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October 19, 2022

Amy Yeldell
Colorado Division of Reclamation, Mining and Safety
101 South 3rd, Suite 301
Grand Junction, CO 81501

Transmittal: Third Quarter 2022 Hydrological Report, File No. M-2007-044, Whirlwind Mine, Mesa County, Colorado

Dear Ms. Yeldell:

Attached is the Third Quarter 2022 Hydrological Report for Energy Fuels Resources (USA) Inc.'s ("EFRI's") Whirlwind Mine (the "Mine"). This report was prepared to comply with the Environmental Protection Plan approved by the Colorado Division of Reclamation, Mining, and Safety, and the conditions set forth in Attachment B of the Bureau of Land Management's *Decision Record, Finding of No Significant Impact, and Final Environmental Assessment for the Whirlwind Mine Uranium Mining Project*, September 2008.

If you have any questions or comments, please do not hesitate to contact me at 303-389-4131 or Kathy Weinel at 303-389-4125.

Yours very truly,

ENERGY FUELS RESOURCES (USA) INC.
Jordan App
Environmental Scientist

cc: Brittany Cocina, BLM
Scott Bakken
John Uhrie
Kathy Weinel
DRMS – Denver Office

Whirlwind Mine



Third Quarter 2022 Hydrological Monitoring Report

October 19, 2022

Table of Contents

Summary of Quarterly Hydrological Monitoring

Appendix 1 – Hydrological Reports

- Attachment 1 - Mine Water Treatment & Discharge
- Attachment 2 - Whirlwind Decline
- Attachment 3 - Packrat Mine
- Attachment 4 - DP Spring
- Attachment 5 - PR Spring
- Attachment 6 - Monitoring Well W-1
- Attachment 7 - Lumsden Canyon Seep
- Attachment 8 - Rajah 49 Mine Thornton Portal (Rajah Spring)
- Attachment 9 - Ore Production and Stockpiling
- Attachment 10 - Waste Production and On-Site Disposal

Appendix 2 - Data Tables

- Table 1 - Water Quality Data, Whirlwind Mine Water
- Table 2 - Water Quality Data, PR Spring
- Table 3 - Water Quality Data, Monitoring Well W-1
- Table 4 - Water Quality Data, Lumsden Canyon Seep
- Table 5 - Water Quality Data, Rajah 49 Mine, Thornton Portal (Rajah Spring)
- Table 6 - Total and SPLP Data, Whirlwind Mine Waste Rock
- Table 7 - Hydrological Monitoring Summary

Appendix 3 – Field Sampling Forms

Appendix 4 - Annual Seeps and Springs Field Survey

Appendix 5 - Laboratory Analysis

Summary of Quarterly Hydrological Monitoring

Mining Operations

On April 20, 2022, Energy Fuels Resources (USA) Inc. (“EFRI”) submitted a Notification of Resumption of Mining Operations to the Utah Division of Oil, Gas, and Mining (“DOGM”) in anticipation of mining operations initially resuming on the Utah side of the Whirlwind Mine (the “Mine”) boundary. As described in the notification to DOGM, mining operations in Utah resumed with the reinstallation and operation of a new meteorological (“met”) monitoring station to collect onsite met data prior to the commencement of ventilation activities at the Mine portal. Installation of the met station occurred on April 20, 2022 and has been in operation since that time.

On May 19, 2022, EFRI submitted a Notice of Resumption of Mining Operations to the Colorado Division of Reclamation, Mining and Safety (“DRMS”). On June 7, 2022, the DRMS issued a Change of Status (CS-1) approval and notification letter that the Mine is no longer in temporary cessation (TC-2). As described in the May 19, 2022 notice to DRMS, during the week of April 25, 2022, EFRI began mobilizing equipment and materials to the Mine portal, which is located on the Colorado side of the Mine boundary, to prepare for the start of rehabilitation activities. Currently, the underground portion of the Mine consists of a 3,200-foot decline and approximately 800 feet of development drift. To date, the Mine has not produced any ore or developed drifts into underground ore deposits, and the underground workings are currently flooded at a distance of approximately 2,500 feet down the decline.

During the report period, rehabilitation activities continued with repair at the portal face and collapsed portions of the decline. Debris and waste rock from the collapse were removed and stockpiled on the waste rock pile during the report period. This is expected to continue during future reporting periods as the ribs and back are shored up using rock bolting, as necessary, for safe entry of workers and equipment.

Concurrent with the initial rehabilitation activities at the Mine, EFRI is also in the process of evaluating dewatering/treatment options and underground ventilation strategies in anticipation of dewatering the mine pool to continue advancing development drifts. As noted in DRMS’ June 7, 2022 letter, prior to any additional developments of mine workings, the underground portion of the reclamation cost estimate specifically, the bulkhead costs, will be re-evaluated and any additional financial warranty required to cover the underground closures will be posted prior to work commencing.

