



# MONTANA RESOURCES LLP

## DATA REPORT FOR TSP AND DUSTFALL MONITORING STATIONS IN BUTTE, MONTANA QUARTER 1, 2025

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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)*

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## 1.0 INTRODUCTION

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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<sub>10</sub> using a Met One Model 1020 Beta Attenuation Monitor (BAM-1020).
- Continuous monitoring for PM<sub>2.5</sub> using a second Met One BAM-1020.
- Episodic monitoring for PM<sub>2.5</sub> 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<sub>2.5</sub> 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<sub>2.5</sub> and PM<sub>10</sub> concentrations, as well as PM<sub>2.5</sub> 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<sub>10</sub> Particulate Sampler: A BGI Model PQ-200 sampler that collects 24-hour inhalable particulate (PM<sub>10</sub>) 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<sub>10</sub> 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

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The National Ambient Air Quality Standards (NAAQS) for TSP were first promulgated in 1971. The TSP standards were superseded by PM<sub>10</sub> 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 6<sup>th</sup>-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 first quarter of 2025, four sampling events were shifted to avoid this issue, as listed below:

6 <sup>th</sup> -Day Date	Sample Date
Feb 06	Feb 08
Feb 18	Feb 21
Feb 24	Feb 26
Mar 20	Mar 19

Additionally, the Walnut St sample for March 14 overran by approximately 11 hours due to a timer programming error. The results for that sample can be considered valid, although it was collected over a period of approximately 35.5 hours; the sampler was shut off at 1134 MST on March 15.

Table 1 summarizes the TSP data collected during the first quarter of 2025. The arithmetic average quarterly TSP concentrations were 34 µg/m<sup>3</sup> at the Pine St site and 28 µg/m<sup>3</sup> at the Walnut St site. These values represent 45 percent and 37 percent of the historical geometric mean annual standard (75 µg/m<sup>3</sup>)<sup>1</sup>, respectively. The maximum TSP concentration of 122 µg/m<sup>3</sup> at Pine St occurred on January 25, while the maximum of 51 µg/m<sup>3</sup> at Walnut St occurred on February 12. Those maximum daily values were 47 percent and 20 percent of the historical 24-hour standard (260 µg/m<sup>3</sup>)<sup>2</sup>, respectively.

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<sup>1</sup> 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 2<sup>nd</sup> highest recorded value per year (on an assumed one-day-in-six schedule)

<sup>2</sup> *Ibid.*

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.

**Table 1: Summary of TSP Monitoring Data for Quarter 1, 2025**

Pine Street		Walnut Street	
Sample Collection Date (2025) <sup>2</sup>	TSP <sup>1</sup> (µg/m <sup>3</sup> )	Sample Collection Date (2025) <sup>2</sup>	TSP <sup>1</sup> (µg/m <sup>3</sup> )
Jan 01	32	Jan 01	29
Jan 07	18	Jan 07	10
Jan 13	26	Jan 13	21
Jan 19	44	Jan 19	46
Jan 25	122	Jan 25	36
Jan 31	32	Jan 31	30
Feb 08	23	Feb 08	31
Feb 12	57	Feb 12	51
Feb 21	16	Feb 21	16
Feb 26	12	Feb 26	14
Mar 02	30	Mar 02	42
Mar 08	25	Mar 08	25
Mar 14	20	Mar 14 <sup>3</sup>	14
Mar 19	12	Mar 19	16
Mar 26	35	Mar 26	40
<b>Arithmetic Average</b>	<b>34</b>	<b>Arithmetic Average</b>	<b>28</b>
<b>Single Day Maximum</b>	<b>122</b>	<b>Single Day Maximum</b>	<b>51</b>
<b>Historical 24-Hour Standard <sup>3</sup></b>	<b>260</b>		
<b>Historical Geometric Mean Annual Standard <sup>4</sup></b>	<b>75</b>		

<sup>1</sup>All values at local temperature and pressure (LTP).

<sup>2</sup>Samples were collected from midnight to midnight (± 10 minutes) on a single calendar day unless noted otherwise.

<sup>3</sup>Sampler ran from 03/14 @ 0010 MST to 03/15 @ 1134 MST

<sup>3</sup> Ibid.

<sup>4</sup> 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 first quarter of 2025:

- January 2 – January 30
- January 30 – February 27
- February 27 to March 30

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 first quarter of 2025. All monthly dustfall results were below the Montana Dustfall standard of 10 g/m<sup>2</sup>/30 days. The maximum value was 9.9 g/m<sup>2</sup>/30 days for the Pine St dustfall sample collected January 2 – January 30. The quarterly averages for all three sites were well below the standard.

**Table 2: Summary of Dustfall Monitoring Data for Quarter 1, 2025**

Sample Collection Date (2025)	Greeley School DF (g/m <sup>2</sup> /30 days)	Pine Street DF (g/m <sup>2</sup> /30 days)	Walnut Street DF (g/m <sup>2</sup> /30 days)
Jan 02 – Jan 30	8.4	9.9	7.5
Jan 30 – Feb 27	5.6	4.5	7.9
Feb 27 – Mar 31	5.9	6.7	4.7
<b>Average</b>	<b>6.6</b>	<b>7.0</b>	<b>6.7</b>
<b>Maximum</b>	<b>8.4</b>	<b>9.9</b>	<b>7.9</b>
<b>Montana Standard <sup>5</sup></b>	<b>10</b>		

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

<sup>5</sup> ARM 17.8.220

## 4.0 CHEMICAL ANALYSIS DATA – TSP SAMPLES

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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 ( $\mu\text{g}$ ) per filter. Fifteen TSP samples collected from both the Walnut Street and Pine Street sites during the first 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 first quarter. Detectable results were generally obtained for copper, lead, manganese, molybdenum and zinc. Results for arsenic and cadmium were often non-detectable. Table 3c shows the Field Blank and Lab Blank results associated with the first 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 first quarter were at or below the MDL, with the following exceptions:

- A very low level of manganese was detected in one laboratory blank.
- Low levels of molybdenum were detected in one method blank, three Field Blanks, and one laboratory blank. This had no discernable effect on reported sample concentrations.
- The arsenic concentration in the method blank associated with the TSP samples collected on March 2, March 8, March 14 and March 19 was slightly above the arsenic MDL (0.07  $\mu\text{g}/\text{filter}$  versus 0.06  $\mu\text{g}/\text{filter}$ ). Because the arsenic concentrations are **typically** non-detectable, the effect of the method blank result is evident in those TSP samples – and also in the associated Field Blank and Lab (filter) Blank. This had a small effect on the calculated average arsenic concentrations for the first quarter:
  - If the reported arsenic concentrations for these samples are taken at face value, the quarterly average arsenic concentrations are 2.2  $\text{ng}/\text{m}^3$  at Pine St and 1.9  $\text{ng}/\text{m}^3$  at Walnut St.
  - If the arsenic concentrations for those samples are treated as non-detectable and set to  $\frac{1}{2}$  the ambient detection limit, the average concentrations decrease to 1.6  $\text{ng}/\text{m}^3$  at Pine St and 1.4  $\text{ng}/\text{m}^3$  at Walnut St.
  - At both sites, the decrease in the average arsenic concentration by treating the arsenic results as non-detectable amounts to roughly 4 percent of the Guideline value of 15  $\text{ng}/\text{m}^3$ .

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 well below the respective lifetime exposure Guideline values. The closest approach was for manganese, with the average of 14 ng/m<sup>3</sup> representing 28 percent of the lifetime exposure Guideline of 50 ng/m<sup>3</sup>. Individual trace element concentrations for the Pine Street site were also below the suggested Guideline values.

All quarterly average trace element concentrations at Walnut Street were also well below the respective Guideline values. The closest approach was for manganese, with the quarterly average of 12 ng/m<sup>3</sup> representing 24 percent of the Guideline value of 50 ng/m<sup>3</sup>. Individual trace element concentrations for the Walnut Street site were also below the suggested Guideline values.

Table 5 shows the sources of the “Guideline” values used for these analyses, and their derivations.<sup>6</sup> 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.

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<sup>6</sup> The guideline values were updated (starting with the Greeley School 4<sup>th</sup> 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)
01/01	763	0.066	ND	2.6	0.35	0.11	0.051	0.60
01/07	439	ND	ND	0.33	0.22	0.022	ND	0.38
01/13	627	ND	ND	1.3	0.26	0.070	0.054	0.55
01/19	1054	0.063	ND	1.3	0.42	0.076	0.072	0.63
01/25	2935	0.062	0.0065	2.8	0.98	0.19	0.18	1.60
01/31	781	ND	0.0046	1.0	0.34	0.058	0.078	0.91
02/08	560	ND	0.0045	0.70	0.19	0.034	0.077	0.46
02/12	1379	ND	0.0058	1.3	0.49	0.088	0.073	0.97
02/21	380	ND	ND	0.45	ND	0.023	ND	0.39
02/26	294	ND	ND	0.50	ND	0.021	ND	ND
03/02	726	0.087	ND	1.5	0.37	0.099	0.10	0.71
03/08	611	0.087	ND	1.3	0.37	0.15	0.12	0.68
03/14	484	0.076	ND	1.2	0.22	0.12	0.059	0.44
03/19	280	0.076	ND	0.31	ND	0.021	ND	ND
03/26	836	0.059	ND	4.2	0.60	0.30	0.17	1.0

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)
01/01	678	0.066	ND	1.4	0.25	0.035	0.057	0.78
01/07	246	ND	ND	0.37	ND	0.014	ND	0.30
01/13	504	ND	ND	0.67	0.22	0.075	0.045	0.89
01/19	1097	ND	ND	1.1	0.34	0.083	0.060	0.60
01/25	853	0.060	ND	0.77	0.36	0.042	0.097	0.95
01/31	715	ND	0.0066	0.60	0.24	0.033	0.095	0.87
02/08	734	ND	ND	0.84	0.21	0.065	0.055	0.60
02/12	1208	ND	0.0049	0.82	0.37	0.075	0.075	0.94
02/21	387	ND	ND	0.22	ND	0.018	ND	0.37
02/26	327	ND	ND	0.17	ND	0.018	ND	ND
03/02	1006	0.089	0.0048	1.1	0.55	0.067	0.12	0.90
03/08	584	0.075	ND	0.83	0.32	0.052	0.22	0.68
03/14	513	0.084	ND	0.44	0.28	0.037	0.054	0.46
03/19	387	0.075	ND	0.32	0.19	0.025	ND	0.41
03/26	952	ND	ND	1.4	0.66	0.089	0.13	0.95

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)
02/20-LB	2	ND	ND	ND	ND	ND	ND	ND
12/15-FFB	22	ND	ND	ND	ND	ND	ND	ND
01/08-FFB	61	ND	ND	ND	ND	0.0072	ND	ND
02/21-LB	0	ND	ND	ND	ND	ND	ND	ND
03/14-LB	-2	ND	ND	ND	ND	ND	ND	ND
02/22-FFB	23	ND	ND	ND	ND	ND	ND	ND
03/03-FFB	34	0.075	ND	ND	ND	0.0085	ND	ND
04/04-LB	5	0.070	ND	ND	ND	ND	ND	ND
05/01-LB	4	ND	ND	ND	0.29	0.014	ND	ND
04/08-FFB	3	ND	ND	ND	ND	0.0059	ND	ND
Lab Method Blank MDL Range		0.06	0.004- 0.006	0.2	0.2	0.005- 0.006	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**

<b>DATE</b>	<b>Sample Volume (m<sup>3</sup>)</b>	<b>As (ng/m<sup>3</sup>)</b>	<b>Cd (ng/m<sup>3</sup>)</b>	<b>Cu (ng/m<sup>3</sup>)</b>	<b>Mn (ng/m<sup>3</sup>)</b>	<b>Mo (ng/m<sup>3</sup>)</b>	<b>Pb (ng/m<sup>3</sup>)</b>	<b>Zn (ng/m<sup>3</sup>)</b>
01/01	24.05	2.7	ND	110	15	4.6	2.1	25
01/07	24.05	ND	ND	14	9.1	0.91	ND	16
01/13	24.05	ND	ND	54	11	2.9	2.2	23
01/19	24.05	2.6	ND	54	17	3.2	3.0	26
01/25	24.05	2.6	0.27	120	41	7.9	7.5	67
01/31	24.05	ND	0.19	42	14	2.4	3.2	38
02/08	24.05	ND	0.19	29	7.9	1.4	3.2	19
02/12	24.05	ND	0.24	54	20	3.7	3.0	40
02/21	24.05	ND	ND	19	ND	1.0	ND	16
02/26	24.05	ND	ND	21	ND	0.87	ND	ND
03/02	24.05	3.6	ND	62	15	4.1	4.2	30
03/08	24.05	3.6	ND	54	15	6.2	5.0	28
03/14	24.05	3.2	ND	50	9.1	5.0	2.5	18
03/19	24.05	3.2	ND	13	ND	0.87	ND	ND
03/26	24.05	2.5	ND	170	25	12	7.1	42
Mean (ng/m <sup>3</sup> ) *		2.2	0.13	58	14	3.8	3.1	27
Guideline (ng/m <sup>3</sup> ) **		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 3.1 ng/m<sup>3</sup> was 2 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 <sup>3</sup> )	As (ng/m <sup>3</sup> )	Cd (ng/m <sup>3</sup> )	Cu (ng/m <sup>3</sup> )	Mn (ng/m <sup>3</sup> )	Mo (ng/m <sup>3</sup> )	Pb (ng/m <sup>3</sup> )	Zn (ng/m <sup>3</sup> )
01/01	23.71	2.8	ND	59	11	1.5	2.4	33
01/07	23.71	ND	ND	16	ND	0.59	ND	13
01/13	23.71	ND	ND	28	9.3	3.2	1.9	38
01/19	23.71	ND	ND	46	14	3.5	2.5	25
01/25	23.71	2.5	ND	32	15	1.8	4.1	40
01/31	23.71	ND	0.28	25	10	1.4	4.0	37
02/08	23.71	ND	ND	35	8.9	2.7	2.3	25
02/12	23.71	ND	0.21	35	16	3.2	3.2	40
02/21	23.71	ND	ND	9.3	ND	0.76	ND	16
02/26	23.71	ND	ND	7.2	ND	0.76	ND	ND
03/02	23.71	3.8	0.20	46	23	2.8	5.1	38
03/08	23.71	3.2	ND	35	13	2.2	9.3	29
03/14	35.46	2.4	ND	12	7.9	1.0	1.5	13
03/19	23.71	3.2	ND	13	8.0	1.1	ND	17
03/26	23.71	ND	ND	59	28	3.8	5.5	40
Mean (ng/m <sup>3</sup> ) *		1.9	0.12	31	12	2.0	3.0	27
Guideline (ng/m <sup>3</sup> ) **		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 3.0 ng/m<sup>3</sup> was 2 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/m<sup>3</sup>)**

Analyte	Dose/ Risk <sup>A</sup>	Source	Description	Time Period	Detectable TSP <sup>D</sup>
Arsenic (inorganic)	15	EPA / DPHHS <sup>F</sup>	RfC <sup>B</sup>	Lifetime	2.50
Cadmium	10	ATSDR / DPHHS <sup>F</sup>	Non-cancer / CV <sup>F</sup>	Chronic	0.17-0.25
	200	IRIS	Cancer	Chronic	
Copper	2,000	DPHHS <sup>F</sup> / Michigan DEQ	RfC <sup>B</sup>	Chronic	8.33
Lead	150	EPA / ATSDR / DPHHS <sup>F</sup>	National Ambient Air Quality Standard <sup>C</sup>	3-month	1.67
Manganese	50	EPA	RfC <sup>B</sup>	Lifetime	8.33
Molybdenum	11,905 (=500,000/42) <sup>E</sup>	CAL/OSHA, ACGIH	CAL/OSHA, ACGIH	Chronic <sup>E</sup>	0.17-0.21
	400	DPHHS <sup>F</sup> / Michigan DEQ	CV	Chronic	
Zinc	47,619 (=2,000,000/42) <sup>E</sup>	ACGIH TLV	ACGIH TLV	Chronic <sup>E</sup>	12.5

<sup>A</sup> See Appendix D for definitions and listing of dose and risk assessment values reviewed to produce this summary table.

<sup>B</sup> 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.

<sup>C</sup> This standard is based on a three-month average.

<sup>D</sup> Based on 24-hour sampling period and total sample volume of 24 m<sup>3</sup>. Range reflects maximum and minimum laboratory MDLs during Q1 2025.

<sup>E</sup> 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.

<sup>F</sup> 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.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

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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. Nine Dustfall samples collected from the Walnut Street, Pine Street and Greeley School sites during the first quarter of 2025 were analyzed for trace elements. Three Field Blanks also were analyzed.

Tables 6a through 6c present the Dustfall analysis data for the first 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 ( $\text{g}/\text{m}^2/30\text{-days}$ ). It was noted that the reported particulate mass for the Field Blank associated with the February 27 – March 31 samples was roughly half that of the three samples. However, the trace element results for the Field Blank ranged from barely detectable to non-detectable; in all cases they were several orders of magnitude lower than for the three samples. Bison discussed these results with the analytical laboratory, and no explanation could be found. Both the particulate mass and dustfall results for the three samples were in line with typical results, with no indication of a false mass contribution.

All 30-day total particulate deposition rates were at or below the MAAQS of  $10 \text{ g}/\text{m}^2/30\text{-days}$ .<sup>7</sup> The highest observed deposition rate of  $9.9 \text{ g}/\text{m}^2/30\text{-days}$  occurred at the Pine Street site between January 2 and January 30, 2025. Quarterly average deposition rates were below the MAAQS at all three sites.

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<sup>7</sup> 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 January 2 – January 30, 2025****Sample Collection Information**

	<b>Greeley School</b>	<b>Pine Street</b>	<b>Walnut Street</b>	<b>Field Blank</b>
Start Date	01/02/25	01/02/25	01/02/25	
End Date	01/30/25	01/30/25	01/30/25	
Days of Exposure	28	28	28	
Dry Particulate Weight (g)	0.1385	0.1633	0.1235	0.0038
<b>Dustfall (g/m<sup>2</sup>/30-days)</b>	8.4	9.9	7.5	0.2

**Trace Element Concentration in Particulate (mg/kg)**

<b>Analyte</b>	<b>Greeley School</b>	<b>Pine Street</b>	<b>Walnut Street</b>	<b>Field Blank</b>
<b>As</b>	14	14	15	ND
<b>Cd</b>	2	2	2	ND
<b>Cu</b>	2,230	2,440	2,520	ND
<b>Pb</b>	56	59	54	ND
<b>Mn</b>	307	342	379	ND
<b>Mo</b>	715	842	822	ND
<b>Zn</b>	445	495	549	ND

**Trace Element Deposition Rate (mg/m<sup>2</sup>/30-days)**

<b>Analyte</b>	<b>Greeley School</b>	<b>Pine Street</b>	<b>Walnut Street</b>	<b>Field Blank</b>
<b>As</b>	0.12	0.14	0.11	ND
<b>Cd</b>	0.02	0.02	0.01	ND
<b>Cu</b>	18.73	24.16	18.87	ND
<b>Pb</b>	0.47	0.58	0.40	ND
<b>Mn</b>	2.58	3.39	2.84	ND
<b>Mo</b>	6.00	8.34	6.16	ND
<b>Zn</b>	3.74	4.90	4.11	ND

**Table 6b: Dustfall Results for January 30 – February 27, 2025**

**Sample Collection Information**

	<b>Greeley School</b>	<b>Pine Street</b>	<b>Walnut Street</b>	<b>Field Blank</b>
Start Date	01/30/25	01/30/25	01/30/25	
End Date	02/27/25	02/27/25	02/27/25	
Days of Exposure	28	28	28	
Dry Particulate Weight (g)	0.0929	0.0742	0.1296	0.0038
<b>Dustfall (g/m<sup>2</sup>/30-days)</b>	5.6	4.5	7.9	0.2

**Trace Element Concentration in Particulate (mg/kg)**

<b>Analyte</b>	<b>Greeley School</b>	<b>Pine Street</b>	<b>Walnut Street</b>	<b>Field Blank</b>
<b>As</b>	8	9	7	ND
<b>Cd</b>	1	1	1	ND
<b>Cu</b>	1,210	1,870	960	ND
<b>Pb</b>	33	51	29	ND
<b>Mn</b>	214	270	222	ND
<b>Mo</b>	420	522	374	ND
<b>Zn</b>	263	389	278	ND

**Trace Element Deposition Rate (mg/m<sup>2</sup>/30-days)**

<b>Analyte</b>	<b>Greeley School</b>	<b>Pine Street</b>	<b>Walnut Street</b>	<b>Field Blank</b>
<b>As</b>	0.05	0.04	0.06	ND
<b>Cd</b>	0.01	0.00	0.01	ND
<b>Cu</b>	6.82	8.41	7.54	ND
<b>Pb</b>	0.19	0.23	0.23	ND
<b>Mn</b>	1.21	1.21	1.74	ND
<b>Mo</b>	2.37	2.35	2.94	ND
<b>Zn</b>	1.48	1.75	2.18	ND



**Table 6c: Dustfall Results for February 27 – March 31, 2025****Sample Collection Information**

	<b>Greeley School</b>	<b>Pine Street</b>	<b>Walnut Street</b>	<b>Field Blank</b>
Start Date	02/27/25	02/27/25	02/27/25	
End Date	03/31/25	03/31/25	03/31/25	
Days of Exposure	32	32	32	
Dry Particulate Weight (g)	0.1111	0.1268	0.0889	0.0449
<b>Dustfall (g/m<sup>2</sup>/30-days)</b>	5.9	6.7	4.7	2.5

**Trace Element Concentration in Particulate (mg/kg)**

<b>Analyte</b>	<b>Greeley School</b>	<b>Pine Street</b>	<b>Walnut Street</b>	<b>Field Blank</b>
<b>As</b>	14	15	16	ND
<b>Cd</b>	1	1	1	ND
<b>Cu</b>	1,440	1,780	1,460	0.04
<b>Pb</b>	68	64	91	ND
<b>Mn</b>	296	292	437	0.07
<b>Mo</b>	553	552	570	ND
<b>Zn</b>	389	383	462	0.2

**Trace Element Deposition Rate (mg/m<sup>2</sup>/30-days)**

<b>Analyte</b>	<b>Greeley School</b>	<b>Pine Street</b>	<b>Walnut Street</b>	<b>Field Blank</b>
<b>As</b>	0.08	0.10	0.08	ND
<b>Cd</b>	0.01	0.01	0.00	ND
<b>Cu</b>	8.49	11.97	6.89	0.00
<b>Pb</b>	0.40	0.43	0.43	ND
<b>Mn</b>	1.74	1.96	2.06	0.00
<b>Mo</b>	3.26	3.71	2.69	ND
<b>Zn</b>	2.29	2.58	2.18	0.00

## 6.0 CALIBRATION DATA

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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 January 15, February 27 and March 12.<sup>8</sup>

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 first 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	
<b><i>TSP Sampler Calibration Checks</i></b>		
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
<b><i>Other</i></b>		
TSP Inlet Head	Disassemble and clean	

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<sup>8</sup> The calibration checks performed on April 29 also are shown to demonstrate data validity through the end of the first quarter.

**Table 8: Summary of Quarter 1, 2025 Calibration Verification Results**

Date	Calibration Check	Results	Limits	Actions
<b>01/15/2025</b>	BGI TSP Flow Verification (A)	-3.9%	±4%	C
<b>Pine Street</b>	BGI TSP Flow Verification (B)	+4.1%	±4%	C
	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 <sub>2</sub> O	≤4 cm H <sub>2</sub> O	
<b>01/15/2025</b>	BGI TSP Flow Verification (A)	-3.9%	±4%	D
<b>Walnut Street</b>	BGI TSP Flow Verification (B)	+4.1%	±4%	D
	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 <sub>2</sub> O	≤4 cm H <sub>2</sub> O	
<b>02/27/2025</b>	BGI TSP Flow Verification (A)	-1.7%	±4%	
<b>Pine Street</b>	BGI TSP Flow Verification (B)	+1.7%	±4%	
	BGI Ambient Temperature	-1.0°C	±2.0°C	
	BGI Filter Temperature	+0.5°C	±2.0°C	
	BGI Ambient Pressure	-0.2 mm Hg	±10 mmHg	
	BGI Leak Test (pressure drop)	2 cm H <sub>2</sub> O	≤4 cm H <sub>2</sub> O	
<b>02/27/2025</b>	BGI TSP Flow Verification (A)	-0.9%	±4%	
<b>Walnut Street</b>	BGI TSP Flow Verification (B)	+1.0%	±4%	
	BGI Ambient Temperature	-0.8°C	±2.0°C	
	BGI Filter Temperature	+0.8°C	±2.0°C	
	BGI Ambient Pressure	+1.0 mm Hg	±10 mmHg	
	BGI Leak Test (pressure drop)	1 cm H <sub>2</sub> O	≤4 cm H <sub>2</sub> O	
<b>03/12/2025</b>	BGI TSP Flow Verification (A)	-2.3%	±4%	
<b>Pine Street</b>	BGI TSP Flow Verification (B)	+2.4%	±4%	
	BGI Ambient Temperature	-0.2°C	±2.0°C	
	BGI Filter Temperature	+0.4°C	±2.0°C	
	BGI Ambient Pressure	+0.3 mm Hg	±10 mmHg	
	BGI Leak Test (pressure drop)	0 cm H <sub>2</sub> O	≤4 cm H <sub>2</sub> O	
<b>03/12/2025</b>	BGI TSP Flow Verification (A)	0.0%	±4%	
<b>Walnut Street</b>	BGI TSP Flow Verification (B)	0.0%	±4%	
	BGI Ambient Temperature	-0.6°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)	2 cm H <sub>2</sub> O	≤4 cm H <sub>2</sub> O	

Date	Calibration Check	Results	Limits	Actions
04/29/2025	BGI TSP Flow Verification (A)	-6.0%	±4%	E
Pine Street	BGI TSP Flow Verification (B)	+6.4%	±4%	E
	BGI Ambient Temperature	-0.2°C	±2.0°C	
	BGI Filter Temperature	+0.3°C	±2.0°C	
	BGI Ambient Pressure	-0.2 mm Hg	±10 mmHg	
	BGI Leak Test (pressure drop)	0 cm H <sub>2</sub> O	≤4 cm H <sub>2</sub> O	
04/29/2025	BGI TSP Flow Verification (A)	+2.0%	±4%	F
Walnut Street	BGI TSP Flow Verification (B)	-2.0%	±4%	F
	BGI Ambient Temperature	-0.6°C	±2.0°C	
	BGI Filter Temperature	+0.3°C	±2.0°C	
	BGI Ambient Pressure	+1.3 mm Hg	±10 mmHg	
	BGI Leak Test (pressure drop)	1 cm H <sub>2</sub> O	≤4 cm H <sub>2</sub> O	
<b>Codes:</b> A = Difference of reported flow from reference standard flow. B = Difference of reference standard flow from design flow of 16.7 LPM. C = Performed multipoint flow calibration. Operating flow left at 16.75 LPM D = Performed multipoint flow calibration. Operating flow left at 16.68 LPM E = Performed multipoint flow calibration. Operating flow left at 16.72 LPM F = Performed multipoint flow calibration. Operating flow left at 16.68 LPM				

## **7.0 QUARTERLY AUDIT/CALIBRATION RESULTS**

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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 first quarter audit was performed on March 12, 2025, at both sites. Results for both TSP samplers were satisfactory as shown in Table 9.

**Table 9: Quarter 1, 2025 Audit Results**

BGI PQ200 TSP Sampler – Performance Audit			
Date: 03/12/2025	Time: 1255-1310	Sampler Serial Number: 90133 (Pine)	
Performed By: Daniel Bitz		Observer: Steve Heck	
Ref Standard: Swift 25.0 SN D1602		Certification Date: 07/15/2024	
Barometric Pressure Sensor Verification			
Reading (mm Hg)	Sampler (a)	Audit (b)	Difference (a - b) (must be $\leq \pm 10$ )
Ambient Pressure	613	613.3 mm	-0.3
Temperature Sensor Verification			
Reading (degrees Celsius)	Sampler (a)	Audit (b)	Difference (a - b) (must be $\leq \pm 2^{\circ}\text{C}$ )
Ambient Temperature	10.7 C	11.1 C	-0.4
Filter Temperature	11.3 C	11.2 C	+0.1
Leak Check			
Vacuum Readings (cm H2O)	Start 137	End 137	Pass   Fail
Flow Rate Verification			
Reading (liters per minute)	Sampler (a)	Audit (b)	% Difference $100*(a - b)/b$ (must be $\leq \pm 4\%$ )
Operating flow rate check	16.7	16.53	+1.0%
Reading (liters per minute)	Audit (b)	Design Flow Rate Standard (c)	% Difference $100*(b-16.7)/16.7$ (must be $\leq \pm 5\%$ )
Design flow rate calculation	16.53	16.7	-1.0%

BGI PQ200 TSP Sampler – Performance Audit			
Date: 03/12/2025	Time: 1340-1355	Sampler Serial Number: 90129 Walnut	
Performed By: Daniel Bitz		Observer: Steve Heck	
Ref Std: Swift 25.0 SN D1602		Certification Date: 07/15/2024	
Barometric Pressure Sensor Verification			
Reading (mm Hg)	Sampler (a)	Audit (b)	Difference (a - b) (must be $\pm 10$ )
Ambient Pressure	614	614.1	-0.1
Temperature Sensor Verification			
Reading (degrees Celsius)	Sampler (a)	Audit (b)	Difference (a - b) (must be $\pm 2^{\circ}\text{C}$ )
Ambient Temperature	9.8 C	10.2 C	-0.4
Filter Temperature	10.8 C	10.4 C	+0.4
Leak Check			
Vacuum Readings (cm H2O)	Start 135	End 133	Pass <del>Fail</del>
Flow Rate Verification			
Reading (liters per minute)	Sampler (a)	Audit (b)	% Difference $100 \cdot (a - b) / b$ (must be $\pm 4\%$ )
Operating flow rate check	16.7	16.13	+3.5%
Reading (liters per minute)	Audit (b)	Design Flow Rate Standard (c)	% Difference $100 \cdot (b - 16.7) / 16.7$ (must be $\pm 5\%$ )
Design flow rate calculation	16.13	16.7	-3.4%

## 8.0 DATA COMPLETENESS

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Data recovery statistics for the particulate filter samples are presented in Table 10. The typical quarterly data recovery goal for TSP filter samples is  $\geq 80$  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 first quarter of 2025 – 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**

<b>Montana Resources LLP</b>			
Parameter	Readings Possible	Valid Results	Percent Recovery
<b>January 2025</b>			
TSP – Pine St / Gravimetric	6	6	100.0
TSP – Pine St / Trace Elements	42	42	100.0
TSP – Walnut St / Gravimetric	6	6	100.0
TSP – Walnut St / Trace Elements	42	42	100.0
Total	96	96	100.0
<b>February 2025</b>			
TSP – Pine St / Gravimetric	4	4	100.0
TSP – Pine St / Trace Elements	28	28	100.0
TSP – Walnut St / Gravimetric	4	4	100.0
TSP – Walnut St / Trace Elements	28	28	100.0
Total	64	64	100.0
<b>March 2025</b>			
TSP – Pine St / Gravimetric	5	5	100.0
TSP – Pine St / Trace Elements	35	35	100.0
TSP – Walnut St / Gravimetric	5	5 <sup>[1]</sup>	100.0
TSP – Walnut St / Trace Elements	35	35 <sup>[1]</sup>	100.0
Total	80	80	100.0
<b>Quarter 1, 2025</b>			
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

<sup>[1]</sup> One sample collected over non-standard sampling period. See Section 2.0 for discussion.

## 9.0 COMPARISON TO AMBIENT AIR QUALITY STANDARDS

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This study is not intended to determine compliance with the NAAQS<sup>9</sup> or the Montana ambient air quality standards<sup>10</sup> (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  $\mu\text{g}/\text{m}^3$  and the historical annual geometric average standard of 75  $\mu\text{g}/\text{m}^3$ . ***Note that all TSP standards were superseded by PM<sub>10</sub> standards in 1987.***<sup>11</sup>

Similarly, the lead concentrations analyzed from the exposed TSP filters indicate quarterly average airborne concentrations well below the 0.15  $\mu\text{g}/\text{m}^3$  ambient NAAQS based on a 3-month average of the 24-hour samples. The MAAQS is 1.5  $\mu\text{g}/\text{m}^3$  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 ( $\geq 40$  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 first quarter of 2025.

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  $\text{g}/\text{m}^2/30\text{-days}$ . All dustfall results for the first quarter were below that value. There is no NAAQS for Dustfall.

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<sup>9</sup> 40 CFR 50 *et seq.*

<sup>10</sup> ARM 17.8.201 *et seq.*

<sup>11</sup> 52 FR 24634, July 1, 1987

**Table 11: Summary of Airborne Concentration vs. NAAQS**

Analyte	Location	Observed Concentration (µg/m <sup>3</sup> )	Averaging Period	Ambient Standard (µg/m <sup>3</sup> )	Authority
TSP	Pine St	122 <sup>1</sup>	24-hour (max)	260 <sup>3</sup>	NAAQS
	Walnut St	51 <sup>1</sup>			
TSP	Pine St	34	Annual Average	75 <sup>3</sup>	NAAQS
	Walnut St	28			
Pb	Pine St	0.003 <sup>2</sup>	90-day	1.50	MAAQS
	Walnut St	0.003 <sup>2</sup>	3-month	0.15	NAAQS
Analyte	Location	Deposition Rate Average (g/m <sup>2</sup> /30-days)	Averaging Period	Ambient Standard (g/m <sup>2</sup> /30-days)	Authority
Dustfall	Greeley Sch.	6.6	30-days	10	MAAQS
	Pine St	7.0			
	Walnut St	6.7			

<sup>1</sup> This value was the maximum 24-hour value from the filter-based TSP sampler.

<sup>2</sup> 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.

<sup>3</sup> 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 1, 2025, based on gravimetric filter analysis.

## **APPENDIX A: GRAVIMETRIC ANALYSIS DATA**

Quarter 1, 2025 Filter Analysis Results - TSP - Pine St

FILTER	TYPE	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)
C1853192	TSP	01/01	16.70	24:00	24.05	116.135	10-Dec	116.898	11-Feb	0.763	32
C1853194	TSP	01/07	16.70	24:00	24.05	119.280	10-Dec	119.719	11-Feb	0.439	18
C1109063	TSP	01/13	16.70	24:00	24.05	127.914	30-Dec	128.541	11-Feb	0.627	26
C1109066	TSP	01/19	16.70	24:00	24.05	127.471	30-Dec	128.525	11-Feb	1.054	44
C1109067	TSP	01/25	16.70	24:00	24.05	128.551	30-Dec	131.486	11-Feb	2.935	122
C1109069	TSP	01/31	16.70	24:00	24.05	122.902	30-Dec	123.683	11-Feb	0.781	32
C1109071	TSP	02/08	16.70	24:00	24.05	126.700	26-Jan	127.260	10-Mar	0.560	23
C1109074	TSP	02/12	16.70	24:00	24.05	126.467	26-Jan	127.846	10-Mar	1.379	57
C1109095	TSP	02/21	16.70	24:00	24.05	127.504	26-Jan	127.884	10-Mar	0.380	16
C1109097	TSP	02/26	16.70	24:00	24.05	129.210	26-Jan	129.504	10-Mar	0.294	12
C1104716	TSP	03/02	16.70	24:00	24.05	117.354	14-Feb	118.080	28-Mar	0.726	30
C1104720	TSP	03/08	16.70	24:00	24.05	118.908	14-Feb	119.519	28-Mar	0.611	25
C1104721	TSP	03/14	16.70	24:00	24.05	118.719	14-Feb	119.203	28-Mar	0.484	20
C1104724	TSP	03/19	16.70	24:00	24.05	117.902	14-Feb	118.182	28-Mar	0.280	12
C1104701	TSP	03/26	16.70	24:00	24.05	121.282	21-Mar	122.118	23-Apr	0.836	35

Quarter 1, 2025 Filter Analysis Results - TSP - Walnut St

FILTER	TYPE	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)
C1853193	TSP	01/01	16.7	23:40	23.71	116.273	10-Dec	116.951	11-Feb	0.678	29
C1853195	TSP	01/07	16.70	23:40	23.71	118.068	10-Dec	118.314	11-Feb	0.246	10
C1109062	TSP	01/13	16.70	23:40	23.71	124.927	30-Dec	125.431	11-Feb	0.504	21
C1109065	TSP	01/19	16.70	23:40	23.71	126.385	30-Dec	127.482	11-Feb	1.097	46
C1109068	TSP	01/25	16.70	23:40	23.71	125.460	30-Dec	126.313	11-Feb	0.853	36
C1109070	TSP	01/31	16.70	23:40	23.71	125.981	30-Dec	126.696	11-Feb	0.715	30
C1109073	TSP	02/08	16.70	23:40	23.71	125.026	26-Jan	125.760	10-Mar	0.734	31
C1109075	TSP	02/12	16.70	23:40	23.71	128.282	26-Jan	129.490	10-Mar	1.208	51
C1109096	TSP	02/21	16.70	23:40	23.71	127.760	26-Jan	128.147	10-Mar	0.387	16
C1109098	TSP	02/26	16.70	23:40	23.71	128.009	26-Jan	128.336	10-Mar	0.327	14
C1104717	TSP	03/02	16.70	23:40	23.71	117.985	14-Feb	118.991	28-Mar	1.006	42
C1104719	TSP	03/08	16.70	23:40	23.71	118.064	14-Feb	118.648	28-Mar	0.584	25
C1104722	TSP	03/14	16.70	35:24	35.46	117.721	14-Feb	118.234	28-Mar	0.513	14
C1104725	TSP	03/19	16.70	23:40	23.71	119.498	14-Feb	119.885	28-Mar	0.387	16
C1104703	TSP	03/26	16.70	23:40	23.71	119.553	21-Mar	120.505	23-Apr	0.952	40

**Quarter 1, 2025 Filter Analysis Results - Pine & Walnut - Blanks**

<b>FILTER</b>	<b>TYPE</b>	<b>DATE*</b>	<b>PRE WEIGHT (MG)</b>	<b>PRE-WEIGHT DATE</b>	<b>POST WEIGHT (MG)</b>	<b>POST-WEIGHT DATE</b>	<b>PART MASS (MG)</b>
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
C1109061	Field	8-Jan	124.525	30-Dec	124.586	11-Feb	0.061
C1109064	Lab	21-Feb	125.449	30-Dec	125.449	11-Feb	0.000
C1109072	Lab	14-Mar	124.007	26-Jan	124.005	10-Mar	-0.002
C1109099	Field	22-Feb	126.374	26-Jan	126.397	10-Mar	0.023
C1104718	Field	3-Mar	119.154	14-Feb	119.188	28-Mar	0.034
C1104723	Lab	4-Apr	120.818	14-Feb	120.823	28-Mar	0.005
C1104702	Lab	1-May	119.047	21-Mar	119.051	23-Apr	0.004
C1104750	Field	8-Apr	120.250	21-Mar	120.253	23-Apr	0.003

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

## **APPENDIX B: LABORATORY ANALYSIS REPORTS - TSP**





## 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

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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  
**Date Received:** 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
<b>METALS IN AIR</b>												
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** RL - Analyte Reporting Limit  
**Definitions:**

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  
**Date Received:** 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
<b>METALS IN AIR</b>												
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** RL - Analyte Reporting Limit  
**Definitions:**

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  
**Date Received:** 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
<b>METALS IN AIR</b>												
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** RL - Analyte Reporting Limit  
**Definitions:** 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)



## 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  
**Date Received:** 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
<b>METALS IN AIR</b>												
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** RL - Analyte Reporting Limit  
**Definitions:** 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)



## 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  
**Date Received:** 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
<b>METALS IN AIR</b>												
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** RL - Analyte Reporting Limit  
**Definitions:** 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)



## 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  
**Date Received:** 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
<b>METALS IN AIR</b>												
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** RL - Analyte Reporting Limit  
**Definitions:** 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)





## 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  
**Date Received:** 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
<b>METALS IN AIR</b>												
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** RL - Analyte Reporting Limit  
**Definitions:** 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)



## 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  
**Date Received:** 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
<b>METALS IN AIR</b>												
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** RL - Analyte Reporting Limit  
**Definitions:** 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)



## 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  
**Date Received:** 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
<b>METALS IN AIR</b>												
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** RL - Analyte Reporting Limit  
**Definitions:** 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)



## 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  
**Date Received:** 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
<b>METALS IN AIR</b>												
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** RL - Analyte Reporting Limit  
**Definitions:** 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 Billings, MT Branch

Work Order: B25020656

Report Date: 02/27/25

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>		Analytical Run: ICPMS207-B_250218A								
<b>Lab ID: QCS</b>	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			
<b>Lab ID: CCV</b>	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			
<b>Lab ID: CCV</b>	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			
<b>Method: E200.8</b>		Batch: 197366								
<b>Lab ID: MB-197366</b>	7	Method Blank								02/20/25 06:56
		Run: ICPMS207-B_250218A								
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						
<b>Lab ID: LCS-197366</b>	7	Laboratory Control Sample								02/20/25 07:02
		Run: ICPMS207-B_250218A								
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
<b>Method: E200.8</b>										Batch: 197366
<b>Lab ID: LCSD-197366</b>										02/20/25 07:08
7 Laboratory Control Sample Duplicate										
Run: ICPMS207-B_250218A										
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
<b>Method: E200.8</b>		Analytical Run: ICPMS208-B_250220A								
<b>Lab ID: QCS</b>	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			
<b>Lab ID: CCV</b>	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			
<b>Lab ID: CCV</b>	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			
<b>Lab ID: QCS</b>	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			
<b>Lab ID: CCV</b>	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			
<b>Method: E200.8</b>		Batch: 197366								
<b>Lab ID: MB-197366</b>	5	Method Blank								02/20/25 16:46
		Run: ICPMS208-B_250220A								
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:

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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
<b>Method: E200.8</b>							Analytical Run: ICPMS208-B_250226A			
<b>Lab ID: QCS</b>	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			
<b>Lab ID: CCV</b>	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			
<b>Method: E200.8</b>							Batch: 197366			
<b>Lab ID: MB-197366</b>	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 <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on all shipping container(s)/cooler(s)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on all sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Applicable <input type="checkbox"/>
Container/Temp Blank temperature:	-1.8°C Blue Ice		
Containers requiring zero headspace have no headspace or bubble that is <6mm (1/4").	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Applicable <input checked="" type="checkbox"/>

---

## 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.




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## Contact and Corrective Action Comments:

None

## Laboratory Certifications and Accreditations

Current certificates are available at [www.energylab.com](http://www.energylab.com) website:

	Agency	Number
<b>Billings, MT</b>    	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
<b>Casper, WY</b>  	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
<b>Gillette, WY</b>	US EPA Region VIII	WY00006
<b>Helena, MT</b>	Colorado	MT00945
	Montana	CERT0079
	Nevada	NV-C24-00119
	US EPA Region VIII	Reciprocal
	USDA Soil Permit	P330-20-00090



Trust our People. Trust our Data.

# Chain of Custody & Analytical Request Record

www.energylab.com

Page 1 of 1

## 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	<input type="checkbox"/> Hard Copy	<input checked="" type="checkbox"/> Email	Receive Report
Purchase Order	Quote		<input type="checkbox"/> Hard Copy <input checked="" type="checkbox"/> Email
MTR223018	Bottle Order		

## Report Information (if different than Account Information)

Company/Name Bison Engineering, Inc.	
Contact	Don Milimine
Phone	(406) 208-4833
Mailing Address	2751 Enterprise Avenue Suite 2
City, State, Zip	Billings, MT 59102
Email	dmilimine@bison-eng.com
Receive Report	<input type="checkbox"/> Hard Copy <input checked="" type="checkbox"/> Email
Special Report/Format:	
<input type="checkbox"/> LEVEL IV <input type="checkbox"/> NELAC <input type="checkbox"/> EDD/EDT (contact laboratory) <input type="checkbox"/> Other	

## Comments

Analyze per history
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## Project Information

Project Name, PWSID, Permit, etc. Montana Resources/Greely School PW			
Sampler Name	Sampler Phone		
Sample Origin State	Montana	EPA/State Compliance	<input type="checkbox"/> Yes <input type="checkbox"/> No
URANIUM MINING CLIENTS MUST indicate sample type.			
<input type="checkbox"/> NOT Source or Byproduct Material			
<input type="checkbox"/> Source/Processed Ore (Ground or Refined) **CALL BEFORE SENDING			
<input type="checkbox"/> 11e.(2) Byproduct Material (Can ONLY be Submitted to ELI Casper Location)			

## Matrix Codes

A - Air	W - Water	S - Solids	V - Vegetation	B - Bioassay	O - Other	DW - Drinking
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## Analysis Requested

Analysis Requested	Cadmium	Copper	Lead	Manganese	Molybdenum	Zinc
Asenice	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Artenice	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Artenice	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Artenice	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Artenice	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Artenice	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Artenice	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Artenice	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Artenice	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Artenice	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Artenice	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Artenice	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Artenice	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Artenice	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Artenice	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Artenice	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Artenice	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Artenice	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Artenice	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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## ANALYTICAL SUMMARY REPORT

July 16, 2025

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

Work Order: B25030651 Quote ID: B4795

Project Name: Montana Resources/Greely School PW

Energy Laboratories Inc Billings MT received the following 10 samples for Bison Engineering on 2/14/2025 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B25030651-001	Particulate Filter C1109061 Field Blank	01/08/25 15:05	02/14/25	Air	Metals on air filter by ICP/ICPMS Nitric acid-extraction by 40CFR50G
B25030651-002	Particulate Filter C1109062 TSP Walnut ST	01/13/25 00:00	02/14/25	Air	Same As Above
B25030651-003	Particulate Filter C1109063 TSP Pine ST	01/13/25 00:00	02/14/25	Air	Same As Above
B25030651-004	Particulate Filter C1109064 Lab Blank	12/30/24 18:00	02/14/25	Air	Same As Above
B25030651-005	Particulate Filter C1109065 TSP Walnut ST	01/19/25 00:00	02/14/25	Air	Same As Above
B25030651-006	Particulate Filter C1109066 TSP Pine ST	01/19/25 00:00	02/14/25	Air	Same As Above
B25030651-007	Particulate Filter C1109067 TSP Pine ST	01/25/25 00:00	02/14/25	Air	Same As Above
B25030651-008	Particulate Filter C1109068 TSP Walnut ST	01/25/25 00:00	02/14/25	Air	Same As Above
B25030651-009	Particulate Filter C1109069 TSP Pine ST	01/31/25 00:00	02/14/25	Air	Same As Above
B25030651-010	Particulate Filter C1109070 TSP Walnut ST	01/31/25 00:00	02/14/25	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:** B25030651

**Revised Date:** 07/16/25

**Report Date:** 03/12/25

## CASE NARRATIVE

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Revised Date: 7/16/2025

On 7/16/2025 a request was received from Steve Heck at Bison Engineering to revise this workorder by changing all sample identifications beginning with C1109161-70 to C1109061-70.

The report has been revised and replaces the previously issued report dated 6/16/2025 in its entirety.

Revised Date: 6/16/2025

On 6/13/25 a request was received from Don Milmine at Bison Engineering to revise this workorder by changing all sample identifications to begin with C1109.

The report has been revised and replaces the previously issued report dated 3/12/2025 in its entirety.



## LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Client:** Bison Engineering  
**Client Sample ID:** Particulate Filter C1109061 Field Blank  
**Project:** Montana Resources/Greely School PW  
**Matrix:** Air

**Lab ID:** B25030651-001  
**Collection Date:** 01/08/25 15:05  
**Date Received:** 02/14/25  
**Report Date:** 03/12/25 **Revised Date:** 07/16/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
<b>METALS IN AIR</b>												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	02/21/25 15:13 / jks	02/20/25 10:58	40CFR50	ICPMS208-B_250220A : 280		197459
Cadmium	ND	ug/filter		1.0	0.0044	E200.8	02/21/25 15:13 / jks	02/20/25 10:58	40CFR50	ICPMS208-B_250220A : 280		197459
Copper	ND	ug/filter		1.0	0.16	E200.8	02/21/25 15:13 / jks	02/20/25 10:58	40CFR50	ICPMS208-B_250220A : 280		197459
Lead	ND	ug/filter		1.0	0.042	E200.8	02/27/25 00:20 / ae	02/20/25 10:58	40CFR50	ICPMS208-B_250226A : 147		197459
Manganese	ND	ug/filter		1.0	0.18	E200.8	02/27/25 00:20 / ae	02/20/25 10:58	40CFR50	ICPMS208-B_250226A : 147		197459
Molybdenum	0.0072	ug/filter	J	1.0	0.0059	E200.8	02/21/25 15:13 / jks	02/20/25 10:58	40CFR50	ICPMS208-B_250220A : 280		197459
Zinc	ND	ug/filter		1.0	0.30	E200.8	02/27/25 00:20 / ae	02/20/25 10:58	40CFR50	ICPMS208-B_250226A : 147		197459

**Report** RL - Analyte Reporting Limit  
**Definitions:** 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)



## LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Client:** Bison Engineering  
**Client Sample ID:** Particulate Filter C1109062 TSP Walnut ST  
**Project:** Montana Resources/Greely School PW  
**Matrix:** Air

**Lab ID:** B25030651-002  
**Collection Date:** 01/13/25  
**Date Received:** 02/14/25  
**Report Date:** 03/12/25 **Revised Date:** 07/16/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
<b>METALS IN AIR</b>												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	02/21/25 15:37 / jks	02/20/25 10:58	40CFR50	ICPMS208-B_250220A : 284		197459
Cadmium	ND	ug/filter		1.0	0.0044	E200.8	02/21/25 15:37 / jks	02/20/25 10:58	40CFR50	ICPMS208-B_250220A : 284		197459
Copper	0.67	ug/filter	J	1.0	0.16	E200.8	02/21/25 15:37 / jks	02/20/25 10:58	40CFR50	ICPMS208-B_250220A : 284		197459
Lead	0.045	ug/filter	J	1.0	0.042	E200.8	02/27/25 14:08 / ae	02/20/25 10:58	40CFR50	ICPMS208-B_250226A : 286		197459
Manganese	0.22	ug/filter	J	1.0	0.18	E200.8	02/27/25 14:08 / ae	02/20/25 10:58	40CFR50	ICPMS208-B_250226A : 286		197459
Molybdenum	0.075	ug/filter	J	1.0	0.0059	E200.8	02/21/25 15:37 / jks	02/20/25 10:58	40CFR50	ICPMS208-B_250220A : 284		197459
Zinc	0.89	ug/filter	J	1.0	0.30	E200.8	02/27/25 00:26 / ae	02/20/25 10:58	40CFR50	ICPMS208-B_250226A : 148		197459

**Report** RL - Analyte Reporting Limit  
**Definitions:** 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)



## LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Client:** Bison Engineering  
**Client Sample ID:** Particulate Filter C1109063 TSP Pine ST  
**Project:** Montana Resources/Greely School PW  
**Matrix:** Air

**Lab ID:** B25030651-003  
**Collection Date:** 01/13/25  
**Date Received:** 02/14/25  
**Report Date:** 03/12/25 **Revised Date:** 07/16/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
<b>METALS IN AIR</b>												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	02/21/25 15:43 / jks	02/20/25 10:58	40CFR50	ICPMS208-B_250220A : 285		197459
Cadmium	ND	ug/filter		1.0	0.0044	E200.8	02/21/25 15:43 / jks	02/20/25 10:58	40CFR50	ICPMS208-B_250220A : 285		197459
Copper	1.3	ug/filter		1.0	0.16	E200.8	02/21/25 15:43 / jks	02/20/25 10:58	40CFR50	ICPMS208-B_250220A : 285		197459
Lead	0.054	ug/filter	J	1.0	0.042	E200.8	02/27/25 14:14 / ae	02/20/25 10:58	40CFR50	ICPMS208-B_250226A : 287		197459
Manganese	0.26	ug/filter	J	1.0	0.18	E200.8	02/27/25 14:14 / ae	02/20/25 10:58	40CFR50	ICPMS208-B_250226A : 287		197459
Molybdenum	0.070	ug/filter	J	1.0	0.0059	E200.8	02/21/25 15:43 / jks	02/20/25 10:58	40CFR50	ICPMS208-B_250220A : 285		197459
Zinc	0.55	ug/filter	J	1.0	0.30	E200.8	02/27/25 00:32 / ae	02/20/25 10:58	40CFR50	ICPMS208-B_250226A : 149		197459

**Report** RL - Analyte Reporting Limit  
**Definitions:** 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)





## LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Client:** Bison Engineering  
**Client Sample ID:** Particulate Filter C1109064 Lab Blank  
**Project:** Montana Resources/Greely School PW  
**Matrix:** Air

**Lab ID:** B25030651-004  
**Collection Date:** 12/30/24 18:00  
**Date Received:** 02/14/25  
**Report Date:** 03/12/25 **Revised Date:** 07/16/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
<b>METALS IN AIR</b>												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	02/21/25 15:49 / jks	02/20/25 10:58	40CFR50	ICPMS208-B_250220A : 286		197459
Cadmium	ND	ug/filter		1.0	0.0044	E200.8	02/21/25 15:49 / jks	02/20/25 10:58	40CFR50	ICPMS208-B_250220A : 286		197459
Copper	ND	ug/filter		1.0	0.16	E200.8	02/21/25 15:49 / jks	02/20/25 10:58	40CFR50	ICPMS208-B_250220A : 286		197459
Lead	ND	ug/filter		1.0	0.042	E200.8	02/27/25 00:38 / ae	02/20/25 10:58	40CFR50	ICPMS208-B_250226A : 150		197459
Manganese	ND	ug/filter		1.0	0.18	E200.8	02/27/25 00:38 / ae	02/20/25 10:58	40CFR50	ICPMS208-B_250226A : 150		197459
Molybdenum	ND	ug/filter		1.0	0.0059	E200.8	02/21/25 15:49 / jks	02/20/25 10:58	40CFR50	ICPMS208-B_250220A : 286		197459
Zinc	ND	ug/filter		1.0	0.30	E200.8	02/27/25 00:38 / ae	02/20/25 10:58	40CFR50	ICPMS208-B_250226A : 150		197459

**Report** RL - Analyte Reporting Limit  
**Definitions:**

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 C1109065 TSP Walnut ST  
**Project:** Montana Resources/Greely School PW  
**Matrix:** Air

**Lab ID:** B25030651-005  
**Collection Date:** 01/19/25  
**Date Received:** 02/14/25  
**Report Date:** 03/12/25 **Revised Date:** 07/16/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
<b>METALS IN AIR</b>												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	02/21/25 15:55 / jks	02/20/25 10:58	40CFR50	ICPMS208-B_250220A : 287		197459
Cadmium	ND	ug/filter		1.0	0.0044	E200.8	02/21/25 15:55 / jks	02/20/25 10:58	40CFR50	ICPMS208-B_250220A : 287		197459
Copper	1.1	ug/filter		1.0	0.16	E200.8	02/21/25 15:55 / jks	02/20/25 10:58	40CFR50	ICPMS208-B_250220A : 287		197459
Lead	0.060	ug/filter	J	1.0	0.042	E200.8	02/27/25 14:20 / ae	02/20/25 10:58	40CFR50	ICPMS208-B_250226A : 288		197459
Manganese	0.34	ug/filter	J	1.0	0.18	E200.8	02/27/25 14:20 / ae	02/20/25 10:58	40CFR50	ICPMS208-B_250226A : 288		197459
Molybdenum	0.083	ug/filter	J	1.0	0.0059	E200.8	02/21/25 15:55 / jks	02/20/25 10:58	40CFR50	ICPMS208-B_250220A : 287		197459
Zinc	0.60	ug/filter	J	1.0	0.30	E200.8	02/27/25 00:44 / ae	02/20/25 10:58	40CFR50	ICPMS208-B_250226A : 151		197459

**Report** RL - Analyte Reporting Limit  
**Definitions:** 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)



## LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Client:** Bison Engineering  
**Client Sample ID:** Particulate Filter C1109066 TSP Pine ST  
**Project:** Montana Resources/Greely School PW  
**Matrix:** Air

**Lab ID:** B25030651-006  
**Collection Date:** 01/19/25  
**Date Received:** 02/14/25  
**Report Date:** 03/12/25 **Revised Date:** 07/16/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
<b>METALS IN AIR</b>												
Arsenic	0.063	ug/filter	J	1.0	0.058	E200.8	02/21/25 16:01 / jks	02/20/25 10:58	40CFR50	ICPMS208-B_250220A : 288		197459
Cadmium	ND	ug/filter		1.0	0.0044	E200.8	02/21/25 16:01 / jks	02/20/25 10:58	40CFR50	ICPMS208-B_250220A : 288		197459
Copper	1.3	ug/filter		1.0	0.16	E200.8	02/21/25 16:01 / jks	02/20/25 10:58	40CFR50	ICPMS208-B_250220A : 288		197459
Lead	0.072	ug/filter	J	1.0	0.042	E200.8	02/27/25 14:26 / ae	02/20/25 10:58	40CFR50	ICPMS208-B_250226A : 289		197459
Manganese	0.42	ug/filter	J	1.0	0.18	E200.8	02/27/25 14:26 / ae	02/20/25 10:58	40CFR50	ICPMS208-B_250226A : 289		197459
Molybdenum	0.076	ug/filter	J	1.0	0.0059	E200.8	02/21/25 16:01 / jks	02/20/25 10:58	40CFR50	ICPMS208-B_250220A : 288		197459
Zinc	0.63	ug/filter	J	1.0	0.30	E200.8	02/27/25 00:50 / ae	02/20/25 10:58	40CFR50	ICPMS208-B_250226A : 152		197459

**Report** RL - Analyte Reporting Limit  
**Definitions:** 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)



## LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Client:** Bison Engineering  
**Client Sample ID:** Particulate Filter C1109067 TSP Pine ST  
**Project:** Montana Resources/Greely School PW  
**Matrix:** Air

**Lab ID:** B25030651-007  
**Collection Date:** 01/25/25  
**Date Received:** 02/14/25  
**Report Date:** 03/12/25 **Revised Date:** 07/16/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
<b>METALS IN AIR</b>												
Arsenic	0.062	ug/filter	J	1.0	0.058	E200.8	02/21/25 16:07 / jks	02/20/25 10:58	40CFR50	ICPMS208-B_250220A : 289		197459
Cadmium	0.0065	ug/filter	J	1.0	0.0044	E200.8	02/21/25 16:07 / jks	02/20/25 10:58	40CFR50	ICPMS208-B_250220A : 289		197459
Copper	2.8	ug/filter		1.0	0.16	E200.8	02/21/25 16:07 / jks	02/20/25 10:58	40CFR50	ICPMS208-B_250220A : 289		197459
Lead	0.18	ug/filter	J	1.0	0.042	E200.8	02/27/25 14:32 / ae	02/20/25 10:58	40CFR50	ICPMS208-B_250226A : 290		197459
Manganese	0.98	ug/filter	J	1.0	0.18	E200.8	02/27/25 14:32 / ae	02/20/25 10:58	40CFR50	ICPMS208-B_250226A : 290		197459
Molybdenum	0.19	ug/filter	J	1.0	0.0059	E200.8	02/21/25 16:07 / jks	02/20/25 10:58	40CFR50	ICPMS208-B_250220A : 289		197459
Zinc	1.6	ug/filter		1.0	0.30	E200.8	02/27/25 00:56 / ae	02/20/25 10:58	40CFR50	ICPMS208-B_250226A : 153		197459

**Report** RL - Analyte Reporting Limit  
**Definitions:** 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)



## LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Client:** Bison Engineering  
**Client Sample ID:** Particulate Filter C1109068 TSP Walnut ST  
**Project:** Montana Resources/Greely School PW  
**Matrix:** Air

**Lab ID:** B25030651-008  
**Collection Date:** 01/25/25  
**Date Received:** 02/14/25  
**Report Date:** 03/12/25 **Revised Date:** 07/16/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
<b>METALS IN AIR</b>												
Arsenic	0.060	ug/filter	J	1.0	0.058	E200.8	02/21/25 16:13 / jks	02/20/25 10:58	40CFR50	ICPMS208-B_250220A : 290		197459
Cadmium	ND	ug/filter		1.0	0.0044	E200.8	02/21/25 16:13 / jks	02/20/25 10:58	40CFR50	ICPMS208-B_250220A : 290		197459
Copper	0.77	ug/filter	J	1.0	0.16	E200.8	02/21/25 16:13 / jks	02/20/25 10:58	40CFR50	ICPMS208-B_250220A : 290		197459
Lead	0.097	ug/filter	J	1.0	0.042	E200.8	02/27/25 14:50 / ae	02/20/25 10:58	40CFR50	ICPMS208-B_250226A : 293		197459
Manganese	0.36	ug/filter	J	1.0	0.18	E200.8	02/27/25 14:50 / ae	02/20/25 10:58	40CFR50	ICPMS208-B_250226A : 293		197459
Molybdenum	0.042	ug/filter	J	1.0	0.0059	E200.8	02/21/25 16:13 / jks	02/20/25 10:58	40CFR50	ICPMS208-B_250220A : 290		197459
Zinc	0.95	ug/filter	J	1.0	0.30	E200.8	02/27/25 01:02 / ae	02/20/25 10:58	40CFR50	ICPMS208-B_250226A : 154		197459

**Report** RL - Analyte Reporting Limit  
**Definitions:** 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)



## LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Client:** Bison Engineering  
**Client Sample ID:** Particulate Filter C1109069 TSP Pine ST  
**Project:** Montana Resources/Greely School PW  
**Matrix:** Air

**Lab ID:** B25030651-009  
**Collection Date:** 01/31/25  
**Date Received:** 02/14/25  
**Report Date:** 03/12/25 **Revised Date:** 07/16/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
<b>METALS IN AIR</b>												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	02/21/25 16:19 / jks	02/20/25 10:58	40CFR50	ICPMS208-B_250220A : 291		197459
Cadmium	0.0046	ug/filter	J	1.0	0.0044	E200.8	02/21/25 16:19 / jks	02/20/25 10:58	40CFR50	ICPMS208-B_250220A : 291		197459
Copper	1.0	ug/filter		1.0	0.16	E200.8	02/21/25 16:19 / jks	02/20/25 10:58	40CFR50	ICPMS208-B_250220A : 291		197459
Lead	0.078	ug/filter	J	1.0	0.042	E200.8	02/27/25 14:56 / ae	02/20/25 10:58	40CFR50	ICPMS208-B_250226A : 294		197459
Manganese	0.34	ug/filter	J	1.0	0.18	E200.8	02/27/25 14:56 / ae	02/20/25 10:58	40CFR50	ICPMS208-B_250226A : 294		197459
Molybdenum	0.058	ug/filter	J	1.0	0.0059	E200.8	02/21/25 16:19 / jks	02/20/25 10:58	40CFR50	ICPMS208-B_250220A : 291		197459
Zinc	0.91	ug/filter	J	1.0	0.30	E200.8	02/27/25 01:20 / ae	02/20/25 10:58	40CFR50	ICPMS208-B_250226A : 157		197459

**Report** RL - Analyte Reporting Limit  
**Definitions:** 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)



## LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Client:** Bison Engineering  
**Client Sample ID:** Particulate Filter C1109070 TSP Walnut ST  
**Project:** Montana Resources/Greely School PW  
**Matrix:** Air

**Lab ID:** B25030651-010  
**Collection Date:** 01/31/25  
**Date Received:** 02/14/25  
**Report Date:** 03/12/25 **Revised Date:** 07/16/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
<b>METALS IN AIR</b>												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	02/21/25 16:25 / jks	02/20/25 10:58	40CFR50	ICPMS208-B_250220A : 292		197459
Cadmium	0.0066	ug/filter	J	1.0	0.0044	E200.8	02/21/25 16:25 / jks	02/20/25 10:58	40CFR50	ICPMS208-B_250220A : 292		197459
Copper	0.60	ug/filter	J	1.0	0.16	E200.8	02/21/25 16:25 / jks	02/20/25 10:58	40CFR50	ICPMS208-B_250220A : 292		197459
Lead	0.095	ug/filter	J	1.0	0.042	E200.8	02/27/25 15:02 / ae	02/20/25 10:58	40CFR50	ICPMS208-B_250226A : 295		197459
Manganese	0.24	ug/filter	J	1.0	0.18	E200.8	02/27/25 15:02 / ae	02/20/25 10:58	40CFR50	ICPMS208-B_250226A : 295		197459
Molybdenum	0.033	ug/filter	J	1.0	0.0059	E200.8	02/21/25 16:25 / jks	02/20/25 10:58	40CFR50	ICPMS208-B_250220A : 292		197459
Zinc	0.87	ug/filter	J	1.0	0.30	E200.8	02/27/25 01:26 / ae	02/20/25 10:58	40CFR50	ICPMS208-B_250226A : 158		197459

**Report** RL - Analyte Reporting Limit  
**Definitions:** 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 Billings, MT Branch

Work Order: B25030651

Report Date: 03/12/25

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>								Analytical Run: ICPMS208-B_250220A		
<b>Lab ID: QCS</b>	4	Initial Calibration Verification Standard							02/21/25 12:22	
Arsenic		0.0494	mg/L	0.0050	99	90	110			
Cadmium		0.0252	mg/L	0.0010	101	90	110			
Copper		0.0508	mg/L	0.010	102	90	110			
Molybdenum		0.0492	mg/L	0.0050	98	90	110			
<b>Lab ID: CCV</b>	4	Continuing Calibration Verification Standard							02/21/25 13:45	
Arsenic		0.0494	mg/L	0.0050	99	90	110			
Cadmium		0.0485	mg/L	0.0010	97	90	110			
Copper		0.0501	mg/L	0.010	100	90	110			
Molybdenum		0.0485	mg/L	0.0050	97	90	110			
<b>Lab ID: CCV</b>	4	Continuing Calibration Verification Standard							02/21/25 15:19	
Arsenic		0.0489	mg/L	0.0050	98	90	110			
Cadmium		0.0490	mg/L	0.0010	98	90	110			
Copper		0.0503	mg/L	0.010	101	90	110			
Molybdenum		0.0490	mg/L	0.0050	98	90	110			
<b>Method: E200.8</b>								Batch: 197459		
<b>Lab ID: MB-197459</b>	7	Method Blank							Run: ICPMS208-B_250220A 02/21/25 13:33	
Arsenic		ND	ug/filter	0.06						
Cadmium		ND	ug/filter	0.004						
Copper		ND	ug/filter	0.2						
Lead		ND	ug/filter	0.04						
Manganese		ND	ug/filter	0.2						
Molybdenum		ND	ug/filter	0.006						
Zinc		ND	ug/filter	0.3						
<b>Lab ID: LCS-197459</b>	7	Laboratory Control Sample							Run: ICPMS208-B_250220A 02/21/25 13:39	
Arsenic		93.5	ug/filter	1.0	93	85	115			
Cadmium		49.6	ug/filter	1.0	99	85	115			
Copper		102	ug/filter	1.0	102	85	115			
Lead		99.3	ug/filter	1.0	99	85	115			
Manganese		512	ug/filter	1.0	102	85	115			
Molybdenum		98.4	ug/filter	1.0	98	85	115			
Zinc		94.4	ug/filter	1.0	94	85	115			
<b>Lab ID: LCSD-197459</b>	7	Laboratory Control Sample Duplicate							Run: ICPMS208-B_250220A 02/21/25 13:57	
Arsenic		92.8	ug/filter	1.0	93	85	115			
Cadmium		49.3	ug/filter	1.0	99	85	115			
Copper		101	ug/filter	1.0	101	85	115			
Lead		97.5	ug/filter	1.0	98	85	115			
Manganese		512	ug/filter	1.0	102	85	115			
Molybdenum		96.1	ug/filter	1.0	96	85	115			
Zinc		93.6	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: B25030651

Report Date: 03/12/25

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>								Analytical Run: ICPMS208-B_250226A		
<b>Lab ID: QCS</b>	3	Initial Calibration Verification Standard							02/26/25 18:34	
Lead		0.0500	mg/L	0.0010	100	90	110			
Manganese		0.257	mg/L	0.0050	103	90	110			
Zinc		0.0517	mg/L	0.0050	103	90	110			
<b>Lab ID: CCV</b>	3	Continuing Calibration Verification Standard							02/26/25 23:50	
Lead		0.0503	mg/L	0.0010	101	90	110			
Manganese		0.0500	mg/L	0.0050	100	90	110			
Zinc		0.0507	mg/L	0.0050	101	90	110			
<b>Lab ID: CCV</b>	3	Continuing Calibration Verification Standard							02/27/25 01:08	
Lead		0.0498	mg/L	0.0010	100	90	110			
Manganese		0.0500	mg/L	0.0050	100	90	110			
Zinc		0.0509	mg/L	0.0050	102	90	110			
<b>Lab ID: QCS</b>	3	Initial Calibration Verification Standard							02/27/25 11:51	
Lead		0.0503	mg/L	0.0010	101	90	110			
Manganese		0.260	mg/L	0.0050	104	90	110			
Zinc		0.0521	mg/L	0.0050	104	90	110			
<b>Lab ID: CCV</b>	3	Continuing Calibration Verification Standard							02/27/25 13:15	
Lead		0.0495	mg/L	0.0010	99	90	110			
Manganese		0.0505	mg/L	0.0050	101	90	110			
Zinc		0.0504	mg/L	0.0050	101	90	110			
<b>Lab ID: CCV</b>	3	Continuing Calibration Verification Standard							02/27/25 14:38	
Lead		0.0475	mg/L	0.0010	95	90	110			
Manganese		0.0498	mg/L	0.0050	100	90	110			
Zinc		0.0504	mg/L	0.0050	101	90	110			
<b>Method: E200.8</b>								Batch: 197459		
<b>Lab ID: MB-197459</b>	7	Method Blank							Run: ICPMS208-B_250226A 02/26/25 23:44	
Arsenic		ND	ug/filter	0.06						
Cadmium		ND	ug/filter	0.004						
Copper		ND	ug/filter	0.2						
Lead		ND	ug/filter	0.04						
Manganese		ND	ug/filter	0.2						
Molybdenum		ND	ug/filter	0.006						
Zinc		ND	ug/filter	0.3						
<b>Lab ID: LCS-197459</b>	7	Laboratory Control Sample							Run: ICPMS208-B_250226A 02/27/25 00:02	
Arsenic		99.6	ug/filter	1.0	100	85	115			
Cadmium		49.0	ug/filter	1.0	98	85	115			
Copper		102	ug/filter	5.0	102	85	115			
Lead		98.2	ug/filter	1.0	98	85	115			
Manganese		489	ug/filter	5.0	98	85	115			
Molybdenum		94.7	ug/filter	1.0	95	85	115			
Zinc		102	ug/filter	5.0	102	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: B25030651

Report Date: 03/12/25

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>										Batch: 197459
<b>Lab ID: LCSD-197459</b>	7	Laboratory Control Sample Duplicate				Run: ICPMS208-B_250226A			02/27/25 00:08	
Arsenic		101	ug/filter	1.0	101	85	115			
Cadmium		48.8	ug/filter	1.0	98	85	115			
Copper		103	ug/filter	5.0	103	85	115			
Lead		98.4	ug/filter	1.0	98	85	115			
Manganese		493	ug/filter	5.0	99	85	115			
Molybdenum		94.2	ug/filter	1.0	94	85	115			
Zinc		101	ug/filter	5.0	101	85	115			
<b>Lab ID: MB-197459</b>	7	Method Blank				Run: ICPMS208-B_250226A			02/27/25 14:02	
Arsenic		ND	ug/filter	0.06						
Cadmium		ND	ug/filter	0.004						
Copper		ND	ug/filter	0.2						
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)



# Work Order Receipt Checklist

Bison Engineering

B25030651

Login completed by: Yvonna E. Smith

Date Received: 2/14/2025

Reviewed by: gmccartney

Received by: CMJ

Reviewed Date: 3/11/2025

Carrier name: Hand Deliver

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on all shipping container(s)/cooler(s)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on all sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Applicable <input type="checkbox"/>
Container/Temp Blank temperature:	-1.3°C Blue Ice		
Containers requiring zero headspace have no headspace or bubble that is <6mm (1/4").	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Applicable <input checked="" type="checkbox"/>

---

## 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](http://www.energylab.com) website:

	Agency	Number
<b>Billings, MT</b>    	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
<b>Casper, WY</b>  	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
<b>Gillette, WY</b>	US EPA Region VIII	WY00006
<b>Helena, MT</b>	Colorado	MT00945
	Montana	CERT0079
	Nevada	NV-C24-00119
	US EPA Region VIII	Reciprocal
	USDA Soil Permit	P330-20-00090



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# Chain of Custody & Analytical Request Record

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Page 1 of 3

## 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 myyoung@bison-eng.com  
 Receive Invoice ☐ Hard Copy ☒ Email ☐ Hard Copy ☐ Email  
 Purchase Order HYD223165  
 Quote

## 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/Remarks:  
☐ LEVEL IV ☐ NELAC ☐ EDDI/EDT (contact laboratory) ☐ Other

## Comments

Analyze per history

## Project Information

Project Name, PWSID, Permit, etc. Hydrometrics/Kerr-McGee  
 Sampler Name  
 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 - Solids  
 V - Vegetation  
 B - Bioassay  
 O - Other  
 DW - Drinking Water

## Analysis Requested

See Attached

Sample Identification (Name, Location, Interval, etc.)	Collection Date	Time	Matrix (See Codes Above)	Number of Containers	Analysis Requested	As noted	ELI LAB ID RUSH TAT
1 Particulate filter C1667952 PM10	11/1/25	24 hr Composite	W - Water	1	on filter	X	B25020808
2 Particulate filter C1667953 TSP	11/1/25	24 hr Composite	S - Solids	1	on filter	X	logged separately 03/11/15
3 Particulate filter C1667954 PM10	11/1/25	24 hr Composite	V - Vegetation	1	on filter	X	
4 Particulate filter C1667955 TSP	11/1/25	24 hr Composite	B - Bioassay	1	on filter	X	
5 Particulate filter C1667956 PM10	11/13/25	24 hr Composite	O - Other	1	on filter	X	
6 Particulate filter C1667997 TSP	11/13/25	24 hr Composite	DW - Drinking Water	1	on filter	X	
7 Particulate filter C1667998 Field Blank	11/17/25	0916		1	on filter	X	
8 Particulate filter C1527198 Lab Blank	12/20/24	1430		1	on filter	X	
9 Particulate filter C1667999 PM10	11/19/25	24 hr Composite		1	on filter	X	
10 Particulate filter C1668000 TSP	11/19/25	24 hr Composite		1	on filter	X	

Custody Record MUST be signed  
 Relinquished by (print) Don Milmine  
 Date/Time 2/4/25 1441  
 Signature  
 Received by (print) Cassel Stasi  
 Date/Time 03/10/25 1441  
 Signature  
 Shipped By  
 Cooler ID(s)  
 Custody Seals Y N C B  
 Receipt Temp °C  
 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





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# Chain of Custody & Analytical Request Record

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Page 2 of 3

## 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	myyoung@bison-eng.com
Receive Invoice	<input type="checkbox"/> Hard Copy <input checked="" type="checkbox"/> Email
Purchase Order	Quote
MTR223018	Bottle Order

## Report Information (If different than Account Information)

Company/Name Bison Engineering, Inc.	
Contact	Don Milimine
Phone	(406) 208-4833
Mailing Address 2751 Enterprise Avenue Suite 2	
City, State, Zip	Billings, MT 59102
Email	dmilimine@bison-eng.com
Receive Report	<input type="checkbox"/> Hard Copy <input checked="" type="checkbox"/> Email
Special Report/Format:	<input type="checkbox"/> LEVEL IV <input type="checkbox"/> NELAC <input type="checkbox"/> EDD/EDT (contact laboratory) <input type="checkbox"/> Other

## Comments

Analyze per history
---------------------

## Project Information

Project Name, PWSID, Permit, etc. Montana Resources/Greely School PW	
Sampler Name	Sampler Phone
Sample Origin State	Montana
EPA/State Compliance <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
URANIUM MINING CLIENTS MUST indicate sample type.	
<input type="checkbox"/> NOT Source or Byproduct Material	
<input type="checkbox"/> Source/Processed Ore (Ground or Refined) **CALL BEFORE SENDING	
<input type="checkbox"/> 11e(2) Byproduct Material (Can ONLY be Submitted to ELI Casper Location)	

## Matrix Codes

A - Air	W - Water
S - Solids	V - Vegetation
B - Bioassay	O - Other
DW - Drinking Water	

## Analysis Requested

Asenic	Cadmium	Copper	Manganese	Molybdenum	Zinc
--------	---------	--------	-----------	------------	------

See Attached
--------------

Sample Identification (Name, Location, Interval, etc.)	Collection Date	Time	Number of Containers	Matrix (See Codes Above)	Asenic	Cadmium	Copper	Manganese	Molybdenum	Zinc	ELI LAB ID Laboratory Use Only
1 Particulate filter C1853161 Field Blank	1/8/25	1505	1	On Filter	X	X	X	X	X	X	B250288
2 Particulate filter C1853162 TSP Walnut ST	1/13/25	24 hr Composite	1	On Filter	X	X	X	X	X	X	B25030451-002
3 Particulate filter C1853163 TSP Pine ST	1/13/25	24 hr Composite	1	On Filter	X	X	X	X	X	X	-003
4 Particulate filter C1853164 Lab Blank	12/30/24	1800	1	On Filter	X	X	X	X	X	X	-004
5 Particulate filter C1853165 TSP Walnut ST	1/19/25	24 hr Composite	1	On Filter	X	X	X	X	X	X	-005
6 Particulate filter C1853166 TSP Pine ST	1/19/25	24 hr Composite	1	On Filter	X	X	X	X	X	X	-000
7 Particulate filter C1853167 TSP Pine ST	1/25/25	24 hr Composite	1	On Filter	X	X	X	X	X	X	-001
8 Particulate filter C1853168 TSP Walnut ST	1/25/25	24 hr Composite	1	On Filter	X	X	X	X	X	X	-006
9 Particulate filter C1853169 TSP Pine ST	1/31/25	24 hr Composite	1	On Filter	X	X	X	X	X	X	-009
10 Particulate filter C1853170 TSP Walnut ST	1/31/25	24 hr Composite	1	On Filter	X	X	X	X	X	X	-010

Custody Record MUST be signed	Relinquished by (print) Don Milimine	Signature	Relinquished by (print) Don Milimine	Signature	Received by (print) Casper	Signature	Date/Time 2/14/25 1441
Shipped By	Cooler ID(s)	Custody Seals Y N C B	Intact Y N	Receipt Temp °C	On Ice Y N	Payment Type Cash Check	Amount \$
LABORATORY USE ONLY						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





## Chain of Custody & Analytical Request Record

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Account Information <i>(Billing information)</i>				Report Information <i>(if different than Account Information)</i>		Comments
Company/Name <b>Bison Engineering, Inc.</b>				Company/Name <b>Bison Engineering, Inc.</b>		
Contact <b>Shelley Argott-Brown</b>				Contact <b>Don Milmine</b>		
Phone <b>(406) 442-5768</b>				Phone <b>(406) 208-4833</b>		
Mailing Address <b>3143 E Lyndale Avenue</b>				Mailing Address <b>2751 Enterprise Avenue Suite 2</b>		
City, State, Zip <b>Helena MT, 59601</b>				City, State, Zip <b>Billings, MT 59102</b>		
Email <b>sbrown-argott@bison-eng.com</b>				Email <b>dmilmine@bison-eng.com</b>		
Receive Invoice <input type="checkbox"/> Hard Copy <input type="checkbox"/> Email <input type="checkbox"/>		Receive Report <input type="checkbox"/> Hard Copy <input type="checkbox"/> Email <input type="checkbox"/>				
Purchase Order <b>MTR2224018</b>		Bottle Order		Special Report/Formats:		
Quote				<input type="checkbox"/> LEVEL IV <input type="checkbox"/> NELAC <input type="checkbox"/> EDD/EDT (contact laboratory) <input type="checkbox"/> Other _____		

Project Information			
Project Name, PWSID, Permit, etc. Montana Resources/Greely School DH			
Sampler Name	Sampler Phone		
Sample Origin State	Montana	EPA/State Compliance	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
URANIUM MINING CLIENTS MUST indicate sample type. <input type="checkbox"/> NOT Source or Byproduct Material <input type="checkbox"/> Source/Processed Ore (Ground or Refined) **CALL BEFORE SENDING			

U-238, 235, 234, 233, 232, 231, 230, 229, 228, 227, 226, 225, 224, 223, 222, 221, 220, 219, 218, 217, 216, 215, 214, 213, 212, 211, 210, 209, 208, 207, 206, 205, 204, 203, 202, 201, 200, 199, 198, 197, 196, 195, 194, 193, 192, 191, 190, 189, 188, 187, 186, 185, 184, 183, 182, 181, 180, 179, 178, 177, 176, 175, 174, 173, 172, 171, 170, 169, 168, 167, 166, 165, 164, 163, 162, 161, 160, 159, 158, 157, 156, 155, 154, 153, 152, 151, 150, 149, 148, 147, 146, 145, 144, 143, 142, 141, 140, 139, 138, 137, 136, 135, 134, 133, 132, 131, 130, 129, 128, 127, 126, 125, 124, 123, 122, 121, 120, 119, 118, 117, 116, 115, 114, 113, 112, 111, 110, 109, 108, 107, 106, 105, 104, 103, 102, 101, 100, 99, 98, 97, 96, 95, 94, 93, 92, 91, 90, 89, 88, 87, 86, 85, 84, 83, 82, 81, 80, 79, 78, 77, 76, 75, 74, 73, 72, 71, 70, 69, 68, 67, 66, 65, 64, 63, 62, 61, 60, 59, 58, 57, 56, 55, 54, 53, 52, 51, 50, 49, 48, 47, 46, 45, 44, 43, 42, 41, 40, 39, 38, 37, 36, 35, 34, 33, 32, 31, 30, 29, 28, 27, 26, 25, 24, 23, 22, 21, 20, 19, 18, 17, 16, 15, 14, 13, 12, 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1

Sample Identification (Name, Location, Interval, etc.)	Collection		Matrix (Base Grades Above)	Arsenic	Cadmium	Copper	Lead	Manganese	Molybdenum	Zinc	See	ELI LAB ID Laboratory Use Only
	Date	Time										
1 Particulate filter C1109051 TSP 1/6 - 1/9	1/6 → 1/6	continuous	1	OK test line filter	X	X	X	X	X	X		B25-020808
2 Particulate filter C1109052 PM10	1/17/25	24 hr composite	1	OK test line filter	X	X	X	X	X	X		logged separately
3 Particulate filter C1109053 Lab Blank	12/31/24	1400	1	OK test line filter	X	X	X	X	X	X		
4 Particulate filter C1109054 TSP 1/9 - 1/14	1/9 → 1/14	continuous	1	OK test line filter	X	X	X	X	X	X		
5 Particulate filter C1109055 PM10	1/13/25	24 hr composite	1	OK test line filter	X	X	X	X	X	X		
6 Particulate filter C1109056 TSP 1/14 - 1/21	1/14 → 1/21	continuous	1	OK test line filter	X	X	X	X	X	X		
7 Particulate filter C1109057 PM10	1/19/25	24 hr composite	1	OK test line filter	X	X	X	X	X	X		
8 Particulate filter C1109058 TSP 1/21 - 1/28	1/21 → 1/28	continuous	1	OK test line filter	X	X	X	X	X	X		
9 Particulate filter C1109059 PM10	1/25/25	24 hr composite	1	OK test line filter	X	X	X	X	X	X		
10 Particulate filter C1109060 Field Blank	1/28/25	1400	1	OK test line filter	X	X	X	X	X	X		

Custody Record MUST be signed	Requisitioned by (print)	Signature	Received by (print)				Signature	Date/Time	Signature
	Requisitioned by (print)	Signature	Received by Laboratory (print)				Signature	Date/Time	Signature
LABORATORY USE ONLY									
Shipped By	Coder ID(s)	Intact	Temp Blank	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	\$	

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

March 18, 2025

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

Work Order: B25030632 Quote ID: B4795

Project Name: Montana Resources/Greely School PW

Energy Laboratories Inc Billings MT received the following 10 samples for Bison Engineering on 3/10/2025 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B25030632-001	Particulate Filter C1109071 Pine ST TSP	02/08/25 0:00	03/10/25	Air	Metals on air filter by ICP/ICPMS Nitric acid-extraction by 40CFR50G
B25030632-002	Particulate Filter C1109072 Lab Blank	01/27/25 16:40	03/10/25	Air	Same As Above
B25030632-003	Particulate Filter C1109073 Walnut ST TSP	02/08/25 0:00	03/10/25	Air	Same As Above
B25030632-004	Particulate Filter C1109074 Pine ST TSP	02/12/25 0:00	03/10/25	Air	Same As Above
B25030632-005	Particulate Filter C1109075 Walnut ST TSP	02/12/25 0:00	03/10/25	Air	Same As Above
B25030632-006	Particulate Filter C1109095 Pine ST TSP	02/21/25 0:00	03/10/25	Air	Same As Above
B25030632-007	Particulate Filter C1109096 Walnut ST TSP	02/21/25 0:00	03/10/25	Air	Same As Above
B25030632-008	Particulate Filter C1109097 Pine ST TSP	02/26/25 0:00	03/10/25	Air	Same As Above
B25030632-009	Particulate Filter C1109098 Walnut ST TSP	02/26/25 0:00	03/10/25	Air	Same As Above
B25030632-010	Particulate Filter C1853195 TSP Field Blank	02/22/25 13:45	03/10/25	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 C1109071 Pine ST TSP  
**Project:** Montana Resources/Greely School PW  
**Matrix:** Air

**Lab ID:** B25030632-001  
**Collection Date:** 02/08/25  
**Date Received:** 03/10/25  
**Report Date:** 03/18/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
<b>METALS IN AIR</b>												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	03/14/25 02:49 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 368		197893
Cadmium	0.0045	ug/filter	J	1.0	0.0044	E200.8	03/14/25 02:49 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 368		197893
Copper	0.70	ug/filter	J	1.0	0.16	E200.8	03/14/25 02:49 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 368		197893
Lead	0.077	ug/filter	J	1.0	0.042	E200.8	03/14/25 02:49 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 368		197893
Manganese	0.19	ug/filter	J	1.0	0.18	E200.8	03/14/25 02:49 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 368		197893
Molybdenum	0.034	ug/filter	J	1.0	0.0059	E200.8	03/14/25 02:49 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 368		197893
Zinc	0.46	ug/filter	J	1.0	0.30	E200.8	03/14/25 02:49 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 368		197893

**Report** RL - Analyte Reporting Limit  
**Definitions:** 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)



## LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Client:** Bison Engineering  
**Client Sample ID:** Particulate Filter C1109072 Lab Blank  
**Project:** Montana Resources/Greely School PW  
**Matrix:** Air

**Lab ID:** B25030632-002  
**Collection Date:** 01/27/25 16:40  
**Date Received:** 03/10/25  
**Report Date:** 03/18/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
<b>METALS IN AIR</b>												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	03/14/25 02:55 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 369		197893
Cadmium	ND	ug/filter		1.0	0.0044	E200.8	03/14/25 02:55 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 369		197893
Copper	ND	ug/filter		1.0	0.16	E200.8	03/14/25 02:55 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 369		197893
Lead	ND	ug/filter		1.0	0.042	E200.8	03/14/25 02:55 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 369		197893
Manganese	ND	ug/filter		1.0	0.18	E200.8	03/14/25 02:55 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 369		197893
Molybdenum	ND	ug/filter		1.0	0.0059	E200.8	03/12/25 20:41 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 70		197893
Zinc	ND	ug/filter		1.0	0.30	E200.8	03/14/25 02:55 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 369		197893

**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 C1109073 Walnut ST TSP  
**Project:** Montana Resources/Greely School PW  
**Matrix:** Air

**Lab ID:** B25030632-003  
**Collection Date:** 02/08/25  
**Date Received:** 03/10/25  
**Report Date:** 03/18/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
<b>METALS IN AIR</b>												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	03/14/25 03:01 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 370		197893
Cadmium	ND	ug/filter		1.0	0.0044	E200.8	03/14/25 03:01 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 370		197893
Copper	0.84	ug/filter	J	1.0	0.16	E200.8	03/14/25 03:01 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 370		197893
Lead	0.055	ug/filter	J	1.0	0.042	E200.8	03/14/25 03:01 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 370		197893
Manganese	0.21	ug/filter	J	1.0	0.18	E200.8	03/14/25 03:01 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 370		197893
Molybdenum	0.065	ug/filter	J	1.0	0.0059	E200.8	03/12/25 20:47 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 71		197893
Zinc	0.60	ug/filter	J	1.0	0.30	E200.8	03/14/25 03:01 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 370		197893

**Report** RL - Analyte Reporting Limit  
**Definitions:** 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)



## LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Client:** Bison Engineering  
**Client Sample ID:** Particulate Filter C1109074 Pine ST TSP  
**Project:** Montana Resources/Greely School PW  
**Matrix:** Air

**Lab ID:** B25030632-004  
**Collection Date:** 02/12/25  
**Date Received:** 03/10/25  
**Report Date:** 03/18/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
<b>METALS IN AIR</b>												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	03/14/25 03:19 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 373		197893
Cadmium	0.0056	ug/filter	J	1.0	0.0044	E200.8	03/14/25 03:19 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 373		197893
Copper	1.3	ug/filter		1.0	0.16	E200.8	03/14/25 03:19 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 373		197893
Lead	0.073	ug/filter	J	1.0	0.042	E200.8	03/14/25 03:19 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 373		197893
Manganese	0.49	ug/filter	J	1.0	0.18	E200.8	03/14/25 03:19 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 373		197893
Molybdenum	0.088	ug/filter	J	1.0	0.0059	E200.8	03/12/25 21:05 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 74		197893
Zinc	0.97	ug/filter	J	1.0	0.30	E200.8	03/14/25 03:19 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 373		197893

**Report** RL - Analyte Reporting Limit  
**Definitions:** 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)



## LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Client:** Bison Engineering  
**Client Sample ID:** Particulate Filter C1109075 Walnut ST TSP  
**Project:** Montana Resources/Greely School PW  
**Matrix:** Air

**Lab ID:** B25030632-005  
**Collection Date:** 02/12/25  
**Date Received:** 03/10/25  
**Report Date:** 03/18/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
<b>METALS IN AIR</b>												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	03/14/25 03:25 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 374		197893
Cadmium	0.0049	ug/filter	J	1.0	0.0044	E200.8	03/14/25 03:25 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 374		197893
Copper	0.82	ug/filter	J	1.0	0.16	E200.8	03/14/25 03:25 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 374		197893
Lead	0.075	ug/filter	J	1.0	0.042	E200.8	03/14/25 03:25 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 374		197893
Manganese	0.37	ug/filter	J	1.0	0.18	E200.8	03/14/25 03:25 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 374		197893
Molybdenum	0.075	ug/filter	J	1.0	0.0059	E200.8	03/12/25 21:11 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 75		197893
Zinc	0.94	ug/filter	J	1.0	0.30	E200.8	03/14/25 03:25 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 374		197893

**Report** RL - Analyte Reporting Limit  
**Definitions:** 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)



## LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Client:** Bison Engineering  
**Client Sample ID:** Particulate Filter C1109095 Pine ST TSP  
**Project:** Montana Resources/Greely School PW  
**Matrix:** Air

**Lab ID:** B25030632-006  
**Collection Date:** 02/21/25  
**Date Received:** 03/10/25  
**Report Date:** 03/18/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
<b>METALS IN AIR</b>												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	03/14/25 03:31 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 375		197893
Cadmium	ND	ug/filter		1.0	0.0044	E200.8	03/14/25 03:31 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 375		197893
Copper	0.45	ug/filter	J	1.0	0.16	E200.8	03/14/25 03:31 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 375		197893
Lead	ND	ug/filter		1.0	0.042	E200.8	03/14/25 03:31 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 375		197893
Manganese	ND	ug/filter		1.0	0.18	E200.8	03/14/25 03:31 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 375		197893
Molybdenum	0.023	ug/filter	J	1.0	0.0059	E200.8	03/14/25 03:31 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 375		197893
Zinc	0.39	ug/filter	J	1.0	0.30	E200.8	03/14/25 03:31 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 375		197893

**Report** RL - Analyte Reporting Limit  
**Definitions:** 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)



## LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Client:** Bison Engineering  
**Client Sample ID:** Particulate Filter C1109096 Walnut ST TSP  
**Project:** Montana Resources/Greely School PW  
**Matrix:** Air

**Lab ID:** B25030632-007  
**Collection Date:** 02/21/25  
**Date Received:** 03/10/25  
**Report Date:** 03/18/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
<b>METALS IN AIR</b>												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	03/14/25 03:37 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 376		197893
Cadmium	ND	ug/filter		1.0	0.0044	E200.8	03/14/25 03:37 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 376		197893
Copper	0.22	ug/filter	J	1.0	0.16	E200.8	03/14/25 03:37 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 376		197893
Lead	ND	ug/filter		1.0	0.042	E200.8	03/14/25 03:37 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 376		197893
Manganese	ND	ug/filter		1.0	0.18	E200.8	03/14/25 03:37 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 376		197893
Molybdenum	0.018	ug/filter	J	1.0	0.0059	E200.8	03/14/25 03:37 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 376		197893
Zinc	0.37	ug/filter	J	1.0	0.30	E200.8	03/14/25 03:37 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 376		197893

**Report Definitions:** RL - Analyte Reporting 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)



## LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Client:** Bison Engineering  
**Client Sample ID:** Particulate Filter C1109097 Pine ST TSP  
**Project:** Montana Resources/Greely School PW  
**Matrix:** Air

**Lab ID:** B25030632-008  
**Collection Date:** 02/26/25  
**Date Received:** 03/10/25  
**Report Date:** 03/18/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
<b>METALS IN AIR</b>												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	03/14/25 03:43 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 377		197893
Cadmium	ND	ug/filter		1.0	0.0044	E200.8	03/14/25 03:43 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 377		197893
Copper	0.50	ug/filter	J	1.0	0.16	E200.8	03/14/25 03:43 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 377		197893
Lead	ND	ug/filter		1.0	0.042	E200.8	03/14/25 03:43 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 377		197893
Manganese	ND	ug/filter		1.0	0.18	E200.8	03/14/25 03:43 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 377		197893
Molybdenum	0.021	ug/filter	J	1.0	0.0059	E200.8	03/14/25 03:43 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 377		197893
Zinc	ND	ug/filter		1.0	0.30	E200.8	03/14/25 03:43 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 377		197893

**Report** RL - Analyte Reporting Limit  
**Definitions:** 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)





## LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Client:** Bison Engineering  
**Client Sample ID:** Particulate Filter C1109098 Walnut ST TSP  
**Project:** Montana Resources/Greely School PW  
**Matrix:** Air

**Lab ID:** B25030632-009  
**Collection Date:** 02/26/25  
**Date Received:** 03/10/25  
**Report Date:** 03/18/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
<b>METALS IN AIR</b>												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	03/14/25 03:49 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 378		197893
Cadmium	ND	ug/filter		1.0	0.0044	E200.8	03/14/25 03:49 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 378		197893
Copper	0.17	ug/filter	J	1.0	0.16	E200.8	03/14/25 03:49 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 378		197893
Lead	ND	ug/filter		1.0	0.042	E200.8	03/14/25 03:49 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 378		197893
Manganese	ND	ug/filter		1.0	0.18	E200.8	03/14/25 03:49 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 378		197893
Molybdenum	0.018	ug/filter	J	1.0	0.0059	E200.8	03/15/25 09:39 / jks	03/11/25 10:43	40CFR50	ICPMS208-B_250314A : 236		197893
Zinc	ND	ug/filter		1.0	0.30	E200.8	03/14/25 03:49 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 378		197893

**Report** RL - Analyte Reporting Limit  
**Definitions:** 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)



## LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Client:** Bison Engineering  
**Client Sample ID:** Particulate Filter C1853195 TSP Field Blank  
**Project:** Montana Resources/Greely School PW  
**Matrix:** Air

**Lab ID:** B25030632-010  
**Collection Date:** 02/22/25 13:45  
**Date Received:** 03/10/25  
**Report Date:** 03/18/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
<b>METALS IN AIR</b>												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	03/14/25 03:55 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 379		197893
Cadmium	ND	ug/filter		1.0	0.0044	E200.8	03/14/25 03:55 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 379		197893
Copper	ND	ug/filter		1.0	0.16	E200.8	03/14/25 03:55 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 379		197893
Lead	ND	ug/filter		1.0	0.042	E200.8	03/14/25 03:55 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 379		197893
Manganese	ND	ug/filter		1.0	0.18	E200.8	03/14/25 03:55 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 379		197893
Molybdenum	ND	ug/filter		1.0	0.0059	E200.8	03/12/25 21:41 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 80		197893
Zinc	ND	ug/filter		1.0	0.30	E200.8	03/14/25 03:55 / ae	03/11/25 10:43	40CFR50	ICPMS208-B_250312B : 379		197893

**Report Definitions:** RL - Analyte Reporting Limit

MCL - Maximum Contaminant Level

ND - Not detected at the Reporting Limit (RL)

## QA/QC Summary Report

Prepared by Billings, MT Branch

Work Order: B25030632

Report Date: 03/18/25

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Analytical Run: ICPMS208-B_250312B			
<b>Lab ID: QCS</b>	7	Initial Calibration Verification Standard							03/12/25 15:09	
Arsenic		0.0509	mg/L	0.0050	102	90	110			
Cadmium		0.0262	mg/L	0.0010	105	90	110			
Copper		0.0526	mg/L	0.010	105	90	110			
Lead		0.0502	mg/L	0.0010	100	90	110			
Manganese		0.259	mg/L	0.0050	104	90	110			
Molybdenum		0.0504	mg/L	0.0050	101	90	110			
Zinc		0.0531	mg/L	0.0050	106	90	110			
<b>Lab ID: CCV</b>	7	Continuing Calibration Verification Standard							03/12/25 19:24	
Arsenic		0.0497	mg/L	0.0050	99	90	110			
Cadmium		0.0479	mg/L	0.0010	96	90	110			
Copper		0.0501	mg/L	0.010	100	90	110			
Lead		0.0482	mg/L	0.0010	96	90	110			
Manganese		0.0495	mg/L	0.0050	99	90	110			
Molybdenum		0.0468	mg/L	0.0050	94	90	110			
Zinc		0.0498	mg/L	0.0050	100	90	110			
<b>Lab ID: CCV</b>	7	Continuing Calibration Verification Standard							03/12/25 20:53	
Arsenic		0.0495	mg/L	0.0050	99	90	110			
Cadmium		0.0492	mg/L	0.0010	98	90	110			
Copper		0.0501	mg/L	0.010	100	90	110			
Lead		0.0479	mg/L	0.0010	96	90	110			
Manganese		0.0492	mg/L	0.0050	98	90	110			
Molybdenum		0.0482	mg/L	0.0050	96	90	110			
Zinc		0.0487	mg/L	0.0050	97	90	110			
<b>Lab ID: QCS</b>	7	Initial Calibration Verification Standard							03/13/25 22:27	
Arsenic		0.0530	mg/L	0.0050	106	90	110			
Cadmium		0.0258	mg/L	0.0010	103	90	110			
Copper		0.0533	mg/L	0.010	107	90	110			
Lead		0.0499	mg/L	0.0010	100	90	110			
Manganese		0.264	mg/L	0.0050	105	90	110			
Molybdenum		0.0502	mg/L	0.0050	100	90	110			
Zinc		0.0535	mg/L	0.0050	107	90	110			
<b>Lab ID: CCV</b>	7	Continuing Calibration Verification Standard							03/14/25 01:50	
Arsenic		0.0463	mg/L	0.0050	93	90	110			
Cadmium		0.0469	mg/L	0.0010	94	90	110			
Copper		0.0482	mg/L	0.010	96	90	110			
Lead		0.0462	mg/L	0.0010	92	90	110			
Manganese		0.0473	mg/L	0.0050	95	90	110			
Molybdenum		0.0458	mg/L	0.0050	92	90	110			
Zinc		0.0472	mg/L	0.0050	94	90	110			
<b>Lab ID: CCV</b>	7	Continuing Calibration Verification Standard							03/14/25 03:07	
Arsenic		0.0476	mg/L	0.0050	95	90	110			
Cadmium		0.0461	mg/L	0.0010	92	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: B25030632

Report Date: 03/18/25

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>								Analytical Run: ICPMS208-B_250312B		
<b>Lab ID: CCV</b>	7	Continuing Calibration Verification Standard							03/14/25 03:07	
Copper		0.0488	mg/L	0.010	98	90	110			
Lead		0.0457	mg/L	0.0010	91	90	110			
Manganese		0.0479	mg/L	0.0050	96	90	110			
Molybdenum		0.0448	mg/L	0.0050	90	90	110			
Zinc		0.0476	mg/L	0.0050	95	90	110			
<b>Method: E200.8</b>								Batch: 197893		
<b>Lab ID: MB-197893</b>		Method Blank				Run: ICPMS208-B_250312B		03/12/25 20:11		
Molybdenum		ND	ug/filter	0.006						
<b>Lab ID: LCS-197893</b>	7	Laboratory Control Sample							Run: ICPMS208-B_250312B	
Arsenic		102	ug/filter	1.0	102	85	115			03/12/25 20:17
Cadmium		52.8	ug/filter	1.0	106	85	115			
Copper		104	ug/filter	5.0	104	85	115			
Lead		104	ug/filter	1.0	104	85	115			
Manganese		506	ug/filter	5.0	101	85	115			
Molybdenum		101	ug/filter	1.0	101	85	115			
Zinc		103	ug/filter	5.0	103	85	115			
<b>Lab ID: LCSD-197893</b>	7	Laboratory Control Sample Duplicate							Run: ICPMS208-B_250312B	
Arsenic		104	ug/filter	1.0	104	85	115			03/12/25 20:23
Cadmium		53.0	ug/filter	1.0	106	85	115			
Copper		106	ug/filter	5.0	106	85	115			
Lead		104	ug/filter	1.0	104	85	115			
Manganese		516	ug/filter	5.0	103	85	115			
Molybdenum		103	ug/filter	1.0	103	85	115			
Zinc		107	ug/filter	5.0	107	85	115			
<b>Lab ID: MB-197893</b>	7	Method Blank							Run: ICPMS208-B_250312B	
Arsenic		ND	ug/filter	0.06						03/14/25 02:43
Cadmium		ND	ug/filter	0.004						
Copper		ND	ug/filter	0.2						
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: B25030632

Report Date: 03/18/25

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8								Analytical Run: ICPMS208-B_250314A		
Lab ID: QCS	Initial Calibration Verification Standard									03/15/25 07:34
Molybdenum		0.0519	mg/L	0.0050	104	90	110			
Lab ID: CCV	Continuing Calibration Verification Standard									03/15/25 08:04
Molybdenum		0.0470	mg/L	0.0050	94	90	110			
Lab ID: CCV	Continuing Calibration Verification Standard									03/15/25 09:21
Molybdenum		0.0483	mg/L	0.0050	97	90	110			
Method: E200.8								Batch: 197893		
Lab ID: MB-197893	Method Blank					Run: ICPMS208-B_250314A				03/15/25 08:33
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

B25030632

Login completed by: Crystal M. Jones

Date Received: 3/10/2025

Reviewed by: gmccartney

Received by: CMJ

Reviewed Date: 3/14/2025

Carrier name: Hand Deliver

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on all shipping container(s)/cooler(s)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on all sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Applicable <input type="checkbox"/>
Container/Temp Blank temperature:	1.9°C Blue Ice		
Containers requiring zero headspace have no headspace or bubble that is <6mm (1/4").	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Applicable <input checked="" type="checkbox"/>

## 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 sample identification indicated on the container is C1109099 MTR PW and on the chain of custody it is C1853195 TSP Field Blank. Proceeded with the sample identification as indicated on the chain of custody per email from Don



## Work Order Receipt Checklist - Continued


Bison Engineering

B25030632

Milmine on 03/11/25. CMJ 03/11/25

## Laboratory Certifications and Accreditations

Current certificates are available at [www.energylab.com](http://www.energylab.com) website:

	Agency	Number
<b>Billings, MT</b>   	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
<b>Casper, WY</b>  	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
<b>Gillette, WY</b>	US EPA Region VIII	WY00006
<b>Helena, MT</b>	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

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

Purchase Order: **MTR223018**

Quote: ☐ Hard Copy ☐ 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/Forms: ☐ LEVEL IV ☐ NELAC ☐ EDD/EDT (contact laboratory) ☐ Other

## Comments

Analyze per history

## Project Information

Project Name, PWSID, Permit, etc.: **Montana Resources/Greely School PW**

Sampler Name: **Greely School PW**

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 - Solids

V - Vegetation

B - Biossary

O - Other

DW - Drinking Water

## Analysis Requested

Lead

Copper

Cadmium

Arsenic

Manganese

Molybdenum

Zinc

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	Time	Number of Containers	Matrix (See Codes)	Received by (print)	Date/Time	Signature
1 Particulate filter C1109071 Pine ST TSP	2/8/25	24 hr Composite	1	on filter	Don Milmine	3/10/25 1651	Signature
2 Particulate filter C1109072 Lab Blank	1/27/25	1640	1	on filter	Don Milmine	3/10/25 1651	Signature
3 Particulate filter C1109073 Walnut ST TSP	2/8/25	24 hr Composite	1	on filter	Don Milmine	3/10/25 1651	Signature
4 Particulate filter C1109074 Pine ST TSP	2/12/25	24 hr Composite	1	on filter	Don Milmine	3/10/25 1651	Signature
5 Particulate filter C1109075 Walnut ST TSP	2/12/25	24 hr Composite	1	on filter	Don Milmine	3/10/25 1651	Signature
6 Particulate filter C1109095 Pine ST TSP	2/21/25	24 hr Composite	1	on filter	Don Milmine	3/10/25 1651	Signature
7 Particulate filter C1109096 Walnut ST TSP	2/21/25	24 hr Composite	1	on filter	Don Milmine	3/10/25 1651	Signature
8 Particulate filter C1109097 Pine ST TSP	2/26/25	24 hr Composite	1	on filter	Don Milmine	3/10/25 1651	Signature
9 Particulate filter C1109098 Walnut ST TSP	2/26/25	24 hr Composite	1	on filter	Don Milmine	3/10/25 1651	Signature
10 Particulate filter C1853195 TSP Field Blank	2/22/25	1345	1	on filter	Don Milmine	3/10/25 1651	Signature

Custody Record MUST be signed

Relinquished by (print): **Don Milmine**

Relinquished by (signature): **Don Milmine**

Signature: **Don Milmine**

Date/Time: **3/10/25 1651**

Shipped By: **Don Milmine**

Signature: **Don Milmine**

Date/Time: **3/10/25 1651**

Receipt Temp: **1651**

Intact: **Y**

Custody Seals: **Y N C B**

Shipped By: **Don Milmine**

Signature: **Don Milmine**

Date/Time: **3/10/25 1651**

Amount: **\$**

Payment Type: **CC**

Check: **Y**

Receipt Number (cash/check only): **1651**

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

April 10, 2025

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

Work Order: B25032123 Quote ID: B4795

Project Name: Montana Resources/Greely School PW

Energy Laboratories Inc Billings MT received the following 10 samples for Bison Engineering on 3/28/2025 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B25032123-001	Particulate filter C1104716 Pine ST TSP	03/02/25 00:00	03/28/25	Air	Metals on air filter by ICP/ICPMS Nitric acid-extraction by 40CFR50G
B25032123-002	Particulate filter C1104717 Walnut St	03/02/25 00:00	03/28/25	Air	Same As Above
B25032123-003	Particulate filter C1104718 Field Blank	03/03/25 11:06	03/28/25	Air	Same As Above
B25032123-004	Particulate filter C1104719 Walnut ST TSP	03/08/25 00:00	03/28/25	Air	Same As Above
B25032123-005	Particulate filter C1104720 Pine ST TSP	03/08/25 00:00	03/28/25	Air	Same As Above
B25032123-006	Particulate filter C1104721 Pine ST TSP	03/14/25 00:00	03/28/25	Air	Same As Above
B25032123-007	Particulate filter C1104722 Walnut ST TSP	03/14/25 00:00	03/28/25	Air	Same As Above
B25032123-008	Particulate filter C1104723 Lab Blank	02/14/25 16:30	03/28/25	Air	Same As Above
B25032123-009	Particulate filter C1104724 Pine ST TSP	03/19/25 00:00	03/28/25	Air	Same As Above
B25032123-010	Particulate filter C1853195 Walnut ST TSP	03/19/25 00:00	03/28/25	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 C1104716 Pine ST TSP  
**Project:** Montana Resources/Greely School PW  
**Matrix:** Air

**Lab ID:** B25032123-001  
**Collection Date:** 03/02/25  
**Date Received:** 03/28/25  
**Report Date:** 04/10/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
<b>METALS IN AIR</b>												
Arsenic	0.087	ug/filter	J	1.0	0.058	E200.8	04/04/25 17:15 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250404A : 72		198583
Cadmium	ND	ug/filter		1.0	0.0044	E200.8	04/09/25 19:45 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250409A : 96		198583
Copper	1.5	ug/filter		1.0	0.16	E200.8	04/04/25 17:15 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250404A : 72		198583
Lead	0.10	ug/filter	J	1.0	0.042	E200.8	04/08/25 03:45 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250407A : 157		198583
Manganese	0.37	ug/filter	J	1.0	0.18	E200.8	04/04/25 17:15 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250404A : 72		198583
Molybdenum	0.099	ug/filter	J	1.0	0.0059	E200.8	04/08/25 03:45 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250407A : 157		198583
Zinc	0.71	ug/filter	J	1.0	0.30	E200.8	04/04/25 17:15 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250404A : 72		198583

**Report** RL - Analyte Reporting Limit  
**Definitions:** 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)



## LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Client:** Bison Engineering  
**Client Sample ID:** Particulate filter C1104717 Walnut St  
**Project:** Montana Resources/Greely School PW  
**Matrix:** Air

**Lab ID:** B25032123-002  
**Collection Date:** 03/02/25  
**Date Received:** 03/28/25  
**Report Date:** 04/10/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
<b>METALS IN AIR</b>												
Arsenic	0.089	ug/filter	J	1.0	0.058	E200.8	04/04/25 17:21 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250404A : 73		198583
Cadmium	0.0048	ug/filter	J	1.0	0.0044	E200.8	04/09/25 19:51 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250409A : 97		198583
Copper	1.1	ug/filter		1.0	0.16	E200.8	04/04/25 17:21 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250404A : 73		198583
Lead	0.12	ug/filter	J	1.0	0.042	E200.8	04/08/25 03:51 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250407A : 158		198583
Manganese	0.55	ug/filter	J	1.0	0.18	E200.8	04/04/25 17:21 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250404A : 73		198583
Molybdenum	0.067	ug/filter	J	1.0	0.0059	E200.8	04/08/25 03:51 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250407A : 158		198583
Zinc	0.90	ug/filter	J	1.0	0.30	E200.8	04/04/25 17:21 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250404A : 73		198583

**Report** RL - Analyte Reporting Limit  
**Definitions:** 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)



## LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Client:** Bison Engineering  
**Client Sample ID:** Particulate filter C1104718 Field Blank  
**Project:** Montana Resources/Greely School PW  
**Matrix:** Air

**Lab ID:** B25032123-003  
**Collection Date:** 03/03/25 11:06  
**Date Received:** 03/28/25  
**Report Date:** 04/10/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
<b>METALS IN AIR</b>												
Arsenic	0.075	ug/filter	J	1.0	0.058	E200.8	04/04/25 17:27 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250404A : 74		198583
Cadmium	ND	ug/filter		1.0	0.0044	E200.8	04/08/25 03:57 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250407A : 159		198583
Copper	ND	ug/filter		1.0	0.16	E200.8	04/04/25 17:27 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250404A : 74		198583
Lead	ND	ug/filter		1.0	0.042	E200.8	04/08/25 03:57 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250407A : 159		198583
Manganese	ND	ug/filter		1.0	0.18	E200.8	04/04/25 17:27 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250404A : 74		198583
Molybdenum	0.0085	ug/filter	J	1.0	0.0050	E200.8	04/09/25 19:57 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250409A : 98		198583
Zinc	ND	ug/filter		1.0	0.30	E200.8	04/04/25 17:27 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250404A : 74		198583

**Report** RL - Analyte Reporting Limit  
**Definitions:** 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)





## LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Client:** Bison Engineering  
**Client Sample ID:** Particulate filter C1104719 Walnut ST TSP  
**Project:** Montana Resources/Greely School PW  
**Matrix:** Air

**Lab ID:** B25032123-004  
**Collection Date:** 03/08/25  
**Date Received:** 03/28/25  
**Report Date:** 04/10/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
<b>METALS IN AIR</b>												
Arsenic	0.075	ug/filter	J	1.0	0.058	E200.8	04/04/25 17:33 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250404A : 75		198583
Cadmium	ND	ug/filter		1.0	0.0044	E200.8	04/08/25 04:03 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250407A : 160		198583
Copper	0.83	ug/filter	J	1.0	0.16	E200.8	04/04/25 17:33 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250404A : 75		198583
Lead	0.22	ug/filter	J	1.0	0.042	E200.8	04/08/25 04:03 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250407A : 160		198583
Manganese	0.32	ug/filter	J	1.0	0.18	E200.8	04/04/25 17:33 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250404A : 75		198583
Molybdenum	0.052	ug/filter	J	1.0	0.0059	E200.8	04/08/25 04:03 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250407A : 160		198583
Zinc	0.68	ug/filter	J	1.0	0.30	E200.8	04/04/25 17:33 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250404A : 75		198583

**Report** RL - Analyte Reporting Limit  
**Definitions:** 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)



## LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Client:** Bison Engineering  
**Client Sample ID:** Particulate filter C1104720 Pine ST TSP  
**Project:** Montana Resources/Greely School PW  
**Matrix:** Air

**Lab ID:** B25032123-005  
**Collection Date:** 03/08/25  
**Date Received:** 03/28/25  
**Report Date:** 04/10/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
<b>METALS IN AIR</b>												
Arsenic	0.087	ug/filter	J	1.0	0.058	E200.8	04/04/25 17:39 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250404A : 76		198583
Cadmium	ND	ug/filter		1.0	0.0044	E200.8	04/08/25 04:09 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250407A : 161		198583
Copper	1.3	ug/filter		1.0	0.16	E200.8	04/04/25 17:39 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250404A : 76		198583
Lead	0.12	ug/filter	J	1.0	0.042	E200.8	04/08/25 04:09 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250407A : 161		198583
Manganese	0.37	ug/filter	J	1.0	0.18	E200.8	04/04/25 17:39 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250404A : 76		198583
Molybdenum	0.15	ug/filter	J	1.0	0.0059	E200.8	04/08/25 04:09 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250407A : 161		198583
Zinc	0.68	ug/filter	J	1.0	0.30	E200.8	04/04/25 17:39 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250404A : 76		198583

**Report** RL - Analyte Reporting Limit  
**Definitions:** 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)



## LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Client:** Bison Engineering  
**Client Sample ID:** Particulate filter C1104721 Pine ST TSP  
**Project:** Montana Resources/Greely School PW  
**Matrix:** Air

**Lab ID:** B25032123-006  
**Collection Date:** 03/14/25  
**Date Received:** 03/28/25  
**Report Date:** 04/10/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
<b>METALS IN AIR</b>												
Arsenic	0.076	ug/filter	J	1.0	0.058	E200.8	04/04/25 17:45 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250404A : 77		198583
Cadmium	ND	ug/filter		1.0	0.0044	E200.8	04/08/25 04:15 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250407A : 162		198583
Copper	1.2	ug/filter		1.0	0.16	E200.8	04/04/25 17:45 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250404A : 77		198583
Lead	0.059	ug/filter	J	1.0	0.042	E200.8	04/08/25 04:15 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250407A : 162		198583
Manganese	0.22	ug/filter	J	1.0	0.18	E200.8	04/04/25 17:45 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250404A : 77		198583
Molybdenum	0.12	ug/filter	J	1.0	0.0059	E200.8	04/08/25 04:15 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250407A : 162		198583
Zinc	0.44	ug/filter	J	1.0	0.30	E200.8	04/04/25 17:45 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250404A : 77		198583

**Report** RL - Analyte Reporting Limit  
**Definitions:** 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)





## LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Client:** Bison Engineering  
**Client Sample ID:** Particulate filter C1104722 Walnut ST TSP  
**Project:** Montana Resources/Greely School PW  
**Matrix:** Air

**Lab ID:** B25032123-007  
**Collection Date:** 03/14/25  
**Date Received:** 03/28/25  
**Report Date:** 04/10/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
<b>METALS IN AIR</b>												
Arsenic	0.084	ug/filter	J	1.0	0.058	E200.8	04/04/25 17:51 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250404A : 78		198583
Cadmium	ND	ug/filter		1.0	0.0044	E200.8	04/08/25 04:21 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250407A : 163		198583
Copper	0.44	ug/filter	J	1.0	0.16	E200.8	04/04/25 17:51 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250404A : 78		198583
Lead	0.054	ug/filter	J	1.0	0.042	E200.8	04/08/25 04:21 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250407A : 163		198583
Manganese	0.28	ug/filter	J	1.0	0.18	E200.8	04/04/25 17:51 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250404A : 78		198583
Molybdenum	0.037	ug/filter	J	1.0	0.0059	E200.8	04/08/25 04:21 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250407A : 163		198583
Zinc	0.46	ug/filter	J	1.0	0.30	E200.8	04/04/25 17:51 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250404A : 78		198583

**Report** RL - Analyte Reporting Limit  
**Definitions:** 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)



## LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Client:** Bison Engineering  
**Client Sample ID:** Particulate filter C1104723 Lab Blank  
**Project:** Montana Resources/Greely School PW  
**Matrix:** Air

**Lab ID:** B25032123-008  
**Collection Date:** 02/14/25 16:30  
**Date Received:** 03/28/25  
**Report Date:** 04/10/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
<b>METALS IN AIR</b>												
Arsenic	0.070	ug/filter	J	1.0	0.058	E200.8	04/04/25 18:09 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250404A : 81		198583
Cadmium	ND	ug/filter		1.0	0.0044	E200.8	04/08/25 04:27 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250407A : 164		198583
Copper	ND	ug/filter		1.0	0.16	E200.8	04/04/25 18:09 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250404A : 81		198583
Lead	ND	ug/filter		1.0	0.042	E200.8	04/08/25 04:27 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250407A : 164		198583
Manganese	ND	ug/filter		1.0	0.18	E200.8	04/04/25 18:09 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250404A : 81		198583
Molybdenum	ND	ug/filter		1.0	0.0059	E200.8	04/08/25 04:27 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250407A : 164		198583
Zinc	ND	ug/filter		1.0	0.30	E200.8	04/04/25 18:09 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250404A : 81		198583

**Report** RL - Analyte Reporting Limit  
**Definitions:** 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)



## LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Client:** Bison Engineering  
**Client Sample ID:** Particulate filter C1104724 Pine ST TSP  
**Project:** Montana Resources/Greely School PW  
**Matrix:** Air

**Lab ID:** B25032123-009  
**Collection Date:** 03/19/25  
**Date Received:** 03/28/25  
**Report Date:** 04/10/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
<b>METALS IN AIR</b>												
Arsenic	0.076	ug/filter	J	1.0	0.058	E200.8	04/04/25 18:15 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250404A : 82		198583
Cadmium	ND	ug/filter		1.0	0.0044	E200.8	04/08/25 04:33 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250407A : 165		198583
Copper	0.31	ug/filter	J	1.0	0.16	E200.8	04/04/25 18:15 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250404A : 82		198583
Lead	ND	ug/filter		1.0	0.042	E200.8	04/08/25 04:33 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250407A : 165		198583
Manganese	ND	ug/filter		1.0	0.18	E200.8	04/04/25 18:15 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250404A : 82		198583
Molybdenum	0.021	ug/filter	J	1.0	0.0050	E200.8	04/09/25 20:03 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250409A : 99		198583
Zinc	ND	ug/filter		1.0	0.30	E200.8	04/04/25 18:15 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250404A : 82		198583

**Report** RL - Analyte Reporting Limit  
**Definitions:** 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)



## 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:** B25032123-010  
**Collection Date:** 03/19/25  
**Date Received:** 03/28/25  
**Report Date:** 04/10/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
<b>METALS IN AIR</b>												
Arsenic	0.075	ug/filter	J	1.0	0.058	E200.8	04/04/25 18:20 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250404A : 83		198583
Cadmium	ND	ug/filter		1.0	0.0044	E200.8	04/08/25 04:39 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250407A : 166		198583
Copper	0.32	ug/filter	J	1.0	0.16	E200.8	04/09/25 20:09 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250409A : 100		198583
Lead	ND	ug/filter		1.0	0.042	E200.8	04/08/25 04:39 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250407A : 166		198583
Manganese	0.19	ug/filter	J	1.0	0.18	E200.8	04/04/25 18:20 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250404A : 83		198583
Molybdenum	0.025	ug/filter	J	1.0	0.0050	E200.8	04/09/25 20:09 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250409A : 100		198583
Zinc	0.41	ug/filter	J	1.0	0.30	E200.8	04/04/25 18:20 / ae	04/03/25 09:11	40CFR50	ICPMS208-B_250404A : 83		198583

**Report** RL - Analyte Reporting Limit  
**Definitions:** 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 Billings, MT Branch

Work Order: B25032123

Report Date: 04/10/25

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>						Analytical Run: ICPMS208-B_250404A				
<b>Lab ID: QCS</b>	4	Initial Calibration Verification Standard								04/04/25 14:52
Arsenic		0.0489	mg/L	0.0050	98	90	110			
Copper		0.0503	mg/L	0.010	101	90	110			
Manganese		0.247	mg/L	0.0050	99	90	110			
Zinc		0.0509	mg/L	0.0050	102	90	110			
<b>Lab ID: CCV</b>	4	Continuing Calibration Verification Standard								04/04/25 16:33
Arsenic		0.0504	mg/L	0.0050	101	90	110			
Copper		0.0514	mg/L	0.010	103	90	110			
Manganese		0.0507	mg/L	0.0050	101	90	110			
Zinc		0.0509	mg/L	0.0050	102	90	110			
<b>Lab ID: CCV</b>	4	Continuing Calibration Verification Standard								04/04/25 17:57
Arsenic		0.0500	mg/L	0.0050	100	90	110			
Copper		0.0509	mg/L	0.010	102	90	110			
Manganese		0.0497	mg/L	0.0050	99	90	110			
Zinc		0.0517	mg/L	0.0050	103	90	110			
<b>Method: E200.8</b>						Batch: 198583				
<b>Lab ID: MB-198583</b>	4	Method Blank								Run: ICPMS208-B_250404A 04/04/25 16:51
Arsenic		0.07	ug/filter	0.06						
Copper		ND	ug/filter	0.2						
Manganese		ND	ug/filter	0.2						
Zinc		ND	ug/filter	0.3						
<b>Lab ID: LCS-198583</b>	4	Laboratory Control Sample								Run: ICPMS208-B_250404A 04/04/25 16:57
Arsenic		103	ug/filter	1.0	103	85	115			
Copper		107	ug/filter	5.0	107	85	115			
Manganese		516	ug/filter	5.0	103	85	115			
Zinc		106	ug/filter	5.0	106	85	115			
<b>Lab ID: LCSD-198583</b>	4	Laboratory Control Sample Duplicate								Run: ICPMS208-B_250404A 04/04/25 17:03
Arsenic		103	ug/filter	1.0	103	85	115	0.1	20	
Copper		106	ug/filter	5.0	106	85	115	0.2	20	
Manganese		518	ug/filter	5.0	104	85	115	0.3	20	
Zinc		108	ug/filter	5.0	108	85	115	1.3	20	

### Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)



## QA/QC Summary Report

Prepared by Billings, MT Branch

Work Order: B25032123

Report Date: 04/10/25

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>						Analytical Run: ICPMS208-B_250407A				
<b>Lab ID: QCS</b>	3	Initial Calibration Verification Standard								04/08/25 02:15
Cadmium		0.0243	mg/L	0.0010	97	90	110			
Lead		0.0478	mg/L	0.0010	96	90	110			
Molybdenum		0.0475	mg/L	0.0050	95	90	110			
<b>Lab ID: CCV</b>	3	Continuing Calibration Verification Standard								04/08/25 03:27
Cadmium		0.0490	mg/L	0.0010	98	90	110			
Lead		0.0476	mg/L	0.0010	95	90	110			
Molybdenum		0.0482	mg/L	0.0050	96	90	110			
<b>Method: E200.8</b>						Batch: 198583				
<b>Lab ID: MB-198583</b>	3	Method Blank								Run: ICPMS208-B_250407A 04/08/25 02:45
Cadmium		ND	ug/filter	0.004						
Lead		ND	ug/filter	0.04						
Molybdenum		ND	ug/filter	0.006						
<b>Lab ID: LCS-198583</b>	3	Laboratory Control Sample								Run: ICPMS208-B_250407A 04/08/25 02:51
Cadmium		53.6	ug/filter	1.0	107	85	115			
Lead		102	ug/filter	1.0	102	85	115			
Molybdenum		106	ug/filter	1.0	106	85	115			
<b>Lab ID: LCSD-198583</b>	3	Laboratory Control Sample Duplicate								Run: ICPMS208-B_250407A 04/08/25 02:57
Cadmium		53.1	ug/filter	1.0	106	85	115	0.8	20	
Lead		102	ug/filter	1.0	102	85	115	0.0	20	
Molybdenum		103	ug/filter	1.0	103	85	115	3.1	20	
<b>Method: E200.8</b>						Analytical Run: ICPMS208-B_250409A				
<b>Lab ID: QCS</b>	3	Initial Calibration Verification Standard								04/09/25 19:09
Cadmium		0.0239	mg/L	0.0010	95	90	110			
Copper		0.0509	mg/L	0.010	102	90	110			
Molybdenum		0.0460	mg/L	0.0050	92	90	110			
<b>Lab ID: CCV</b>	3	Continuing Calibration Verification Standard								04/09/25 19:15
Cadmium		0.0498	mg/L	0.0010	99	90	110			
Copper		0.0507	mg/L	0.010	101	90	110			
Molybdenum		0.0494	mg/L	0.0050	99	90	110			
<b>Method: E200.8</b>						Batch: 198583				
<b>Lab ID: MB-198583</b>	3	Method Blank								Run: ICPMS208-B_250409A 04/09/25 19:39
Cadmium		ND	ug/filter	0.004						
Copper		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

B25032123

Login completed by: Kyelie L. Pflock

Date Received: 3/28/2025

Reviewed by: gmccartney

Received by: LEL

Reviewed Date: 4/2/2025

Carrier name: Hand Deliver

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on all shipping container(s)/cooler(s)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on all sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Applicable <input type="checkbox"/>
Container/Temp Blank temperature:	2.9°C Blue Ice		
Containers requiring zero headspace have no headspace or bubble that is <6mm (1/4").	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Applicable <input checked="" type="checkbox"/>

---

## 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.

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## Contact and Corrective Action Comments:

The following issues were resolved per conversation at the counter with Don Milmine on 04/01/25:



## Work Order Receipt Checklist - Continued

Bison Engineering

B25032123


Sample C1104725 MTRPW was received without a collection date/time and not indicated on the chain of custody. Proceed with sample identification as Particulate filter C1853195 Walnut ST TSP with the collection date/time per chain of custody. KLP 04/01/25

A sample with illegible identification was received without a collection date/time. Proceed with sample identification as Particulate filter C1104724 Pine ST TSP with the collection date/time per chain of custody. KLP 04/01/25



## Laboratory Certifications and Accreditations

Current certificates are available at [www.energylab.com](http://www.energylab.com) website:

	Agency	Number
<b>Billings, MT</b>    	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
<b>Casper, WY</b>  	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
<b>Gillette, WY</b>	US EPA Region VIII	WY00006
<b>Helena, MT</b>	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

Comments
Analyze per history

<b>Report Information</b> <i>(if different than Account Information)</i>	
Company/Name <b>Bison Engineering, Inc.</b>	
Contact	Don Milmine
Phone	(406) 208-4833
Mailing Address <b>2751 Enterprise Avenue Suite 2</b>	
City, State, Zip	<b>Billings, MT 59102</b>
Email	<b>dmilmine@bison-eng.com</b>
Receive Report	<input type="checkbox"/> Hard Copy <input type="checkbox"/> Email
Special Report formats:	
<input type="checkbox"/> LEVEL IV	<input type="checkbox"/> NELAC <input type="checkbox"/> EDD/EDT <input type="checkbox"/> Other _____

<b>Account Information</b> <i>(Billing information)</i>			
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	<input checked="" type="checkbox"/> Hard Copy	<input checked="" type="checkbox"/> Email	Receive Report <input type="checkbox"/> Hard Copy <input checked="" type="checkbox"/> Email
Purchase Order	Quote		Bottle Order
MTR223018			

All turnaround times are standard unless marked as RUSH.

[illegible]

**Matrix Codes**

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

<b>Project Information</b>	
Project Name, PWSID, Permit, etc. Montana Resources/Greely School PW	
Sampler Name	Sampler Phone
Sample Origin State Montana	EPA/State Compliance <input type="checkbox"/> Yes <input type="checkbox"/> No
<b>URANIUM MINING CLIENTS MUST indicate sample type.</b> <input type="checkbox"/> NOT Source or Byproduct Material <input type="checkbox"/> Source/Processed Ore (Ground or Refined) **CALL BEFORE SENDING <small>44-729 Product/Process Material (See ONLY be Submitted to EIL Casper Location)</small>	

[illegible]

Custody Record MUST be signed	Relinquished by (print)	Date/Time	Signature	Received by (print)	Date/Time	Signature
	Relinquished by (print)	Date/Time	Signature	Received by Laboratory (print)	Date/Time	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)

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

May 08, 2025

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

Work Order: B25041935 Quote ID: B4795

Project Name: Montana Resources/Greely School PW

Energy Laboratories Inc Billings MT received the following 10 samples for Bison Engineering on 4/24/2025 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B25041935-001	Particulate Filter C1104701 Pine ST TSP	03/26/25 0:00	04/24/25	Air	Metals on air filter by ICP/ICPMS Nitric acid-extraction by 40CFR50G
B25041935-002	Particulate Filter C1104702 Lab Blank	03/21/25 16:20	04/24/25	Air	Same As Above
B25041935-003	Particulate Filter C1104703 Walnut ST TSP	03/26/25 0:00	04/24/25	Air	Same As Above
B25041935-004	Particulate Filter C1104704 Pine ST TSP	04/02/25 0:00	04/24/25	Air	Same As Above
B25041935-005	Particulate Filter C1104705 Walnut ST TSP	04/02/25 0:00	04/24/25	Air	Same As Above
B25041935-006	Particulate Filter C1104746 Pine ST TSP	04/07/25 0:00	04/24/25	Air	Same As Above
B25041935-007	Particulate Filter C1104747 Walnut ST TSP	04/07/25 0:00	04/24/25	Air	Same As Above
B25041935-008	Particulate Filter C1104748 Pine ST TSP	04/13/25 0:00	04/24/25	Air	Same As Above
B25041935-009	Particulate Filter C1104749 Walnut ST TSP	04/13/25 0:00	04/24/25	Air	Same As Above
B25041935-010	Particulate Filter C1104750 Field Blank	04/08/25 8:26	04/24/25	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:** B25041935

**Report Date:** 05/08/25

## CASE NARRATIVE

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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 C1104701 Pine ST TSP  
**Project:** Montana Resources/Greely School PW  
**Matrix:** Air

**Lab ID:** B25041935-001  
**Collection Date:** 03/26/25  
**Date Received:** 04/24/25  
**Report Date:** 05/08/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
<b>METALS IN AIR</b>												
Arsenic	0.059	ug/filter	J	1.0	0.058	E200.8	05/07/25 22:18 / ae	04/29/25 10:48	40CFR50	ICPMS207-B_250507A : 123		199348
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	05/01/25 09:46 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 220		199348
Copper	4.2	ug/filter		1.0	0.16	E200.8	05/01/25 09:46 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 220		199348
Lead	0.17	ug/filter	J	1.0	0.042	E200.8	05/02/25 04:55 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 426		199348
Manganese	0.60	ug/filter	J	1.0	0.18	E200.8	05/02/25 04:55 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 426		199348
Molybdenum	0.30	ug/filter	J	1.0	0.0050	E200.8	05/02/25 04:55 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 426		199348
Zinc	1.0	ug/filter		1.0	0.30	E200.8	05/07/25 22:18 / ae	04/29/25 10:48	40CFR50	ICPMS207-B_250507A : 123		199348

**Report** RL - Analyte Reporting Limit  
**Definitions:** 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)





## LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Client:** Bison Engineering  
**Client Sample ID:** Particulate Filter C1104702 Lab Blank  
**Project:** Montana Resources/Greely School PW  
**Matrix:** Air

**Lab ID:** B25041935-002  
**Collection Date:** 03/21/25 16:20  
**Date Received:** 04/24/25  
**Report Date:** 05/08/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
<b>METALS IN AIR</b>												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	05/07/25 22:24 / ae	04/29/25 10:48	40CFR50	ICPMS207-B_250507A : 124		199348
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	05/01/25 09:52 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 221		199348
Copper	ND	ug/filter		1.0	0.16	E200.8	05/01/25 09:52 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 221		199348
Lead	ND	ug/filter		1.0	0.042	E200.8	05/01/25 09:52 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 221		199348
Manganese	0.29	ug/filter	J	1.0	0.18	E200.8	05/02/25 05:01 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 427		199348
Molybdenum	0.014	ug/filter	J	1.0	0.0050	E200.8	05/02/25 05:01 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 427		199348
Zinc	ND	ug/filter		1.0	0.30	E200.8	05/07/25 22:24 / ae	04/29/25 10:48	40CFR50	ICPMS207-B_250507A : 124		199348

**Report** RL - Analyte Reporting Limit  
**Definitions:** 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)



## LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Client:** Bison Engineering  
**Client Sample ID:** Particulate Filter C1104703 Walnut ST TSP  
**Project:** Montana Resources/Greely School PW  
**Matrix:** Air

**Lab ID:** B25041935-003  
**Collection Date:** 03/26/25  
**Date Received:** 04/24/25  
**Report Date:** 05/08/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
<b>METALS IN AIR</b>												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	05/07/25 22:30 / ae	04/29/25 10:48	40CFR50	ICPMS207-B_250507A : 125		199348
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	05/01/25 09:58 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 222		199348
Copper	1.4	ug/filter		1.0	0.16	E200.8	05/01/25 09:58 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 222		199348
Lead	0.13	ug/filter	J	1.0	0.042	E200.8	05/02/25 05:06 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 428		199348
Manganese	0.66	ug/filter	J	1.0	0.18	E200.8	05/02/25 05:06 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 428		199348
Molybdenum	0.089	ug/filter	J	1.0	0.0050	E200.8	05/02/25 05:06 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 428		199348
Zinc	0.95	ug/filter	J	1.0	0.30	E200.8	05/07/25 22:30 / ae	04/29/25 10:48	40CFR50	ICPMS207-B_250507A : 125		199348

**Report** RL - Analyte Reporting Limit  
**Definitions:** 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)



## LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Client:** Bison Engineering  
**Client Sample ID:** Particulate Filter C1104704 Pine ST TSP  
**Project:** Montana Resources/Greely School PW  
**Matrix:** Air

**Lab ID:** B25041935-004  
**Collection Date:** 04/02/25  
**Date Received:** 04/24/25  
**Report Date:** 05/08/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
<b>METALS IN AIR</b>												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	05/07/25 22:36 / ae	04/29/25 10:48	40CFR50	ICPMS207-B_250507A : 126		199348
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	05/01/25 10:04 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 223		199348
Copper	2.1	ug/filter		1.0	0.16	E200.8	05/01/25 10:04 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 223		199348
Lead	0.086	ug/filter	J	1.0	0.042	E200.8	05/02/25 05:12 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 429		199348
Manganese	0.45	ug/filter	J	1.0	0.18	E200.8	05/02/25 05:12 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 429		199348
Molybdenum	0.15	ug/filter	J	1.0	0.0050	E200.8	05/02/25 05:12 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 429		199348
Zinc	0.72	ug/filter	J	1.0	0.30	E200.8	05/07/25 22:36 / ae	04/29/25 10:48	40CFR50	ICPMS207-B_250507A : 126		199348

**Report** RL - Analyte Reporting Limit  
**Definitions:** 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)





## LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Client:** Bison Engineering  
**Client Sample ID:** Particulate Filter C1104705 Walnut ST TSP  
**Project:** Montana Resources/Greely School PW  
**Matrix:** Air

**Lab ID:** B25041935-005  
**Collection Date:** 04/02/25  
**Date Received:** 04/24/25  
**Report Date:** 05/08/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
<b>METALS IN AIR</b>												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	05/07/25 22:42 / ae	04/29/25 10:48	40CFR50	ICPMS207-B_250507A : 127		199348
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	05/01/25 10:09 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 224		199348
Copper	0.69	ug/filter	J	1.0	0.16	E200.8	05/02/25 05:18 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 430		199348
Lead	0.051	ug/filter	J	1.0	0.042	E200.8	05/02/25 05:18 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 430		199348
Manganese	0.26	ug/filter	J	1.0	0.18	E200.8	05/02/25 05:18 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 430		199348
Molybdenum	0.044	ug/filter	J	1.0	0.0050	E200.8	05/02/25 05:18 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 430		199348
Zinc	0.63	ug/filter	J	1.0	0.30	E200.8	05/07/25 22:42 / ae	04/29/25 10:48	40CFR50	ICPMS207-B_250507A : 127		199348

**Report** RL - Analyte Reporting Limit  
**Definitions:** 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)



## LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Client:** Bison Engineering  
**Client Sample ID:** Particulate Filter C1104746 Pine ST TSP  
**Project:** Montana Resources/Greely School PW  
**Matrix:** Air

**Lab ID:** B25041935-006  
**Collection Date:** 04/07/25  
**Date Received:** 04/24/25  
**Report Date:** 05/08/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
<b>METALS IN AIR</b>												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	05/07/25 22:47 / ae	04/29/25 10:48	40CFR50	ICPMS207-B_250507A : 128		199348
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	05/01/25 10:15 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 225		199348
Copper	2.6	ug/filter		1.0	0.16	E200.8	05/01/25 10:15 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 225		199348
Lead	0.13	ug/filter	J	1.0	0.042	E200.8	05/02/25 05:24 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 431		199348
Manganese	0.79	ug/filter	J	1.0	0.18	E200.8	05/02/25 05:24 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 431		199348
Molybdenum	0.11	ug/filter	J	1.0	0.0050	E200.8	05/02/25 05:24 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 431		199348
Zinc	0.99	ug/filter	J	1.0	0.30	E200.8	05/07/25 22:47 / ae	04/29/25 10:48	40CFR50	ICPMS207-B_250507A : 128		199348

**Report** RL - Analyte Reporting Limit  
**Definitions:** 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)



## LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Client:** Bison Engineering  
**Client Sample ID:** Particulate Filter C1104747 Walnut ST TSP  
**Project:** Montana Resources/Greely School PW  
**Matrix:** Air

**Lab ID:** B25041935-007  
**Collection Date:** 04/07/25  
**Date Received:** 04/24/25  
**Report Date:** 05/08/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
<b>METALS IN AIR</b>												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	05/07/25 22:53 / ae	04/29/25 10:48	40CFR50	ICPMS207-B_250507A : 129		199348
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	05/01/25 10:33 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 228		199348
Copper	0.84	ug/filter	J	1.0	0.16	E200.8	05/02/25 05:30 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 432		199348
Lead	0.072	ug/filter	J	1.0	0.042	E200.8	05/02/25 05:30 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 432		199348
Manganese	0.43	ug/filter	J	1.0	0.18	E200.8	05/02/25 05:30 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 432		199348
Molybdenum	0.044	ug/filter	J	1.0	0.0050	E200.8	05/02/25 05:30 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 432		199348
Zinc	0.63	ug/filter	J	1.0	0.30	E200.8	05/07/25 22:53 / ae	04/29/25 10:48	40CFR50	ICPMS207-B_250507A : 129		199348

**Report** RL - Analyte Reporting Limit  
**Definitions:** 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)



## LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Client:** Bison Engineering  
**Client Sample ID:** Particulate Filter C1104748 Pine ST TSP  
**Project:** Montana Resources/Greely School PW  
**Matrix:** Air

**Lab ID:** B25041935-008  
**Collection Date:** 04/13/25  
**Date Received:** 04/24/25  
**Report Date:** 05/08/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
<b>METALS IN AIR</b>												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	05/07/25 23:11 / ae	04/29/25 10:48	40CFR50	ICPMS207-B_250507A : 132		199348
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	05/01/25 10:39 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 229		199348
Copper	1.5	ug/filter		1.0	0.16	E200.8	05/01/25 10:39 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 229		199348
Lead	0.053	ug/filter	J	1.0	0.042	E200.8	05/02/25 05:47 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 435		199348
Manganese	0.21	ug/filter	J	1.0	0.18	E200.8	05/02/25 05:47 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 435		199348
Molybdenum	0.078	ug/filter	J	1.0	0.0050	E200.8	05/02/25 05:47 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 435		199348
Zinc	1.1	ug/filter		1.0	0.30	E200.8	05/07/25 23:11 / ae	04/29/25 10:48	40CFR50	ICPMS207-B_250507A : 132		199348

**Report** RL - Analyte Reporting Limit  
**Definitions:** 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)



## LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Client:** Bison Engineering  
**Client Sample ID:** Particulate Filter C1104749 Walnut ST TSP  
**Project:** Montana Resources/Greely School PW  
**Matrix:** Air

**Lab ID:** B25041935-009  
**Collection Date:** 04/13/25  
**Date Received:** 04/24/25  
**Report Date:** 05/08/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
<b>METALS IN AIR</b>												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	05/07/25 23:17 / ae	04/29/25 10:48	40CFR50	ICPMS207-B_250507A : 133		199348
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	05/01/25 10:44 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 230		199348
Copper	0.31	ug/filter	J	1.0	0.16	E200.8	05/02/25 05:53 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 436		199348
Lead	ND	ug/filter		1.0	0.042	E200.8	05/01/25 10:44 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 230		199348
Manganese	ND	ug/filter		1.0	0.18	E200.8	05/01/25 10:44 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 230		199348
Molybdenum	0.0094	ug/filter	J	1.0	0.0050	E200.8	05/02/25 05:53 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 436		199348
Zinc	ND	ug/filter		1.0	0.30	E200.8	05/07/25 23:17 / ae	04/29/25 10:48	40CFR50	ICPMS207-B_250507A : 133		199348

**Report** RL - Analyte Reporting Limit  
**Definitions:** 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)



## LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Client:** Bison Engineering  
**Client Sample ID:** Particulate Filter C1104750 Field Blank  
**Project:** Montana Resources/Greely School PW  
**Matrix:** Air

**Lab ID:** B25041935-010  
**Collection Date:** 04/08/25 08:26  
**Date Received:** 04/24/25  
**Report Date:** 05/08/25

Analyses	Result	Units	QUAL	RL	MDL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
<b>METALS IN AIR</b>												
Arsenic	ND	ug/filter		1.0	0.058	E200.8	05/07/25 23:22 / ae	04/29/25 10:48	40CFR50	ICPMS207-B_250507A : 134		199348
Cadmium	ND	ug/filter		1.0	0.0063	E200.8	05/01/25 10:50 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 231		199348
Copper	ND	ug/filter		1.0	0.16	E200.8	05/01/25 10:50 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 231		199348
Lead	ND	ug/filter		1.0	0.042	E200.8	05/01/25 10:50 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 231		199348
Manganese	ND	ug/filter		1.0	0.18	E200.8	05/01/25 10:50 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 231		199348
Molybdenum	0.0059	ug/filter	J	1.0	0.0050	E200.8	05/02/25 05:59 / jks	04/29/25 10:48	40CFR50	ICPMS207-B_250430A : 437		199348
Zinc	ND	ug/filter		1.0	0.30	E200.8	05/07/25 23:22 / ae	04/29/25 10:48	40CFR50	ICPMS207-B_250507A : 134		199348

**Report** RL - Analyte Reporting Limit  
**Definitions:** 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 Billings, MT Branch

Work Order: B25041935

Report Date: 05/08/25

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>								Analytical Run: ICPMS207-B_250430A		
<b>Lab ID: QCS</b>	5	Initial Calibration Verification Standard							05/01/25 05:18	
Cadmium		0.0200	mg/L	0.0010	100	90	110			
Copper		0.0393	mg/L	0.010	98	90	110			
Lead		0.0386	mg/L	0.0010	97	90	110			
Manganese		0.199	mg/L	0.0050	100	90	110			
Molybdenum		0.0399	mg/L	0.0050	100	90	110			
<b>Lab ID: CCV</b>	5	Continuing Calibration Verification Standard							05/01/25 09:11	
Cadmium		0.0496	mg/L	0.0010	99	90	110			
Copper		0.0492	mg/L	0.010	98	90	110			
Lead		0.0494	mg/L	0.0010	99	90	110			
Manganese		0.0500	mg/L	0.0050	100	90	110			
Molybdenum		0.0503	mg/L	0.0050	101	90	110			
<b>Lab ID: CCV</b>	5	Continuing Calibration Verification Standard							05/01/25 10:21	
Cadmium		0.0506	mg/L	0.0010	101	90	110			
Copper		0.0494	mg/L	0.010	99	90	110			
Lead		0.0509	mg/L	0.0010	102	90	110			
Manganese		0.0499	mg/L	0.0050	100	90	110			
Molybdenum		0.0511	mg/L	0.0050	102	90	110			
<b>Lab ID: QCS</b>	5	Initial Calibration Verification Standard							05/02/25 03:10	
Cadmium		0.0204	mg/L	0.0010	102	90	110			
Copper		0.0387	mg/L	0.010	97	90	110			
Lead		0.0390	mg/L	0.0010	98	90	110			
Manganese		0.196	mg/L	0.0050	98	90	110			
Molybdenum		0.0408	mg/L	0.0050	102	90	110			
<b>Lab ID: CCV</b>	5	Continuing Calibration Verification Standard							05/02/25 04:26	
Cadmium		0.0517	mg/L	0.0010	103	90	110			
Copper		0.0494	mg/L	0.010	99	90	110			
Lead		0.0504	mg/L	0.0010	101	90	110			
Manganese		0.0502	mg/L	0.0050	100	90	110			
Molybdenum		0.0524	mg/L	0.0050	105	90	110			
<b>Lab ID: CCV</b>	5	Continuing Calibration Verification Standard							05/02/25 05:35	
Cadmium		0.0521	mg/L	0.0010	104	90	110			
Copper		0.0497	mg/L	0.010	99	90	110			
Lead		0.0501	mg/L	0.0010	100	90	110			
Manganese		0.0503	mg/L	0.0050	101	90	110			
Molybdenum		0.0532	mg/L	0.0050	106	90	110			
<b>Method: E200.8</b>								Batch: 199348		
<b>Lab ID: MB-199348</b>	5	Method Blank							Run: ICPMS207-B_250430A	
Cadmium		ND	ug/filter	0.006					05/01/25 08:13	
Copper		ND	ug/filter	0.2						
Lead		ND	ug/filter	0.04						
Manganese		ND	ug/filter	0.2						

### Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)



## QA/QC Summary Report

Prepared by Billings, MT Branch

Work Order: B25041935

Report Date: 05/08/25

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>										Batch: 199348
<b>Lab ID: MB-199348</b>	5	Method Blank						Run: ICPMS207-B_250430A		05/01/25 08:13
Molybdenum		0.006	ug/filter	0.005						
<b>Lab ID: LCS-199348</b>	7	Laboratory Control Sample						Run: ICPMS207-B_250430A		05/01/25 08:19
Arsenic		104	ug/filter	1.0	104	85	115			
Cadmium		52.8	ug/filter	1.0	106	85	115			
Copper		102	ug/filter	5.0	102	85	115			
Lead		105	ug/filter	1.0	105	85	115			
Manganese		531	ug/filter	5.0	106	85	115			
Molybdenum		105	ug/filter	1.0	105	85	115			
Zinc		104	ug/filter	5.0	104	85	115			
<b>Lab ID: LCSD-199348</b>	7	Laboratory Control Sample Duplicate						Run: ICPMS207-B_250430A		05/01/25 08:25
Arsenic		104	ug/filter	1.0	104	85	115	0.6	20	
Cadmium		52.4	ug/filter	1.0	105	85	115	0.7	20	
Copper		100	ug/filter	5.0	100	85	115	1.6	20	
Lead		102	ug/filter	1.0	102	85	115	2.4	20	
Manganese		524	ug/filter	5.0	105	85	115	1.3	20	
Molybdenum		104	ug/filter	1.0	104	85	115	0.3	20	
Zinc		103	ug/filter	5.0	103	85	115	1.0	20	
<b>Lab ID: MB-199348</b>	5	Method Blank						Run: ICPMS207-B_250430A		05/02/25 03:39
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		0.006	ug/filter	0.005						
<b>Method: E200.8</b>										Analytical Run: ICPMS207-B_250507A
<b>Lab ID: QCS</b>	2	Initial Calibration Verification Standard								05/07/25 21:43
Arsenic		0.0386	mg/L	0.0050	96	90	110			
Zinc		0.0389	mg/L	0.0050	97	90	110			
<b>Lab ID: CCV</b>	2	Continuing Calibration Verification Standard								05/07/25 21:49
Arsenic		0.0461	mg/L	0.0050	92	90	110			
Zinc		0.0454	mg/L	0.0050	91	90	110			
<b>Lab ID: CCV</b>	2	Continuing Calibration Verification Standard								05/07/25 22:59
Arsenic		0.0462	mg/L	0.0050	92	90	110			
Zinc		0.0452	mg/L	0.0050	90	90	110			
<b>Method: E200.8</b>										Batch: 199348
<b>Lab ID: MB-199348</b>	2	Method Blank						Run: ICPMS207-B_250507A		05/07/25 22:12
Arsenic		ND	ug/filter	0.06						
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

B25041935

Login completed by: Crystal M. Jones

Date Received: 4/24/2025

Reviewed by: gmccartney

Received by: CMJ

Reviewed Date: 4/30/2025

Carrier name: Hand Deliver

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on all shipping container(s)/cooler(s)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on all sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Applicable <input type="checkbox"/>
Container/Temp Blank temperature:	2.6°C Blue Ice		
Containers requiring zero headspace have no headspace or bubble that is <6mm (1/4").	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Applicable <input checked="" type="checkbox"/>

## 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](http://www.energylab.com) website:

	Agency	Number
<b>Billings, MT</b>    	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
<b>Casper, WY</b>  	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
<b>Gillette, WY</b>	US EPA Region VIII	WY00006
<b>Helena, MT</b>	Colorado	MT00945
	Montana	CERT0079
	Nevada	NV-C24-00119
	US EPA Region VIII	Reciprocal
	USDA Soil Permit	P330-20-00090



Trust our People. Trust our Data.

# Chain of Custody & Analytical Request Record

www.energylab.com

Page 1 of 1

## 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	myyoung@bison-eng.com		
Receive Invoice	<input type="checkbox"/> Hard Copy <input checked="" type="checkbox"/> Email	Receive Report	<input type="checkbox"/> Hard Copy <input type="checkbox"/> Email
Purchase Order	Quote	Bottle Order	
MTR225018			

## 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	<input type="checkbox"/> Hard Copy <input checked="" type="checkbox"/> Email		
Special Report/Formats:			
<input type="checkbox"/> LEVEL IV <input type="checkbox"/> NELAC <input type="checkbox"/> EDD/EDT (contact laboratory) <input type="checkbox"/> Other			

## Comments

Analyze per history
---------------------

## Project Information

Project Name, PWSID, Permit, etc.		Montana Resources/Greely School PW	
Sampler Name	Sampler Phone		
Sample Origin State	Montana	EPA/State Compliance	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
URANIUM MINING CLIENTS MUST indicate sample type.			
<input type="checkbox"/> NOT Source or Byproduct Material			
<input type="checkbox"/> Source/Processed Ore (Ground or Refined) **CALL BEFORE SENDING			
<input type="checkbox"/> 11e.(2) Byproduct Material (Can ONLY be Submitted to ELI Casper Location)			

## Matrix Codes

A - Air	Matrix
W - Water	(See Codes)
S - Solids	Number of Containers
V - Vegetation	1
B - Bioassay	1
O - Other	1
DW - Drinking Water	1

## Analysis Requested

Asenic	Cadmium	Copper	Lead	Manganese	Molybdenum	Zinc
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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

See Attached

Sample Identification (Name, Location, Interval, etc.)	Collection Date	Time	Matrix (See Codes)	Number of Containers	Asenic	Cadmium	Copper	Lead	Manganese	Molybdenum	Zinc	ELI LAB ID Laboratory Use Only
1 Particulate filter C1104701 Pine ST TSP	3/26/25	24 hr Composite	On Teflon filter	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	B2504135
2 Particulate filter C1104702 Lab Blank	3/21/25	1620	On Teflon filter	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
3 Particulate filter C1104703 Walnut ST TSP	3/26/25	24 hr Composite	On Teflon filter	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
4 Particulate filter C1104704 Pine ST TSP	4/2/25	24 hr Composite	On Teflon filter	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
5 Particulate filter C1104705 Walnut ST TSP	4/2/25	24 hr Composite	On Teflon filter	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
6 Particulate filter C1104746 Pine ST TSP	4/7/25	24 hr Composite	On Teflon filter	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
7 Particulate filter C1104747 Walnut ST TSP	4/7/25	24 hr Composite	On Teflon filter	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
8 Particulate filter C1104748 Pine ST TSP	4/13/25	24 hr Composite	On Teflon filter	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
9 Particulate filter C1104749 Walnut ST TSP	4/13/25	24 hr Composite	On Teflon filter	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
10 Particulate filter C1104750 Field Blank	4/8/25	0826	On Teflon filter	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

Custody Record MUST be signed	Relinquished by (print) Don Milmine	Signature Don Milmine	Date/Time 4/24/25 1130	Relinquished by (print)	Signature	Received by (print) Don Milmine	Signature Don Milmine	Date/Time 4/24/25 1130	Received by (print)	Signature	Date/Time 4/24/25 1130	Amount \$	Payment Type Cash	Check	Receipt Number (cash/check 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	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.

ELI-COC-10/18 v.3

## **APPENDIX C: LABORATORY ANALYSIS REPORTS - DUSTFALL**



## ANALYTICAL SUMMARY REPORT

February 28, 2025

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

Work Order: H25020304 Quote ID: H16951

Project Name: Montana Resources Dustfall

Energy Laboratories Inc Helena MT received the following 4 samples for Bison Engineering on 2/13/2025 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H25020304-001	DF-GREELY-018	01/30/25 10:55	02/13/25	Solid	Metals by ICP/ICPMS, Total Total Metals Digestion by SW3050B Soil Parameters
H25020304-002	DF-PINE-018	01/30/25 11:22	02/13/25	Solid	Same As Above
H25020304-003	DF-WALNUT-018	01/30/25 11:15	02/13/25	Solid	Same As Above
H25020304-004	DF-FB-018	01/30/25 11:25	02/13/25	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:** H25020304-001  
**Client Sample ID:** DF-GREELY-018

**Report Date:** 02/28/25  
**Collection Date:** 01/30/25 10:55  
**DateReceived:** 02/13/25  
**Matrix:** Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>PHYSICAL CHARACTERISTICS</b>							
Dry Wt, g	0.1385	g		0.00010		USDA1	02/19/25 14:09 / kjb
Wet Wt, g	527.53	g		0.00010		USDA1	02/19/25 14:09 / kjb
<b>METALS, TOTAL - EPA SW846</b>							
Arsenic	14	mg/kg		1		SW6020B	02/25/25 16:00 / dck
Cadmium	2	mg/kg		1		SW6020B	02/25/25 16:00 / dck
Copper	2230	mg/kg		7		SW6020B	02/25/25 16:00 / dck
Lead	56	mg/kg		4		SW6020B	02/25/25 16:00 / dck
Manganese	307	mg/kg		8		SW6020B	02/25/25 16:00 / dck
Molybdenum	715	mg/kg		20		SW6020B	02/26/25 17:28 / dck
Zinc	445	mg/kg		70		SW6020B	02/25/25 16:00 / dck

**Report** RL - Analyte Reporting Limit  
**Definitions:** 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:** H25020304-002  
**Client Sample ID:** DF-PINE-018

**Report Date:** 02/28/25  
**Collection Date:** 01/30/25 11:22  
**Date Received:** 02/13/25  
**Matrix:** Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>PHYSICAL CHARACTERISTICS</b>							
Dry Wt, g	0.1633	g		0.00010		USDA1	02/19/25 14:09 / kjb
Wet Wt, g	461.22	g		0.00010		USDA1	02/19/25 14:09 / kjb
<b>METALS, TOTAL - EPA SW846</b>							
Arsenic	14	mg/kg		1		SW6020B	02/25/25 16:19 / dck
Cadmium	2	mg/kg		1		SW6020B	02/25/25 16:19 / dck
Copper	2440	mg/kg		6		SW6020B	02/25/25 16:19 / dck
Lead	59	mg/kg		3		SW6020B	02/25/25 16:19 / dck
Manganese	342	mg/kg		6		SW6020B	02/25/25 16:19 / dck
Molybdenum	842	mg/kg		20		SW6020B	02/26/25 17:32 / dck
Zinc	495	mg/kg		60		SW6020B	02/25/25 16:19 / 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:** H25020304-003  
**Client Sample ID:** DF-WALNUT-018

**Report Date:** 02/28/25  
**Collection Date:** 01/30/25 11:15  
**Date Received:** 02/13/25  
**Matrix:** Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>PHYSICAL CHARACTERISTICS</b>							
Dry Wt, g	0.1235	g		0.00010		USDA1	02/19/25 14:09 / kjb
Wet Wt, g	497.49	g		0.00010		USDA1	02/19/25 14:09 / kjb
<b>METALS, TOTAL - EPA SW846</b>							
Arsenic	15	mg/kg		2		SW6020B	02/25/25 16:22 / dck
Cadmium	2	mg/kg		1		SW6020B	02/25/25 16:22 / dck
Copper	2520	mg/kg		8		SW6020B	02/25/25 16:22 / dck
Lead	54	mg/kg		4		SW6020B	02/25/25 16:22 / dck
Manganese	379	mg/kg		9		SW6020B	02/25/25 16:22 / dck
Molybdenum	822	mg/kg		20		SW6020B	02/26/25 17:36 / dck
Zinc	549	mg/kg		80		SW6020B	02/25/25 16:22 / 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:** H25020304-004  
**Client Sample ID:** DF-FB-018

**Report Date:** 02/28/25  
**Collection Date:** 01/30/25 11:25  
**Date Received:** 02/13/25  
**Matrix:** Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>PHYSICAL CHARACTERISTICS</b>							
Dry Wt, g	0.0123	g		0.00010		USDA1	02/19/25 14:09 / kjb
Wet Wt, g	289.17	g		0.00010		USDA1	02/19/25 14:09 / kjb
<b>METALS, TOTAL - EPA SW846</b>							
Arsenic	ND	mg/kg		1		SW6020B	02/25/25 16:26 / dck
Cadmium	ND	mg/kg		1		SW6020B	02/25/25 16:26 / dck
Copper	ND	mg/kg		1		SW6020B	02/25/25 16:26 / dck
Lead	ND	mg/kg		1		SW6020B	02/25/25 16:26 / dck
Manganese	ND	mg/kg		1		SW6020B	02/25/25 16:26 / dck
Molybdenum	ND	mg/kg		1		SW6020B	02/25/25 16:26 / dck
Zinc	ND	mg/kg	D	4		SW6020B	02/26/25 17:48 / dck

**Report Definitions:** RL - Analyte Reporting Limit  
QCL - Quality Control Limit  
D - Reporting Limit (RL) increased due to sample matrix

MCL - Maximum Contaminant Level  
ND - Not detected at the Reporting Limit (RL)

## QA/QC Summary Report

Prepared by Helena, MT Branch

Work Order: H25020304

Report Date: 02/28/25

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: SW6020B</b>				Analytical Run: ICPMS205-H_250225B						
<b>Lab ID: ICV</b>	7	Initial Calibration Verification Standard								02/25/25 12:00
Arsenic		0.0600	mg/L	0.0010	100	90	110			
Cadmium		0.0306	mg/L	0.0010	102	90	110			
Copper		0.0609	mg/L	0.0050	101	90	110			
Lead		0.0602	mg/L	0.0010	100	90	110			
Manganese		0.302	mg/L	0.0010	101	90	110			
Molybdenum		0.0588	mg/L	0.0010	98	90	110			
Zinc		0.0619	mg/L	0.010	103	90	110			
<b>Lab ID: ICSA</b>	7	Interference Check Sample A								02/25/25 12:24
Arsenic		0.0000446	mg/L	0.0010						
Cadmium		0.0000772	mg/L	0.0010						
Copper		0.0000675	mg/L	0.0050						
Lead		-8.39E-06	mg/L	0.0010						
Manganese		0.000334	mg/L	0.0010						
Molybdenum		0.788	mg/L	0.0010	98	80	120			
Zinc		0.00206	mg/L	0.010						
<b>Lab ID: ICSAB</b>	7	Interference Check Sample AB								02/25/25 12:32
Arsenic		0.00882	mg/L	0.0010	88	80	120			
Cadmium		0.00889	mg/L	0.0010	89	80	120			
Copper		0.0172	mg/L	0.0050	86	80	120			
Lead		-6.60E-06	mg/L	0.0010						
Manganese		0.0179	mg/L	0.0010	90	80	120			
Molybdenum		0.837	mg/L	0.0010	105	80	120			
Zinc		0.0119	mg/L	0.010	119	80	120			
<b>Lab ID: CCV</b>	7	Continuing Calibration Verification Standard								02/25/25 15:24
Arsenic		0.0506	mg/L	0.0010	101	90	110			
Cadmium		0.0513	mg/L	0.0010	103	90	110			
Copper		0.0505	mg/L	0.0050	101	90	110			
Lead		0.0491	mg/L	0.0010	98	90	110			
Manganese		0.0499	mg/L	0.0010	100	90	110			
Molybdenum		0.0503	mg/L	0.0010	101	90	110			
Zinc		0.0509	mg/L	0.010	102	90	110			
<b>Lab ID: ICV</b>	7	Initial Calibration Verification Standard								02/25/25 19:19
Arsenic		0.0622	mg/L	0.0010	104	90	110			
Cadmium		0.0310	mg/L	0.0010	104	90	110			
Copper		0.0643	mg/L	0.0050	107	90	110			
Lead		0.0620	mg/L	0.0010	103	90	110			
Manganese		0.316	mg/L	0.0010	105	90	110			
Molybdenum		0.0594	mg/L	0.0010	99	90	110			
Zinc		0.0639	mg/L	0.010	107	90	110			
<b>Lab ID: ICSA</b>	7	Interference Check Sample A								02/25/25 20:44
Arsenic		0.0000448	mg/L	0.0010						
Cadmium		0.0000827	mg/L	0.0010						

### Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

## QA/QC Summary Report

Prepared by Helena, MT Branch

Work Order: H25020304

Report Date: 02/28/25

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: SW6020B</b>										Analytical Run: ICPMS205-H_250225B
<b>Lab ID: ICSA</b>	7	Interference Check Sample A								02/25/25 20:44
Copper		0.0000772	mg/L	0.0050						
Lead		0.0000278	mg/L	0.0010						
Manganese		0.000388	mg/L	0.0010						
Molybdenum		0.864	mg/L	0.0010	108	80	120			
Zinc		0.00200	mg/L	0.010						
<b>Lab ID: CCV</b>	7	Continuing Calibration Verification Standard								02/26/25 17:17
Arsenic		0.0507	mg/L	0.0010	101	90	110			
Cadmium		0.0525	mg/L	0.0010	105	90	110			
Copper		0.0510	mg/L	0.0050	102	90	110			
Lead		0.0524	mg/L	0.0010	105	90	110			
Manganese		0.0496	mg/L	0.0010	99	90	110			
Molybdenum		0.0508	mg/L	0.0010	102	90	110			
Zinc		0.0505	mg/L	0.010	101	90	110			
<b>Lab ID: ICSA</b>	7	Interference Check Sample A								02/26/25 09:37
Arsenic		0.0000117	mg/L	0.0010						
Cadmium		0.0000665	mg/L	0.0010						
Copper		0.0000379	mg/L	0.0050						
Lead		0.0000262	mg/L	0.0010						
Manganese		0.000294	mg/L	0.0010						
Molybdenum		0.846	mg/L	0.0010	106	80	120			
Zinc		0.00340	mg/L	0.010						
<b>Lab ID: ICSAB</b>	7	Interference Check Sample AB								02/26/25 09:56
Arsenic		0.00806	mg/L	0.0010	81	80	120			
Cadmium		0.00825	mg/L	0.0010	83	80	120			
Copper		0.0160	mg/L	0.0050	80	80	120			
Lead		0.0000256	mg/L	0.0010						
Manganese		0.0165	mg/L	0.0010	83	80	120			
Molybdenum		0.840	mg/L	0.0010	105	80	120			
Zinc		0.0108	mg/L	0.010	108	80	120			
<b>Method: SW6020B</b>										Batch: 76322
<b>Lab ID: MB-76322</b>	7	Method Blank								Run: ICPMS205-H_250225B 02/25/25 15:41
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						
<b>Lab ID: LCS-76322</b>	7	Laboratory Control Sample								Run: ICPMS205-H_250225B 02/25/25 15:45
Arsenic		153	mg/kg	1.0	98	66.4	104			
Cadmium		101	mg/kg	1.0	108	79.2	121			

### Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

## QA/QC Summary Report

Prepared by Helena, MT Branch

Work Order: H25020304

Report Date: 02/28/25

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: SW6020B</b>										Batch: 76322
<b>Lab ID: LCS-76322</b>	7	Laboratory Control Sample				Run: ICPMS205-H_250225B				02/25/25 15:45
Copper		118	mg/kg	2.0	98	73.9	113			
Lead		104	mg/kg	1.0	103	71.6	128			
Manganese		391	mg/kg	2.1	97	74.4	123			
Molybdenum		127	mg/kg	1.0	112	61.3	124			
Zinc		218	mg/kg	20	93	83.1	125			
<b>Lab ID: LFB-76322</b>	7	Laboratory Fortified Blank				Run: ICPMS205-H_250225B				02/25/25 15:49
Arsenic		23.7	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		26.3	mg/kg	1.0	105	80	120			
Manganese		121	mg/kg	1.1	97	80	120			
Molybdenum		27.1	mg/kg	1.0	109	80	120			
Zinc		23.5	mg/kg	10	94	80	120			
<b>Lab ID: LFBD-76322</b>	7	Laboratory Fortified Blank Duplicate				Run: ICPMS205-H_250225B				02/25/25 15:53
Arsenic		22.4	mg/kg	1.0	90	80	120			
Cadmium		12.6	mg/kg	1.0	101	80	120			
Copper		23.5	mg/kg	1.0	94	80	120			
Lead		25.5	mg/kg	1.0	102	80	120			
Manganese		115	mg/kg	1.1	92	80	120			
Molybdenum		26.1	mg/kg	1.0	104	80	120			
Zinc		22.3	mg/kg	10	89	80	120			
<b>Lab ID: H25020304-001ADIL</b>	7	Serial Dilution				Run: ICPMS205-H_250225B				02/25/25 16:04
Arsenic		15.9	mg/kg	7.2		0	0		20	N
Cadmium		1.62	mg/kg	1.8		0	0		20	N
Copper		2600	mg/kg	36		0	0	15	20	
Lead		64.9	mg/kg	18		0	0		20	N
Manganese		344	mg/kg	38		0	0		20	N
Molybdenum		730	mg/kg	18		0	0	4.0	20	
Zinc		530	mg/kg	360		0	0		20	N
<b>Lab ID: H25020304-001AMS</b>	7	Sample Matrix Spike				Run: ICPMS205-H_250225B				02/25/25 16:07
Arsenic		47.4	mg/kg	1.4	93	75	125			
Cadmium		39.3	mg/kg	1.0	105	75	125			
Copper		2290	mg/kg	7.2		75	125			A
Lead		93.5	mg/kg	3.6	105	75	125			
Manganese		348	mg/kg	7.6		75	125			A
Molybdenum		766	mg/kg	3.6		75	125			AE
Zinc		484	mg/kg	72		75	125			A
<b>Lab ID: H25020304-001AMSD</b>	7	Sample Matrix Spike Duplicate				Run: ICPMS205-H_250225B				02/25/25 16:11
Arsenic		48.2	mg/kg	1.4	95	75	125	1.7	20	
Cadmium		39.2	mg/kg	1.0	105	75	125	0.2	20	
Copper		2330	mg/kg	7.2		75	125	1.7	20	A
Lead		90.6	mg/kg	3.6	97	75	125	3.1	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  
E - Estimated value - result exceeds the instrument upper quantitation limit



## QA/QC Summary Report

Prepared by Helena, MT Branch

Work Order: H25020304

Report Date: 02/28/25

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: SW6020B</b>										Batch: 76322
<b>Lab ID: H25020304-001AMSD</b>	7	Sample Matrix Spike Duplicate				Run: ICPMS205-H_250225B			02/25/25 16:11	
Manganese		352	mg/kg	7.6		75	125	1.2	20	A
Molybdenum		762	mg/kg	3.6		75	125	0.6	20	AE
Zinc		493	mg/kg	72		75	125	1.9	20	A
<b>Lab ID: MB-76322</b>	7	Method Blank				Run: ICPMS205-H_250225B			02/26/25 17:45	
Arsenic		ND	mg/kg	0.06						
Cadmium		ND	mg/kg	0.01						
Copper		ND	mg/kg	0.3						
Lead		ND	mg/kg	0.2						
Manganese		ND	mg/kg	0.4						
Molybdenum		ND	mg/kg	0.09						
Zinc		ND	mg/kg	1						

### 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  
E - Estimated value - result exceeds the instrument upper quantitation limit



# Work Order Receipt Checklist

Bison Engineering

H25020304

Login completed by: Rebecca A. Tooke

Date Received: 2/13/2025

Reviewed by: tjones

Received by: WJJ

Reviewed Date: 2/14/2025

Carrier name: Hand Deliver

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on all shipping container(s)/cooler(s)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on all sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Not Applicable <input type="checkbox"/>
Container/Temp Blank temperature:	5.4°C No Ice		
Containers requiring zero headspace have no headspace or bubble that is <6mm (1/4").	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Applicable <input checked="" type="checkbox"/>

## 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 2/13/25

## Laboratory Certifications and Accreditations

Current certificates are available at [www.energylab.com](http://www.energylab.com) website:

	Agency	Number
<b>Billings, MT</b>    	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
<b>Casper, WY</b>  	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
<b>Gillette, WY</b>	US EPA Region VIII	WY00006
<b>Helena, MT</b>	Colorado	MT00945
	Montana	CERT0079
	Nevada	NV-C24-00119
	US EPA Region VIII	Reciprocal
	USDA Soil Permit	P330-20-00090





[www.energylab.com](http://www.energylab.com)

Page 1 of 1

### Report Information (if different than Account Information)

Report Information <small>(For Universal Grant Account Information)</small>	
Company/Name	
Contact	
Phone	
Mailing Address	
City, State, Zip	
Email	
Receive Report	<input type="checkbox"/> Hard Copy <input type="checkbox"/> Email
Special Report/Formats:	
<input type="checkbox"/> LEVEL IV	<input type="checkbox"/> NELAC <input type="checkbox"/> EDD/EDT (contact laboratory) <input type="checkbox"/> Other

These are dustfall samples.  
Collected from 01.02.2025 to 01.30.2025

Project Name, PWSID, Permit, etc. <b>Montana Resources Dustfall</b>	
Sampler Name <b>Steve Heck</b>	Sampler Phone <b>406-498-4199</b>
Sample Origin <b>State Montana</b>	EPA/State Compliance <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>URANIUM MINING CLIENTS MUST indicate sample type</b> <input type="checkbox"/> Unprocessed Ore <input type="checkbox"/> Processed Ore (Ground or Refined) **CALL BEFORE SENDING <input type="checkbox"/> 11 (1/2) Evaporated Material (CAN ONLY be Submitted to EIL Casper Locam)	

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

Project Name, PWSID, Permit, etc. Montana Resources Dustfall					
Sampler Name Steve Heck		Sampler Phone 406-498-4199			
Sample Origin State Montana		EPA/State Compliance <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
<b>URANIUM MINING CLIENTS MUST indicate sample type</b>					
<input type="checkbox"/> Unprocessed Ore <input type="checkbox"/> Processed Ore (Ground or Refined) **CALL BEFORE SENDING <input type="checkbox"/> 11(e)2 Byproduct Material (Can ONLY be Submitted to ELI Casper Location)					
Sample Identification <small>(Name, Location, Interval, etc.)</small>		Collection Date      Time		Number of Containers	Matrix <small>(See Codes Above)</small>
1	DF-GREELEY-018	01/30/2025	10:55 am	1	A
2	DF-PINE-018	01/30/2025	11:22 am	1	A
3	DF-WALNUT-018	01/30/2025	11:15 am	1	A
4	DF-FB-018	01/30/2025	11:25 am	1	A
5					
6					
7					
8					
9					

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

ELI LAB ID  
Laboratory Use Only  
  
H25020304

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
	Relinquished by (print)	Date/Time	Signature	Received by Laboratory (print)	Date/Time	Signature
LABORATORY USE ONLY						
Shipped By	Cooler ID(s)	Custody Seals	Intact	Receipt Temp	Temp Blank	On Ice
hndll	Box	Y <input checked="" type="radio"/> C <input type="radio"/> B <input type="radio"/>	Y <input type="radio"/> N <input type="radio"/>	5.4°C	Y <input type="radio"/> N <input checked="" type="radio"/>	Y <input checked="" type="radio"/> N <input type="radio"/>
				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.





## ANALYTICAL SUMMARY REPORT

March 14, 2025

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

Work Order: H25020617      Quote ID: H16951

Project Name: Montana Resources Dustfall

Energy Laboratories Inc Helena MT received the following 4 samples for Bison Engineering on 2/28/2025 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H25020617-001	DF-GREELEY-019	02/27/25 14:00	02/28/25	Solid	Metals by ICP/ICPMS, Total Total Metals Digestion by SW3050B Soil Preparation USDA1 Soil Parameters
H25020617-002	DF-PINE-019	02/27/25 12:29	02/28/25	Solid	Metals by ICP/ICPMS, Total Total Metals Digestion by SW3050B Soil Parameters
H25020617-003	DF-WALNUT-019	02/27/25 13:10	02/28/25	Solid	Same As Above
H25020617-004	DF-FB-019	02/27/25 14:00	02/28/25	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:** H25020617-001  
**Client Sample ID:** DF-GREELEY-019

**Report Date:** 03/14/25  
**Collection Date:** 02/27/25 14:00  
**Date Received:** 02/28/25  
**Matrix:** Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>PHYSICAL CHARACTERISTICS</b>							
Dry Wt, g	0.0929	g		0.00010		USDA1	03/04/25 00:00 / kjb
Wet Wt, g	631.62	g		0.00010		USDA1	03/04/25 00:00 / kjb
<b>METALS, TOTAL - EPA SW846</b>							
Arsenic	8	mg/kg		2		SW6020B	03/12/25 05:55 / dck
Cadmium	0.9	mg/kg	J	1		SW6020B	03/12/25 05:55 / dck
Copper	1210	mg/kg		10		SW6020B	03/12/25 05:55 / dck
Lead	33	mg/kg		5		SW6020B	03/12/25 05:55 / dck
Manganese	214	mg/kg		10		SW6020B	03/12/25 05:55 / dck
Molybdenum	420	mg/kg		5		SW6020B	03/12/25 05:55 / dck
Zinc	263	mg/kg		100		SW6020B	03/12/25 05:55 / 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)	



## LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

**Client:** Bison Engineering  
**Project:** Montana Resources Dustfall  
**Lab ID:** H25020617-002  
**Client Sample ID:** DF-PINE-019

**Report Date:** 03/14/25  
**Collection Date:** 02/27/25 12:29  
**Date Received:** 02/28/25  
**Matrix:** Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>PHYSICAL CHARACTERISTICS</b>							
Dry Wt, g	0.0742	g		0.00010		USDA1	03/04/25 00:00 / kjb
Wet Wt, g	687.22	g		0.00010		USDA1	03/04/25 00:00 / kjb
<b>METALS, TOTAL - EPA SW846</b>							
Arsenic	9	mg/kg		3		SW6020B	03/12/25 06:10 / dck
Cadmium	1	mg/kg		1		SW6020B	03/12/25 06:10 / dck
Copper	1870	mg/kg		10		SW6020B	03/12/25 06:10 / dck
Lead	51	mg/kg		7		SW6020B	03/12/25 06:10 / dck
Manganese	270	mg/kg		10		SW6020B	03/12/25 06:10 / dck
Molybdenum	522	mg/kg		7		SW6020B	03/12/25 06:10 / dck
Zinc	389	mg/kg		100		SW6020B	03/12/25 06:10 / 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:** H25020617-003  
**Client Sample ID:** DF-WALNUT-019

**Report Date:** 03/14/25  
**Collection Date:** 02/27/25 13:10  
**Date Received:** 02/28/25  
**Matrix:** Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>PHYSICAL CHARACTERISTICS</b>							
Dry Wt, g	0.1296	g		0.00010		USDA1	03/04/25 00:00 / kjb
Wet Wt, g	604.03	g		0.00010		USDA1	03/04/25 00:00 / kjb
<b>METALS, TOTAL - EPA SW846</b>							
Arsenic	7	mg/kg		2		SW6020B	03/12/25 06:14 / dck
Cadmium	0.8	mg/kg	J	1		SW6020B	03/12/25 06:14 / dck
Copper	960	mg/kg		8		SW6020B	03/12/25 06:14 / dck
Lead	29	mg/kg		4		SW6020B	03/12/25 06:14 / dck
Manganese	222	mg/kg		8		SW6020B	03/12/25 06:14 / dck
Molybdenum	374	mg/kg		4		SW6020B	03/12/25 06:14 / dck
Zinc	278	mg/kg		80		SW6020B	03/12/25 06:14 / 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)	



## LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

**Client:** Bison Engineering  
**Project:** Montana Resources Dustfall  
**Lab ID:** H25020617-004  
**Client Sample ID:** DF-FB-019

**Report Date:** 03/14/25  
**Collection Date:** 02/27/25 14:00  
**Date Received:** 02/28/25  
**Matrix:** Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>PHYSICAL CHARACTERISTICS</b>							
Dry Wt, g	0.0038	g		0.00010		USDA1	03/04/25 00:00 / kjb
Wet Wt, g	457.36	g		0.00010		USDA1	03/04/25 00:00 / kjb
<b>METALS, TOTAL - EPA SW846</b>							
Arsenic	ND	mg/kg		1		SW6020B	03/12/25 06:17 / dck
Cadmium	ND	mg/kg		1		SW6020B	03/12/25 06:17 / dck
Copper	ND	mg/kg		1		SW6020B	03/12/25 06:17 / dck
Lead	ND	mg/kg		1		SW6020B	03/12/25 06:17 / dck
Manganese	ND	mg/kg		1		SW6020B	03/12/25 06:17 / dck
Molybdenum	ND	mg/kg		1		SW6020B	03/12/25 06:17 / dck
Zinc	ND	mg/kg	L	10		SW6020B	03/12/25 06:17 / dck

**Report  
Definitions:**

RL - Analyte Reporting Limit  
QCL - Quality Control Limit  
L - Lowest available reporting limit for the analytical method  
used and/or volume submitted

MCL - Maximum Contaminant Level  
ND - Not detected at the Reporting Limit (RL)



## QA/QC Summary Report

Prepared by Helena, MT Branch

Work Order: H25020617

Report Date: 03/14/25

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: SW6020B</b>		Analytical Run: ICPMS205-H_250311C								
<b>Lab ID: ICV</b>	7	Initial Calibration Verification Standard								03/11/25 21:14
Arsenic		0.0604	mg/L	0.0010	101	90	110			
Cadmium		0.0300	mg/L	0.0010	100	90	110			
Copper		0.0614	mg/L	0.0050	102	90	110			
Lead		0.0577	mg/L	0.0010	96	90	110			
Manganese		0.303	mg/L	0.0010	101	90	110			
Molybdenum		0.0575	mg/L	0.0010	96	90	110			
Zinc		0.0615	mg/L	0.010	102	90	110			
<b>Lab ID: ICSA</b>	7	Interference Check Sample A								03/11/25 21:32
Arsenic		0.0000327	mg/L	0.0010						
Cadmium		0.0000570	mg/L	0.0010						
Copper		0.000184	mg/L	0.0050						
Lead		0.0000327	mg/L	0.0010						
Manganese		0.000356	mg/L	0.0010						
Molybdenum		0.871	mg/L	0.0010	109	80	120			
Zinc		0.00245	mg/L	0.010						
<b>Lab ID: ICSAB</b>	7	Interference Check Sample AB								03/11/25 21:38
Arsenic		0.00872	mg/L	0.0010	87	80	120			
Cadmium		0.00829	mg/L	0.0010	83	80	120			
Copper		0.0165	mg/L	0.0050	83	80	120			
Lead		0.0000447	mg/L	0.0010						
Manganese		0.0169	mg/L	0.0010	84	80	120			
Molybdenum		0.914	mg/L	0.0010	114	80	120			
Zinc		0.0111	mg/L	0.010	111	80	120			
<b>Lab ID: CCV</b>	7	Continuing Calibration Verification Standard								03/12/25 04:53
Arsenic		0.0507	mg/L	0.0010	101	90	110			
Cadmium		0.0500	mg/L	0.0010	100	90	110			
Copper		0.0490	mg/L	0.0050	98	90	110			
Lead		0.0494	mg/L	0.0010	99	90	110			
Manganese		0.0497	mg/L	0.0010	99	90	110			
Molybdenum		0.0486	mg/L	0.0010	97	90	110			
Zinc		0.0486	mg/L	0.010	97	90	110			
<b>Lab ID: CCV</b>	7	Continuing Calibration Verification Standard								03/12/25 05:33
Arsenic		0.0510	mg/L	0.0010	102	90	110			
Cadmium		0.0504	mg/L	0.0010	101	90	110			
Copper		0.0494	mg/L	0.0050	99	90	110			
Lead		0.0492	mg/L	0.0010	98	90	110			
Manganese		0.0499	mg/L	0.0010	100	90	110			
Molybdenum		0.0491	mg/L	0.0010	98	90	110			
Zinc		0.0506	mg/L	0.010	101	90	110			
<b>Lab ID: CCV</b>	7	Continuing Calibration Verification Standard								03/12/25 06:21
Arsenic		0.0517	mg/L	0.0010	103	90	110			

### Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

## QA/QC Summary Report

Prepared by Helena, MT Branch

Work Order: H25020617

Report Date: 03/14/25

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: SW6020B</b>				Analytical Run: ICPMS205-H_250311C						
<b>Lab ID: CCV</b>	7	Continuing Calibration Verification Standard								03/12/25 06:21
Cadmium		0.0508	mg/L	0.0010	102	90	110			
Copper		0.0509	mg/L	0.0050	102	90	110			
Lead		0.0496	mg/L	0.0010	99	90	110			
Manganese		0.0501	mg/L	0.0010	100	90	110			
Molybdenum		0.0496	mg/L	0.0010	99	90	110			
Zinc		0.0513	mg/L	0.010	103	90	110			
<b>Method: SW6020B</b>				Batch: 76487						
<b>Lab ID: MB-76487</b>	7	Method Blank								Run: ICPMS205-H_250311C 03/12/25 05:41
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						
<b>Lab ID: H25020617-001ADIL</b>	7	Serial Dilution								Run: ICPMS205-H_250311C 03/12/25 05:59
Arsenic		ND	mg/kg	11		0	0			20
Cadmium		ND	mg/kg	2.7		0	0			20
Copper		1230	mg/kg	54		0	0	1.3		20
Lead		35.0	mg/kg	27		0	0			20 N
Manganese		225	mg/kg	57		0	0			20 N
Molybdenum		417	mg/kg	27		0	0	0.9		20
Zinc		298	mg/kg	540		0	0			20 N
<b>Lab ID: H25020617-001AMS</b>	7	Sample Matrix Spike								Run: ICPMS205-H_250311C 03/12/25 06:03
Arsenic		60.5	mg/kg	2.2	98	75	125			
Cadmium		53.4	mg/kg	1.0	98	75	125			
Copper		1250	mg/kg	11		75	125			A
Lead		83.4	mg/kg	5.4	94	75	125			
Manganese		268	mg/kg	11	101	75	125			
Molybdenum		469	mg/kg	5.4		75	125			A
Zinc		311	mg/kg	110		75	125			A
<b>Lab ID: H25020617-001AMSD</b>	7	Sample Matrix Spike Duplicate								Run: ICPMS205-H_250311C 03/12/25 06:06
Arsenic		60.7	mg/kg	2.2	98	75	125	0.4		20
Cadmium		53.8	mg/kg	1.0	99	75	125	0.7		20
Copper		1290	mg/kg	11		75	125	2.5		20 A
Lead		84.2	mg/kg	5.4	96	75	125	1.0		20
Manganese		266	mg/kg	11	97	75	125	0.8		20
Molybdenum		465	mg/kg	5.4		75	125	0.7		20 A
Zinc		311	mg/kg	110		75	125	0.1		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



# Work Order Receipt Checklist

Bison Engineering

H25020617

Login completed by: Wanda J. Johnson

Date Received: 2/28/2025

Reviewed by: rtooke

Received by: WJJ

Reviewed Date: 3/3/2025

Carrier name: Hand Deliver

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on all shipping container(s)/cooler(s)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on all sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Not Applicable <input type="checkbox"/>
Container/Temp Blank temperature:	17.8°C No Ice		
Containers requiring zero headspace have no headspace or bubble that is <6mm (1/4").	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Applicable <input checked="" type="checkbox"/>

## 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/time not indicated on the containers. Proceeded with the collection date/time as indicated on the chain of custody. WJJ 02/28/25



## Laboratory Certifications and Accreditations

Current certificates are available at [www.energylab.com](http://www.energylab.com) website:

	Agency	Number
<b>Billings, MT</b>   	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
<b>Casper, WY</b>  	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
<b>Gillette, WY</b>	US EPA Region VIII	WY00006
<b>Helena, MT</b>	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

Trust our People. Trust our Data.

Page 1 of 1

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	<input type="checkbox"/> Hard Copy	<input checked="" type="checkbox"/> Email	Receive Report <input type="checkbox"/> Hard Copy <input checked="" type="checkbox"/> Email
Purchase Order	Quote	Bottle Order	
MTR224018	H16951		

## Report Information (if different than Account Information)

Company/Name			
Contact			
Phone			
Mailing Address			
City, State, Zip			
Email			
Receive Report	<input type="checkbox"/> Hard Copy	<input type="checkbox"/> Email	
Special Report/Formats:	<input type="checkbox"/> LEVEL IV <input type="checkbox"/> NELAC <input type="checkbox"/> EDD/EDT (contact laboratory) <input type="checkbox"/> Other		

## Comments

These are dustfall samples. Collected from 01.30.2025 to 02.27.2025
--

## 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 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
URANIUM MINING CLIENTS MUST indicate sample type	
<input type="checkbox"/> Unprocessed Ore	
<input type="checkbox"/> Processed Ore (Ground or Refined) **CALL BEFORE SENDING	
<input type="checkbox"/> 11(e)2 Byproduct Material (Can ONLY be Submitted to ELI Casper Location)	

## Matrix Codes

A - Air  
W - Water  
S - Solids  
V - Vegetation  
B - Bioassay  
O - Oil  
DW - Drinking Water

## Analysis Requested

Gravimetric - total mass  
As, Cd, Cu, Pb, Mn, Mo, Zn

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	Time	Number of Containers	Matrix (See Codes Above)	Gravimetric - total mass	As, Cd, Cu, Pb, Mn, Mo, Zn	See Attached	ELI LAB ID RUSH TAT H25020617
1 DF-GREELEY-019	02/27/2025	2:00 pm	1	A	✓	✓		
2 DF-PINE-019	02/27/2025	12:29 pm	1	A	✓	✓		
3 DF-WALNUT-019	02/27/2025	1:10 pm	1	A	✓	✓		
4 DF-FB-019	02/27/2025	2:00 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) Steven R Heck	Date/Time 2-28-2025 1530	Signature	Received by (print) Amanda	Date/Time 2-28-2025 1530	Signature
Shipped By Andad	Cooler ID(s) Y	Custody Seals Y C B	Intact Y N	Receipt Temp 17.8 °C	Temp Blank Y N	On Ice X N
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.



## ANALYTICAL SUMMARY REPORT

April 28, 2025

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

Work Order: H25040366 Quote ID: H16951

Project Name: Montana Resources Dustfall

Energy Laboratories Inc Helena MT received the following 4 samples for Bison Engineering on 4/10/2025 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H25040366-001	DF-GREELEY-020	03/31/25 15:18	04/10/25	Solid	Metals by ICP/ICPMS, Total Total Metals Digestion by SW3050B Soil Preparation USDA1 Soil Parameters
H25040366-002	DF-PINE-020	03/31/25 13:24	04/10/25	Solid	Metals by ICP/ICPMS, Total Total Metals Digestion by SW3050B Soil Parameters
H25040366-003	DF-WALNUT-020	03/31/25 15:10	04/10/25	Solid	Same As Above
H25040366-004	DF-FB-020	03/31/25 15:26	04/10/25	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:** H25040366-001  
**Client Sample ID:** DF-GREELEY-020

**Report Date:** 04/28/25  
**Collection Date:** 03/31/25 15:18  
**Date Received:** 04/10/25  
**Matrix:** Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>PHYSICAL CHARACTERISTICS</b>							
Dry Wt, g	0.1111	g		0.00010		USDA1	04/22/25 17:21 / kjb
Wet Wt, g	409.23	g		0.00010		USDA1	04/22/25 17:21 / kjb
<b>METALS, TOTAL - EPA SW846</b>							
Arsenic	14	mg/kg		4		SW6020B	04/23/25 17:26 / dck
Cadmium	1	mg/kg		1		SW6020B	04/23/25 17:26 / dck
Copper	1440	mg/kg		20		SW6020B	04/23/25 17:26 / dck
Lead	68	mg/kg		9		SW6020B	04/23/25 17:26 / dck
Manganese	296	mg/kg		20		SW6020B	04/23/25 17:26 / dck
Molybdenum	553	mg/kg		9		SW6020B	04/23/25 17:26 / dck
Zinc	389	mg/kg		200		SW6020B	04/23/25 17:26 / dck

**Report** RL - Analyte Reporting Limit  
**Definitions:** 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:** H25040366-002  
**Client Sample ID:** DF-PINE-020

**Report Date:** 04/28/25  
**Collection Date:** 03/31/25 13:24  
**Date Received:** 04/10/25  
**Matrix:** Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>PHYSICAL CHARACTERISTICS</b>							
Dry Wt, g	0.1268	g		0.00010		USDA1	04/22/25 17:21 / kjb
Wet Wt, g	417.74	g		0.00010		USDA1	04/22/25 17:21 / kjb
<b>METALS, TOTAL - EPA SW846</b>							
Arsenic	15	mg/kg		3		SW6020B	04/23/25 17:40 / dck
Cadmium	1	mg/kg		1		SW6020B	04/23/25 17:40 / dck
Copper	1780	mg/kg		20		SW6020B	04/23/25 17:40 / dck
Lead	64	mg/kg		8		SW6020B	04/23/25 17:40 / dck
Manganese	292	mg/kg		20		SW6020B	04/23/25 17:40 / dck
Molybdenum	552	mg/kg		8		SW6020B	04/23/25 17:40 / dck
Zinc	383	mg/kg		200		SW6020B	04/23/25 17:40 / 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:** H25040366-003  
**Client Sample ID:** DF-WALNUT-020

**Report Date:** 04/28/25  
**Collection Date:** 03/31/25 15:10  
**Date Received:** 04/10/25  
**Matrix:** Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>PHYSICAL CHARACTERISTICS</b>							
Dry Wt, g	0.0889	g		0.00010		USDA1	04/22/25 17:21 / kjb
Wet Wt, g	350.76	g		0.00010		USDA1	04/22/25 17:21 / kjb
<b>METALS, TOTAL - EPA SW846</b>							
Arsenic	16	mg/kg		4		SW6020B	04/23/25 17:44 / dck
Cadmium	1	mg/kg		1		SW6020B	04/23/25 17:44 / dck
Copper	1460	mg/kg		20		SW6020B	04/23/25 17:44 / dck
Lead	91	mg/kg		10		SW6020B	04/23/25 17:44 / dck
Manganese	437	mg/kg		20		SW6020B	04/23/25 17:44 / dck
Molybdenum	570	mg/kg		10		SW6020B	04/23/25 17:44 / dck
Zinc	462	mg/kg		200		SW6020B	04/23/25 17:44 / 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:** H25040366-004  
**Client Sample ID:** DF-FB-020

**Report Date:** 04/28/25  
**Collection Date:** 03/31/25 15:26  
**Date Received:** 04/10/25  
**Matrix:** Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>PHYSICAL CHARACTERISTICS</b>							
Dry Wt, g	0.0449	g		0.00010		USDA1	04/22/25 17:21 / kjb
Wet Wt, g	295.8	g		0.00010		USDA1	04/22/25 17:21 / kjb
<b>METALS, TOTAL - EPA SW846</b>							
Arsenic	ND	mg/kg		1		SW6020B	04/23/25 17:48 / dck
Cadmium	ND	mg/kg		1		SW6020B	04/23/25 17:48 / dck
Copper	0.04	mg/kg	J	1		SW6020B	04/24/25 10:51 / dck
Lead	ND	mg/kg		1		SW6020B	04/23/25 17:48 / dck
Manganese	0.07	mg/kg	J	1		SW6020B	04/24/25 10:51 / dck
Molybdenum	ND	mg/kg		1		SW6020B	04/23/25 17:48 / dck
Zinc	0.2	mg/kg	J	1		SW6020B	04/24/25 10:51 / 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: H25040366

Report Date: 04/28/25

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: SW6020B</b>		Analytical Run: ICPMS205-H_250423A								
<b>Lab ID: ICV</b>	7	Initial Calibration Verification Standard								04/23/25 11:33
Arsenic		0.0582	mg/L	0.0010	97	90	110			
Cadmium		0.0298	mg/L	0.0010	99	90	110			
Copper		0.0604	mg/L	0.0050	101	90	110			
Lead		0.0580	mg/L	0.0010	97	90	110			
Manganese		0.298	mg/L	0.0010	99	90	110			
Molybdenum		0.0573	mg/L	0.0010	96	90	110			
Zinc		0.0593	mg/L	0.010	99	90	110			
<b>Lab ID: ICSA</b>	7	Interference Check Sample A								04/23/25 16:48
Arsenic		0.0000578	mg/L	0.0010						
Cadmium		0.000130	mg/L	0.0010						
Copper		-1.29E-06	mg/L	0.0050						
Lead		6.56E-06	mg/L	0.0010						
Manganese		0.000426	mg/L	0.0010						
Molybdenum		0.789	mg/L	0.0010	99	80	120			
Zinc		0.000606	mg/L	0.010						
<b>Lab ID: ICSAB</b>	7	Interference Check Sample AB								04/23/25 16:56
Arsenic		0.00966	mg/L	0.0010	97	80	120			
Cadmium		0.00956	mg/L	0.0010	96	80	120			
Copper		0.0179	mg/L	0.0050	89	80	120			
Lead		9.02E-06	mg/L	0.0010						
Manganese		0.0197	mg/L	0.0010	99	80	120			
Molybdenum		0.766	mg/L	0.0010	96	80	120			
Zinc		0.0115	mg/L	0.010	115	80	120			
<b>Lab ID: CCV</b>	7	Continuing Calibration Verification Standard								04/23/25 17:07
Arsenic		0.0487	mg/L	0.0010	97	90	110			
Cadmium		0.0505	mg/L	0.0010	101	90	110			
Copper		0.0482	mg/L	0.0050	96	90	110			
Lead		0.0477	mg/L	0.0010	95	90	110			
Manganese		0.0507	mg/L	0.0010	101	90	110			
Molybdenum		0.0489	mg/L	0.0010	98	90	110			
Zinc		0.0496	mg/L	0.010	99	90	110			
<b>Lab ID: CCV</b>	7	Continuing Calibration Verification Standard								04/23/25 17:52
Arsenic		0.0482	mg/L	0.0010	96	90	110			
Cadmium		0.0499	mg/L	0.0010	100	90	110			
Copper		0.0492	mg/L	0.0050	98	90	110			
Lead		0.0473	mg/L	0.0010	95	90	110			
Manganese		0.0497	mg/L	0.0010	99	90	110			
Molybdenum		0.0488	mg/L	0.0010	98	90	110			
Zinc		0.0493	mg/L	0.010	99	90	110			
<b>Method: SW6020B</b>		Batch: 77327								

### Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)





## QA/QC Summary Report

Prepared by Helena, MT Branch

Work Order: H25040366

Report Date: 04/28/25

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: SW6020B</b>										Batch: 77327
<b>Lab ID: MB-77327</b>	7	Method Blank				Run: ICPMS205-H_250423A				04/23/25 17:14
Arsenic		ND	mg/kg	0.3						
Cadmium		ND	mg/kg	0.05						
Copper		ND	mg/kg	1						
Lead		ND	mg/kg	0.9						
Manganese		ND	mg/kg	2						
Molybdenum		ND	mg/kg	0.4						
Zinc		ND	mg/kg	6						
<b>Lab ID: LCS-77327</b>	7	Laboratory Control Sample				Run: ICPMS205-H_250423A				04/23/25 17:18
Arsenic		24.2	mg/kg	1.0	97	80	120			
Cadmium		12.9	mg/kg	1.0	103	80	120			
Copper		24.8	mg/kg	2.0	99	80	120			
Lead		25.2	mg/kg	1.0	101	80	120			
Manganese		126	mg/kg	2.1	101	80	120			
Molybdenum		24.8	mg/kg	1.0	99	80	120			
Zinc		24.8	mg/kg	20	99	80	120			
<b>Lab ID: H25040366-001ADIL</b>	7	Serial Dilution				Run: ICPMS205-H_250423A				04/23/25 17:29
Arsenic		15.4	mg/kg	18		0	0		20	N
Cadmium		ND	mg/kg	4.5		0	0		20	
Copper		1470	mg/kg	90		0	0	2.1	20	
Lead		66.1	mg/kg	45		0	0		20	N
Manganese		298	mg/kg	95		0	0		20	N
Molybdenum		552	mg/kg	45		0	0	0.3	20	
Zinc		425	mg/kg	900		0	0		20	N

### 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: H25040366

Report Date: 04/28/25

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: SW6020B</b>		Analytical Run: ICPMS206-H_250423B								
<b>Lab ID: ICV</b>	3	Initial Calibration Verification Standard								04/23/25 20:00
Copper		0.0616	mg/L	0.0050	103	90	110			
Manganese		0.307	mg/L	0.0010	102	90	110			
Zinc		0.0606	mg/L	0.010	101	90	110			
<b>Lab ID: ICSA</b>	3	Interference Check Sample A								04/24/25 08:32
Copper		0.0000588	mg/L	0.0050						
Manganese		0.000445	mg/L	0.0010						
Zinc		0.000695	mg/L	0.010						
<b>Lab ID: ICSAB</b>	3	Interference Check Sample AB								04/24/25 08:40
Copper		0.0187	mg/L	0.0050	93	80	120			
Manganese		0.0193	mg/L	0.0010	97	80	120			
Zinc		0.0118	mg/L	0.010	118	80	120			
<b>Lab ID: CCV</b>	3	Continuing Calibration Verification Standard								04/24/25 09:43
Copper		0.0522	mg/L	0.0050	104	90	110			
Manganese		0.0510	mg/L	0.0010	102	90	110			
Zinc		0.0512	mg/L	0.010	102	90	110			
<b>Lab ID: CCV</b>	3	Continuing Calibration Verification Standard								04/24/25 10:57
Copper		0.0518	mg/L	0.0050	104	90	110			
Manganese		0.0511	mg/L	0.0010	102	90	110			
Zinc		0.0513	mg/L	0.010	103	90	110			
<b>Method: SW6020B</b>		Batch: 77327								
<b>Lab ID: MB-77327</b>	7	Method Blank								Run: ICPMS206-H_250423B 04/24/25 10:47
Arsenic		ND	mg/kg	0.03						
Cadmium		0.002	mg/kg	0.001						
Copper		0.04	mg/kg	0.03						
Lead		ND	mg/kg	0.02						
Manganese		ND	mg/kg	0.02						
Molybdenum		ND	mg/kg	0.01						
Zinc		ND	mg/kg	0.09						

### Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)



# Work Order Receipt Checklist

Bison Engineering

H25040366

Login completed by: Rebecca A. Tooke

Date Received: 4/10/2025

Reviewed by: gmccartney

Received by: RAT

Reviewed Date: 4/15/2025

Carrier name: Hand Deliver

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on all shipping container(s)/cooler(s)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on all sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Not Applicable <input type="checkbox"/>
Container/Temp Blank temperature:	24.8°C No Ice		
Containers requiring zero headspace have no headspace or bubble that is <6mm (1/4").	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Applicable <input checked="" type="checkbox"/>

## 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/time indicated is not on the containers.. Proceeded with the collection date/time as indicated on the chain of custody. RAT 4/10/25

## Laboratory Certifications and Accreditations

Current certificates are available at [www.energylab.com](http://www.energylab.com) website:

	Agency	Number
<b>Billings, MT</b>   	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
<b>Casper, WY</b>  	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
<b>Gillette, WY</b>	US EPA Region VIII	WY00006
<b>Helena, MT</b>	Colorado	MT00945
	Montana	CERT0079
	Nevada	NV-C24-00119
	US EPA Region VIII	Reciprocal
	USDA Soil Permit	P330-20-00090



Trust our People. Trust our Data.

# Chain of Custody & Analytical Request Record

www.energylab.com

Page 1 of 1

## 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	<input type="checkbox"/> Hard Copy <input checked="" type="checkbox"/> Email	Receive Report	<input type="checkbox"/> Hard Copy <input checked="" type="checkbox"/> Email
Purchase Order	Quote	Bottle Order	
MTR224018	H16951		

## Report Information (If different than Account Information)

Company/Name			
Contact			
Phone			
Mailing Address			
City, State, Zip			
Email			
Receive Report	<input type="checkbox"/> Hard Copy <input checked="" type="checkbox"/> Email		
Special Report/Format:	<input type="checkbox"/> LEVEL IV <input type="checkbox"/> NELAC <input type="checkbox"/> EDD/EDT (contact laboratory) <input type="checkbox"/> Other		

## Comments

These are dustfall samples.  
Collected from 02.27.2025 to 03.31.2025

## 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	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
URANIUM MINING CLIENTS MUST indicate sample type			
<input type="checkbox"/> Unprocessed Ore			
<input type="checkbox"/> Processed Ore (Ground or Refined) **CALL BEFORE SENDING			
<input type="checkbox"/> 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	

## Analysis Requested

Gravimetric - total mass	✓
As, Cd, Cu, Pb, Mn, Mo, Zn	✓

See Attached

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		Number of Containers	Matrix (See Codes Above)	Gravimetric - total mass	As, Cd, Cu, Pb, Mn, Mo, Zn	Analysis Requested				See Attached	RUSH TAT	ELI LAB ID Laboratory Use Only
	Date	Time											
1 DF-GREELEY-020	03/31/2025	3:18 pm	1	A	✓	✓							1425040366
2 DF-PINE-020	03/31/2025	3:24 pm	1	A	✓	✓							
3 DF-WALNUT-020	03/31/2025	3:10 pm	1	A	✓	✓							
4 DF-FB-020	03/31/2025	3:26 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) Steven R Heck	Signature [Signature]	Date/Time 4-10-2025 14:40	Received by (print) [Signature]	Signature [Signature]	Date/Time 4-10-25/1440			
Shipped By [Signature]	Cooler ID(s) Y	Custody Seals Y N C B	Intact Y N	Receipt Temp 24.8 °C	Temp Blank Y N	On Ice Y N	Payment Type 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.

## **APPENDIX D: COMMON GUIDELINES FOR AIRBORNE CONTAMINANTS**

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## 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	<a href="https://www.atsdr.cdc.gov/toxprofiles/tp2-c8.pdf">https://www.atsdr.cdc.gov/toxprofiles/tp2-c8.pdf</a>
	NIOSH	REL		2	µg/m <sup>3</sup>	15 min	<a href="https://www.atsdr.cdc.gov/toxprofiles/tp2-c8.pdf">https://www.atsdr.cdc.gov/toxprofiles/tp2-c8.pdf</a>
	ACGIH	TLV (TWA)		10	µg/m <sup>3</sup>	8-hour	<a href="https://www.osha.gov/dsg/annotated-pels/tablez-1.html">https://www.osha.gov/dsg/annotated-pels/tablez-1.html</a>
	OSHA	PEL (TWA)	General - organic As	200	µg/m <sup>3</sup>	8-hour	<a href="https://www.osha.gov/dsg/annotated-pels/tablez-1.html">https://www.osha.gov/dsg/annotated-pels/tablez-1.html</a>
	OSHA	PEL (TWA)	General - inorganic As	10	µg/m <sup>3</sup>	8-hour	<a href="https://www.atsdr.cdc.gov/toxprofiles/tp2-c8.pdf">https://www.atsdr.cdc.gov/toxprofiles/tp2-c8.pdf</a>
	OSHA	PEL (TWA)	Construction - organic	500	µg/m <sup>3</sup>	8-hour	<a href="https://www.atsdr.cdc.gov/toxprofiles/tp2-c8.pdf">https://www.atsdr.cdc.gov/toxprofiles/tp2-c8.pdf</a>
	OSHA	PEL (TWA)	Shipyard - organic	500	µg/m <sup>3</sup>	8-hour	<a href="https://www.atsdr.cdc.gov/toxprofiles/tp2-c8.pdf">https://www.atsdr.cdc.gov/toxprofiles/tp2-c8.pdf</a>
	EPA	EPA- Ca	Noncancer	0.015	µg/m <sup>3</sup>		<a href="https://www.epa.gov/sites/production/files/2014-05/documents/table1.pdf">https://www.epa.gov/sites/production/files/2014-05/documents/table1.pdf</a>
	EPA	IRIS	Risk = 10 <sup>-6</sup> (lifetime)	0.043	µg/m <sup>3</sup>	Life-time	<a href="https://www.epa.gov/sites/production/files/2014-05/documents/table1.pdf">https://www.epa.gov/sites/production/files/2014-05/documents/table1.pdf</a>
	EPA	REL		0.20	µg/m <sup>3</sup>	1-Hour	<a href="https://www.epa.gov/sites/production/files/2014-05/documents/table2.pdf">https://www.epa.gov/sites/production/files/2014-05/documents/table2.pdf</a>
	EPA	RfC	Inorganic As	0.015	µg/m <sup>3</sup>	Life-time	<a href="https://semspub.epa.gov/work/HQ/401635.pdf">https://semspub.epa.gov/work/HQ/401635.pdf</a> - (November, 2021)
	EPA	RSL	Cancer Risk @ 10 <sup>-6</sup>	0.65	ng/m <sup>3</sup>	Life-time	<a href="https://semspub.epa.gov/work/HQ/401635.pdf">https://semspub.epa.gov/work/HQ/401635.pdf</a> - (November, 2021)
	EPA	RSL	HI = 1	0.016	µg/m <sup>3</sup>		<a href="https://semspub.epa.gov/work/HQ/401635.pdf">https://semspub.epa.gov/work/HQ/401635.pdf</a> - (November, 2021)
Cadmium	ACGIH	TLV (TWA)	(total)	10	µg/m <sup>3</sup>	8-hour	<a href="https://www.osha.gov/dsg/annotated-pels/tablez-1.html">https://www.osha.gov/dsg/annotated-pels/tablez-1.html</a>
	ACGIH	TLV (TWA)	(respirable)	2	µg/m <sup>3</sup>	8-hour	<a href="https://www.osha.gov/dsg/annotated-pels/tablez-1.html">https://www.osha.gov/dsg/annotated-pels/tablez-1.html</a>
	OSHA	PEL (TWA)		5	µg/m <sup>3</sup>		<a href="https://www.osha.gov/dsg/annotated-pels/tablez-1.html">https://www.osha.gov/dsg/annotated-pels/tablez-1.html</a>
	EPA	ATSDR	Noncancer - Cd Compounds	0.01	µg/m <sup>3</sup>	Chronic	<a href="https://www.epa.gov/sites/production/files/2014-05/documents/table1.pdf">https://www.epa.gov/sites/production/files/2014-05/documents/table1.pdf</a>
	EPA	IRIS	Cancer - Cd Compounds	2	µg/m <sup>3</sup>	Chronic	<a href="https://www.epa.gov/sites/production/files/2014-05/documents/table1.pdf">https://www.epa.gov/sites/production/files/2014-05/documents/table1.pdf</a>
	EPA	MRL	Cd Compounds	0.03	µg/m <sup>3</sup>	Acute	
	EPA	AEGL-1 (1-hr)	Cd Compounds	100	µg/m <sup>3</sup>	1-Hour	<a href="https://www.epa.gov/sites/production/files/2014-05/documents/table2.pdf">https://www.epa.gov/sites/production/files/2014-05/documents/table2.pdf</a>
	EPA	AEGL-1 (8-hr)	Cd Compounds	41	µg/m <sup>3</sup>	8-Hour	<a href="https://www.epa.gov/sites/production/files/2014-05/documents/table2.pdf">https://www.epa.gov/sites/production/files/2014-05/documents/table2.pdf</a>
	EPA	RfC	Cd (water)	0.01	µg/m <sup>3</sup>	Life-time	<a href="https://semspub.epa.gov/work/HQ/401635.pdf">https://semspub.epa.gov/work/HQ/401635.pdf</a> - (November, 2021)
	EPA	RSL: TR @ 10 <sup>-6</sup>	Cd (water) (Cancer Risk)	1.60	ng/m <sup>3</sup>	Life-time	<a href="https://semspub.epa.gov/work/HQ/401635.pdf">https://semspub.epa.gov/work/HQ/401635.pdf</a> - (November, 2021)
	EPA	RSL: HI = 1	Cd (water) (Noncancer Risk)	10	ng/m <sup>3</sup>	HI=1	<a href="https://semspub.epa.gov/work/HQ/401635.pdf">https://semspub.epa.gov/work/HQ/401635.pdf</a> - (November, 2021)
Copper	ACGIH	TLV (TWA)	(dust & mist)	1,000	µg/m <sup>3</sup>	8-hour	<a href="https://www.osha.gov/dsg/annotated-pels/tablez-1.html">https://www.osha.gov/dsg/annotated-pels/tablez-1.html</a>
	NIOSH	REL (TWA)		1,000	µg/m <sup>3</sup>	8-hour	<a href="https://www.osha.gov/dsg/annotated-pels/tablez-1.html">https://www.osha.gov/dsg/annotated-pels/tablez-1.html</a>
	OSHA	PEL (TWA)		1,000	µg/m <sup>3</sup>	8-hour	<a href="https://www.osha.gov/dsg/annotated-pels/tablez-1.html">https://www.osha.gov/dsg/annotated-pels/tablez-1.html</a>
Lead (Pb)	ACGIH	TLV (TWA)	(inorganic)	50	µg/m <sup>3</sup>	8-hour	<a href="https://www.osha.gov/dsg/annotated-pels/tablez-1.html">https://www.osha.gov/dsg/annotated-pels/tablez-1.html</a>
	NIOSH	REL (TWA)	(inorganic+ organic salts)	50	µg/m <sup>3</sup>	8-hour	<a href="https://www.osha.gov/dsg/annotated-pels/tablez-1.html">https://www.osha.gov/dsg/annotated-pels/tablez-1.html</a>
	OSHA	PEL (TWA)	(inorganic)	50	µg/m <sup>3</sup>	8-hour	<a href="https://www.osha.gov/dsg/annotated-pels/tablez-1.html">https://www.osha.gov/dsg/annotated-pels/tablez-1.html</a>
	EPA	NAAQS		0.150	µg/m <sup>3</sup>	3-month mean	40 CFR 50.12 (and Appendix R)
	NIOSH	IGHL/10	Lead compounds	10	ng/m <sup>3</sup>		<a href="https://www.epa.gov/sites/production/files/2014-05/documents/table2.pdf">https://www.epa.gov/sites/production/files/2014-05/documents/table2.pdf</a>
	EPA	RSL: HI = 1	Pb (Noncancer Risk)	0.15	µg/m <sup>3</sup>	HI=1	<a href="https://semspub.epa.gov/work/HQ/401635.pdf">https://semspub.epa.gov/work/HQ/401635.pdf</a> - (November, 2021)
Manganese	ACGIH	TLV (TWA)	(compounds + fumes)	20	µg/m <sup>3</sup>	8-hour	<a href="https://www.osha.gov/dsg/annotated-pels/tablez-1.html">https://www.osha.gov/dsg/annotated-pels/tablez-1.html</a>
	NIOSH	REL (TWA)	(compounds + fumes)	1,000	µg/m <sup>3</sup>	8-hour	<a href="https://www.osha.gov/dsg/annotated-pels/tablez-1.html">https://www.osha.gov/dsg/annotated-p</a>

## Zinc (Zn)

ACGIH	TLV (TWA)	(zinc oxide - respirable)	2,000	$\mu\text{g}/\text{m}^3$	8-hour	<a href="https://www.osha.gov/dsg/annotated-pels/tablez-1.html">https://www.osha.gov/dsg/annotated-pels/tablez-1.html</a>
	STEL	(zinc oxide - respirable)	10,000	$\mu\text{g}/\text{m}^3$	15 minutes	<a href="https://www.osha.gov/dsg/annotated-pels/tablez-1.html">https://www.osha.gov/dsg/annotated-pels/tablez-1.html</a>
OSHA	PEL (TWA)	(inorganic)	5,000	$\mu\text{g}/\text{m}^3$	8-hour	<a href="https://www.osha.gov/dsg/annotated-pels/tablez-1.html">https://www.osha.gov/dsg/annotated-pels/tablez-1.html</a>

<u>Term</u>	<u>Definition</u>
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. <a href="https://archive.epa.gov/airtoxics/nata/web/html/gloss.html">https://archive.epa.gov/airtoxics/nata/web/html/gloss.html</a>
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 lifetime <a href="https://www.epa.gov/sites/default/files/2015-08/documents/technical_appendix_a_toxicity_v2_3_3.pdf">https://www.epa.gov/sites/default/files/2015-08/documents/technical_appendix_a_toxicity_v2_3_3.pdf</a>
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. <a href="https://semspub.epa.gov/work/HQ/401635.pdf">https://semspub.epa.gov/work/HQ/401635.pdf</a> 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**

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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 $\leq \pm 10$ )
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 $\leq \pm 2^{\circ}\text{C}$ )
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 <sub>2</sub> O)	Start 134	End 133	Pass    Fail
Flow Rate Verification			
Reading (liters per minute)	Sampler (a)	Reference Standard (b)	% Difference $100 \cdot (a - b) / b$ (must be $\leq \pm 4\%$ )
Operating flow rate check	16.7	17.38	-3.9%
Reading (liters per minute)	Reference Standard (b)	Design Flow Rate Standard (c)	% Difference $100 \cdot (b - 16.7) / 16.7$ (must be $\leq \pm 5\%$ )
Design flow rate calculation	17.38	16.7	+4.1%
<p>Performed multipoint flow calibration</p> <p><u>Set Point</u>  15.0 LPM: 14.97  18.4 LPM: 18.39  16.7 LPM: 16.71</p> <p>Verify operating flow at 16.75 Errors as-left were -0.3% / +0.3%</p>			

BGI PQ200 TSP Sampler – Monthly Calibration Checks			
Date: 02/27/2025	Time: 1236 - 1255 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 $\leq \pm 10$ )
Ambient Pressure	626 mm Hg	626.2 mmHg	-0.2
Temperature Sensor Verification			
Reading (degrees Celsius)	Sampler (a)	Reference Standard (b)	Difference (a - b) (must be $\leq \pm 2^{\circ}\text{C}$ )
Ambient Temperature	7.5 C	8.5 C	-1.0 C
Filter Temperature	9.1 C	8.6 C	+0.5 C
Leak Check			
Vacuum Readings (cm H <sub>2</sub> O)	Start 137	End 135	Pass    Fail
Flow Rate Verification			
Reading (liters per minute)	Sampler (a)	Reference Standard (b)	% Difference $100 \cdot (a - b) / b$ (must be $\leq \pm 4\%$ )
Operating flow rate check	16.7	16.99	-1.7%
Reading (liters per minute)	Reference Standard (b)	Design Flow Rate Standard (c)	% Difference $100 \cdot (b - 16.7) / 16.7$ (must be $\leq \pm 5\%$ )
Design flow rate calculation	16.99	16.7	+1.7%

BGI PQ200 TSP Sampler – Monthly Calibration Checks			
Date: 03/12/2025	Time: 1240 - 1255 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 $\leq \pm 10$ )
Ambient Pressure	613 mm Hg	612.7 mmHg	+0.3
Temperature Sensor Verification			
Reading (degrees Celsius)	Sampler (a)	Reference Standard (b)	Difference (a - b) (must be $\leq \pm 2^{\circ}\text{C}$ )
Ambient Temperature	10.3 C	10.5 C	-0.2 C
Filter Temperature	10.9 C	10.5 C	+0.4 C
Leak Check			
Vacuum Readings (cm H <sub>2</sub> O)	Start 137	End 137	Pass    Fail
Flow Rate Verification			
Reading (liters per minute)	Sampler (a)	Reference Standard (b)	% Difference $100 \cdot (a - b) / b$ (must be $\leq \pm 4\%$ )
Operating flow rate check	16.7	17.10	-2.3%
Reading (liters per minute)	Reference Standard (b)	Design Flow Rate Standard (c)	% Difference $100 \cdot (b - 16.7) / 16.7$ (must be $\leq \pm 5\%$ )
Design flow rate calculation	17.10	16.7	+2.4%

BGI PQ200 TSP Sampler – Monthly Calibration Checks			
Date: 04/29/2025	Time: 1130 - 1150 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 $\leq \pm 10$ )
Ambient Pressure	620 mm Hg	620.2 mmHg	-0.2
Temperature Sensor Verification			
Reading (degrees Celsius)	Sampler (a)	Reference Standard (b)	Difference (a - b) (must be $\leq \pm 2^{\circ}\text{C}$ )
Ambient Temperature	13.3 C	13.5 C	-0.2 C
Filter Temperature	13.7 C	13.4 C	+0.3 C
Leak Check			
Vacuum Readings (cm H <sub>2</sub> O)	Start 138	End 138	Pass    Fail
Flow Rate Verification			
Reading (liters per minute)	Sampler (a)	Reference Standard (b)	% Difference $100 \cdot (a - b) / b$ (must be $\leq \pm 4\%$ )
Operating flow rate check	16.7	17.77	-6.0%
Reading (liters per minute)	Reference Standard (b)	Design Flow Rate Standard (c)	% Difference $100 \cdot (b - 16.7) / 16.7$ (must be $\leq \pm 5\%$ )
Design flow rate calculation	17.77	16.7	+6.4%
<p>Performed multipoint flow cal:</p> <p>@15.0 LPM: 14.98 LPM</p> <p>@18.4 LPM: 18.40 LPM</p> <p>@16.7 LPM: 16.72 LPM</p> <p>Operating flow verification: 16.72 LPM</p>			

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 $\leq \pm 10$ )
Ambient Pressure	632	630.7	+1.3
Temperature Sensor Verification			
Reading (degrees Celsius)	Sampler (a)	Reference Standard (b)	Difference (a - b) (must be $\leq \pm 2^{\circ}\text{C}$ )
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 <sub>2</sub> O)	Start 135	End 133	Pass <input checked="" type="checkbox"/> Fail <input type="checkbox"/>
Flow Rate Verification			
Reading (liters per minute)	Sampler (a)	Reference Standard (b)	% Difference $100 \cdot (a - b) / b$ (must be $\leq \pm 4\%$ )
Operating flow rate check	16.7	17.38	-3.9%
Reading (liters per minute)	Reference Standard (b)	Design Flow Rate Standard (c)	% Difference $100 \cdot (b - 16.7) / 16.7$ (must be $\leq \pm 5\%$ )
Design flow rate calculation	17.38	16.7	+4.1%
<p>Performed multipoint flow calibration</p> <p><u>Set Point</u></p> <p>15.0 LPM: 15.00</p> <p>18.4 LPM: 18.39</p> <p>16.7 LPM: 16.68</p> <p>Verify operating flow at 16.68 Errors as-left were +0.1% / -0.1%</p>			

BGI PQ200 TSP Sampler – Monthly Calibration Checks			
Date: 02/27/2025	Time: 1322 – 1340	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 $\leq \pm 10$ )
Ambient Pressure	627	626.0	+1.0
Temperature Sensor Verification			
Reading (degrees Celsius)	Sampler (a)	Reference Standard (b)	Difference (a - b) (must be $\leq \pm 2^{\circ}\text{C}$ )
Ambient Temperature	7.0 C	7.8 C	-0.8
Filter Temperature	9.1 C	8.3 C	+0.8
Leak Check			
Vacuum Readings (cm H <sub>2</sub> O)	Start 136	End 135	Pass <input checked="" type="checkbox"/> Fail <input type="checkbox"/>
Flow Rate Verification			
Reading (liters per minute)	Sampler (a)	Reference Standard (b)	% Difference $100 \cdot (a - b) / b$ (must be $\leq \pm 4\%$ )
Operating flow rate check	16.7	16.86	-0.9%
Reading (liters per minute)	Reference Standard (b)	Design Flow Rate Standard (c)	% Difference $100 \cdot (b - 16.7) / 16.7$ (must be $\leq \pm 5\%$ )
Design flow rate calculation	16.86	16.7	+1.0%

BGI PQ200 TSP Sampler – Monthly Calibration Checks			
Date: 03/12/2025	Time: 1323 – 1338	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 $\leq \pm 10$ )
Ambient Pressure	614	613.2	+0.8
Temperature Sensor Verification			
Reading (degrees Celsius)	Sampler (a)	Reference Standard (b)	Difference (a - b) (must be $\leq \pm 2^{\circ}\text{C}$ )
Ambient Temperature	9.9 C	10.5 C	-0.6
Filter Temperature	10.9 C	10.6 C	+0.3
Leak Check			
Vacuum Readings (cm H <sub>2</sub> O)	Start 135	End 133	Pass <input checked="" type="checkbox"/> Fail <input type="checkbox"/>
Flow Rate Verification			
Reading (liters per minute)	Sampler (a)	Reference Standard (b)	% Difference $100 \cdot (a - b) / b$ (must be $\leq \pm 4\%$ )
Operating flow rate check	16.7	16.70	0.0%
Reading (liters per minute)	Reference Standard (b)	Design Flow Rate Standard (c)	% Difference $100 \cdot (b - 16.7) / 16.7$ (must be $\leq \pm 5\%$ )
Design flow rate calculation	16.70	16.7	0.0%
Tetra Cal SN 149645 indicated flow of 16.44 LPM			



BGI PQ200 TSP Sampler – Monthly Calibration Checks			
Date: 04/29/2025	Time: 1225 – 1245	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 $\leq \pm 10$ )
Ambient Pressure	622	620.7	+1.3
Temperature Sensor Verification			
Reading (degrees Celsius)	Sampler (a)	Reference Standard (b)	Difference (a - b) (must be $\leq \pm 2^{\circ}\text{C}$ )
Ambient Temperature	12.3 C	12.9 C	-0.6
Filter Temperature	13.4 C	13.1 C	+0.3
Leak Check			
Vacuum Readings (cm H <sub>2</sub> O)	Start 137	End 136	Pass <input checked="" type="checkbox"/> Fail <input type="checkbox"/>
Flow Rate Verification			
Reading (liters per minute)	Sampler (a)	Reference Standard (b)	% Difference $100 \times (a - b) / b$ (must be $\leq \pm 4\%$ )
Operating flow rate check	16.7	16.37	+2.0%
Reading (liters per minute)	Reference Standard (b)	Design Flow Rate Standard (c)	% Difference $100 \times (b - 16.7) / 16.7$ (must be $\leq \pm 5\%$ )
Design flow rate calculation	16.37	16.7	-2.0%
<p>Performed multipoint flow cal:</p> <p>@15.0 LPM: 14.97 LPM</p> <p>@18.4 LPM: 18.38 LPM</p> <p>@16.7 LPM: 16.70 LPM</p> <p>Operating flow verification: 16.68 LPM</p>			

## **APPENDIX F: CALIBRATION STANDARD CERTIFICATION SHEETS**

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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:  $\pm 0.03^{\circ}\text{C}$  from  $-5^{\circ}\text{C}$  -  $70^{\circ}\text{C}$  Room Temperature:  $24.00^{\circ}\text{C}$

Brand: Eutechnics

TE Number: TE12312

Serial Number: 358921

Std Cal Date: 26-Aug-24

Std Cal Due Date: 26-Aug-25

Ambient Temperature (set):  $24.0^{\circ}\text{C}$

Aux (filter) Temperature (set):  $24.0^{\circ}\text{C}$

### 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 ( $\Delta P$ ).

Where: Q=Lpm,  $\Delta P$ = Cm of H2O

Venturi

TE20004 Q= 3.96199  $\Delta P^{\wedge}$  0.52283 Overall Uncertainty: 0.35%

TE20006 Q= 3.92006  $\Delta P^{\wedge}$  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		Test #	Static Pressure mmHg	Barometric Pressure mmHg	Venturi Qa LPM	DUT Qa LPM	% error %
Venturi Type	TE20004 1A	1	133.14	622.7	6.517	6.500	-0.261
Flow range	6 - 30.00 LPM	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 Result	-0.304
						Result	PASS

Range 2		Test #	Static Pressure mmHg	Barometric Pressure mmHg	Venturi Qa LPM	DUT Qa LPM	% error %
Venturi Type	TE20006 2A	1	143.14	622.2	2.015	2.008	-0.347
Flow range	1.40 - 6.0 LPM	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 Result	0.161
						Result	PASS

Performed By: Elsy Lasky

Date: 19-Dec-2024

Approved By:

Troy Thacker  
QC Inspector

Date: 23 DEC 2024



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 <sub>AMB</sub> 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 <sub>AMB</sub> °C	-51	24	-75	Fail	24	24	0	Pass	
Temp <sub>Filter</sub> °C	24	24	0	Pass	24	24	0	Pass	
	Offset	New Offset							
Pres <sub>AMB</sub>	2.9	13.2							
Temp <sub>AMB</sub>	0.05	75.05							
Temp <sub>Filter</sub>	0	0							

Range 1		Test #	Static Pressure mmHg	Barometric Pressure mmHg	Venturi Qa LPM	DUT Qa LPM	% error %
Venturi	TE20004	1	156.85	609.1	5.878	6.588	12.079
Type	1A	2	234.96	609.1	8.855	10.009	13.032
Flow range	6 - 30.00 LPM	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 Result	13.026
							FAIL

Range 2		Test #	Static Pressure mmHg	Barometric Pressure mmHg	Venturi Qa LPM	DUT Qa LPM	% error %
Venturi	TE20006	1	167.05	609.6	1.798	2.011	11.846
Type	2A	2	249.30	609.1	2.699	3.037	12.523
Flow range	1.40 - 6.0 LPM	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 Result	13.130
							FAIL



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

## CERTIFICATE OF CALIBRATION - NIST TRACEABILITY

Calibration Report #: 149645-13012025

TetraCal Serial Number: 149645

Calibration Technician: Elsy Lasky

Date: 13-Jan-2025

Recommended Recal Date: 13-Jan-2026

### Critical Venturi Flow Meter

Max Uncertainty = 0.346%

TE20006 1.40 - 6.0 LPM

Calibration Due: 17-Oct-2025

TE20004 6 - 30.00 LPM

Calibration Due: 22-Oct-2025

TE20008 0.40 - 1.20 LPM

Calibration Due: 9-Oct-2025

Room Temperature:  $\pm 0.03^{\circ}\text{C}$  from  $-5^{\circ}\text{C}$  -  $70^{\circ}\text{C}$  Room Temperature:  $23.10^{\circ}\text{C}$

Brand: Eutechnics

TE Number: TE12312

Serial Number: 358921

Std Cal Date: 26-Aug-24

Std Cal Due Date: 26-Aug-25

Ambient Temperature (set):  $23.0^{\circ}\text{C}$

Aux (filter) Temperature (set):  $23.0^{\circ}\text{C}$

### 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

### TetraCal:

Barometric pressure (set): 619.00 mmHg

0

### Results of Venturi Calibration

Flow Rate (Q) vs. Pressure Drop ( $\Delta P$ ).

Where: Q=Lpm,  $\Delta P$ = Cm of H<sub>2</sub>O

Venturi

TE20006 Q1 = 1.22082  $\Delta P^{\wedge}$  0.515 Overall Uncertainty: 0.35%

TE20004 Q2 = 5.45324  $\Delta P^{\wedge}$  0.51821 Overall Uncertainty: 0.35%

TE20008 Q3 = 0.22238  $\Delta P^{\wedge}$  0.50444 Overall Uncertainty: 0.35%



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CO 80228

NIST Traceable Calibration Facility

### As Shipped Calibration Data for TetraCal

Unit Type: TetraCal TC12 Flow Range: 1.20 -30.00 LPM Serial No. : 149645 Firmware Version: 3.41P	Date	Technician
	13Jan2025	Elsy Lasky
	Ambient Pressure:	619.4 mmHg
	Ambient Temperature:	23.1 °C

Range 1: 1.2 - 6.00 LPM		Test #	Static Pressure mmHg	Barometric Pressure mmHg	Venturi Qa LPM	DUT Qa LPM	% error %
Venturi	TE20006	1	112.16	619.0	1.574	1.578	0.254
Type	2A	2	237.62	619.0	3.375	3.383	0.237
Flow range	1.40 - 6.0 LPM	3	421.63	619.0	6.017	6.041	0.399
Maximum allowable error at any flow rate is 0.75%.						Average Result	0.297
							PASS

Range 2: 6.00 - 30.0 LPM		Test #	Static Pressure mmHg	Barometric Pressure mmHg	Venturi Qa LPM	DUT Qa LPM	% error %
Venturi	TE20004	1	124.02	619.7	6.066	6.031	-0.577
Type	1A	2	366.67	619.7	18.189	18.058	-0.720
Flow range	6 - 30.00 LPM	3	599.33	619.7	29.812	30.008	0.657
Maximum allowable error at any flow rate is 0.75%.						Average Result	-0.213
							PASS

Range 3: NP		Test #	Static Pressure mmHg	Barometric Pressure mmHg	Venturi Qa LPM	DUT Qa LPM	% error %
Venturi	TE20008	1	235.80	618.0	0.533	0.532	-0.188
Type	3A	2	381.71	618.0	0.864	0.858	-0.694
Flow range	0.40 - 1.20 LPM	3	554.71	618.0	1.255	1.250	-0.398
Maximum allowable error at any flow rate is 0.75%.						Average Result	-0.427
							PASS

Performed By: Elsy Lasky

Date: 13-Jan-2025

Approved By: Troy Thacker  
QC Inspector

Date: 14 JAN 2025





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CO 80228

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### As-Found data for TetraCal

<b>Unit Type:</b> TetraCal TC12 <b>Flow Range:</b> 1.20 -30.00 LPM <b>Serial No. :</b> 149645 <b>Firmware Version:</b> 3.41P	Date	Technician
	13Jan2025	Elsy Lasky
Ambient Pressure: 619.4 mmHg Ambient Temperature: 23.1 °C		

As Received Temp. Press. Calibration					As Shipped Temp. Press. Calibration				
	DUT	Standard	Diff	+/- 1 mmHg	DUT	Standard	Diff	+/- 1 mmHg	
<b>Pres<sub>AMB</sub> mmHg</b>	619.7	619.6	0.1	Pass	619	619.4	-0.4	Pass	
	DUT	Standard	Diff	+/- 1 °C	DUT	Standard	Diff	+/- 1 °C	
<b>Temp<sub>AMB</sub> °C</b>	22.9	22.8	0.1	Pass	23	23.1	-0.1	Pass	
<b>Temp<sub>Filter</sub> °C</b>	22.96	22.8	0.16	Pass	23	23.1	-0.1	Pass	

	Offset	New Offset
PresAMB	-46.8	-46.9
TempAMB	0.15	0.05
Temp Filter	0.15	-0.01

Range 1: 1.2 - 6.00 LPM		Test #	Static Pressure mmHg	Barometric Pressure mmHg	Venturi Qa LPM	DUT Qa LPM	% error %
Venturi	TE20006	1	113.60	619.7	1.592	1.537	-3.455
Type	2A	2	241.39	619.7	3.425	3.310	-3.358
Flow range	1.40 - 6.0 LPM	3	435.90	619.7	6.215	6.037	-2.864
Maximum allowable error at any flow rate is 0.75%.						Average Result	-3.225
							FAIL

Range 2: 6.00 - 30.0 LPM		Test #	Static Pressure mmHg	Barometric Pressure mmHg	Venturi Qa LPM	DUT Qa LPM	% error %
Venturi	TE20004	1	124.02	619.7	6.066	6.031	-0.577
Type	1A	2	366.67	619.7	18.189	18.058	-0.720
Flow range	6 - 30.00 LPM	3	599.33	619.7	29.812	30.008	0.657
Maximum allowable error at any flow rate is 0.75%.						Average Result	-0.213
							PASS

Range 3: NP		Test #	Static Pressure mmHg	Barometric Pressure mmHg	Venturi Qa LPM	DUT Qa LPM	% error %
Venturi	TE20008	1	243.39	619.7	0.548	0.546	-0.365
Type	3A	2	375.02	619.7	0.845	0.862	2.012
Flow range	0.40 - 1.20 LPM	3	526.16	619.7	1.185	1.231	3.882
Maximum allowable error at any flow rate is 0.75%.						Average Result	1.843
							FAIL



# Certificate of Calibration

## Model Swift 25.0

Serial Number : D16202

Calibrated Date: 7/15/2024

Firmware: R0.2.0.5a

Calibrated By: A.Schultz

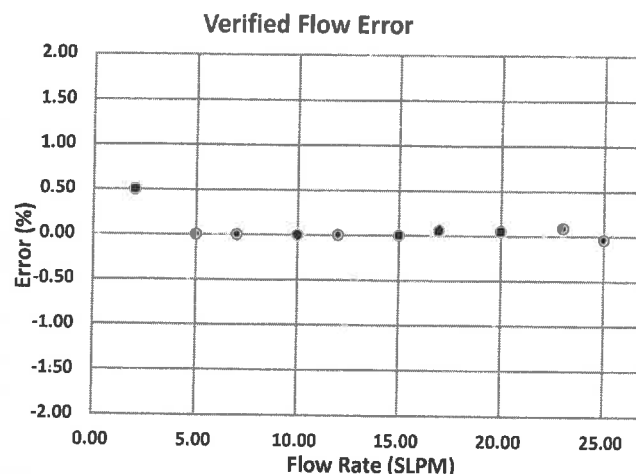
As Left



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: $\pm 0.08$ °C		

Pressure		
Standard (mbar)	Swift 25.0 (mbar)	In Tolerance
974.2	975.0	Pass
Pressure Accuracy: $\pm 0.8$ mbar		

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

RH %		
Standard (RH%)	Swift 25.0 (RH%)	In Tolerance
41	38	Pass
Relative Humidity Accuracy: $\pm 3$ %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.