Monitoring Activities

The remainder of this report summarizes the quarterly monitoring activities at the Mine, as required by the approved Environmental Protection Plan and Attachment B of the Bureau of Land Management’s (the “BLM’s”) *Decision Record, Finding of No Significant Impact, and Final Environmental Assessment for the Whirlwind Mine Uranium Mining Project* (the “EA”). The following field monitoring activities were performed during the third quarter of 2022 (July through September 2022) at the Mine:

- Quarterly water level/flow measurements and field parameters at the monitoring well, DP Spring and PR Spring;
- Annual water samples were collected at PR Spring, MW-1, and the Rajah 49 Thornton Portal (also referred to as the Rajah Spring) during the above sampling event; and
- Annual Seeps and Springs Survey.

Whirlwind Mine Treatment Plant

Discharge of treated water from the Mine is allowed in accordance with the Colorado Wastewater Discharge Permit System, Permit No. CO-0047562. EFRI has suspended use of the Mine water treatment plant until such time that dewatering operations resume. No water has been pumped from the Mine since December 2009, and Mine water has been allowed to accumulate in the Mine workings. As noted in EFRI's May 19, 2022 notice to DRMS, final engineering designs are now in progress with fabrication and delivery of new water treatment equipment expected in late 2022 or early 2023, with dewatering commencing in early to mid-2023. Refer to Appendix 1, Attachment 1 of this report for a summary of mine water treatment.

Whirlwind Mine and Packrat Mine

The inflow within the Mine decline cannot be measured directly because it occurs over approximately 100 feet from the entrance of the decline and within the drifts. The water collects in the mine sump and is subsequently pumped to the surface when the Mine is dewatering. When the Mine is not being dewatered, the groundwater inflow can be calculated based on the approximate elevation level of accumulated mine water, and the void volume of the workings.

Access to the Mine decline was restricted during the third quarter of 2012. As a result, flow rate and field parameter measurements were also put on hold until such time that dewatering is resumed and the mine pool becomes accessible after the completion of the decline rehabilitation. Historical flow rates and field parameters from the Mine decline water are included in Appendix 1, Attachment 2. Analytical data from the previous samples collected from the Mine are summarized in Appendix 2, Table 1.

Characterization of mine water in the Packrat Mine could not be conducted, because the mine is not yet accessible. Appendix 1, Attachment 3 of this report is reserved for field data collected from the Packrat Mine at such time that it becomes accessible and is monitored.

DP Spring

The field parameters were measured at DP Spring on August 1, 2022. The flow is measured by timing the fill rate of a five-gallon bucket. Field parameters from DP Spring are measured in the stock tank located at the spring. The field sampling form is provided in Appendix 3.

Flow rates and field parameters at DP Spring are summarized in Appendix 1, Attachment 4.

PR Spring

The field parameters were measured at PR Spring on August 1, 2022. The flow is measured by timing the fill rate of a five-gallon bucket. Field parameters from PR Spring are measured in the stock tank located at the spring. The field sampling form is provided in Appendix 3.

Flow rates and field parameters at PR Spring are summarized in Appendix 1, Attachment 5. The historical analytical data from PR Spring are summarized in Appendix 2, Table 2.

Monitoring Well W-1

Monitoring Well W-1 was installed on October 12, 2008 for the purpose of characterizing and monitoring groundwater quality downgradient of the waste rock storage area.

Monitoring Well W-1 was measured for the static groundwater level and field parameters on August 1, 2022. The water level at Monitoring Well W-1 is consistent with previous measurements. The field sampling form is provided in Appendix 3.

Water levels and field parameters are summarized in Appendix 1, Attachment 6. The historical analytical data from Monitoring Well W-1 are summarized in Appendix 2, Table 3.

Lumsden Canyon Seep

The Lumsden Canyon Seep (also referred to in earlier reports as Lumsden Canyon Spring) was monitored for field parameters and sampled in June and December of 2008. This location was monitored by Western Water & Land, Inc. during hydrologic reconnaissance required by BLM stipulations to the Plan of Operations. No further sampling or field parameter measurement events are scheduled at this time.

Historical field parameters are summarized in Appendix 1, Attachment 7 and the historical analytical data from the Lumsden Canyon Seep samples are summarized in Appendix 2, Table 4.

Rajah 49 Thornton Portal (Rajah Spring)

The Rajah Spring has been sampled annually from 2009 to 2022. Field parameters and a sample were collected on August 1, 2022, during the 2022 Seeps and Springs Survey. The Annual Seeps and Springs Survey notes and photo log are included in the Third Quarter Report. The analytical laboratory data are provided in the Third Quarter Report. EFRI will continue to include the Rajah Spring in future annual seeps and springs surveys.

Waste Rock

No ore was mined in the third quarter 2022. The Mine is currently in operation with rehabilitation, maintenance and monitoring activities being conducted. EFRI will resume the quarterly waste rock sample collection next quarter.

Production rates of ore and waste rock are summarized in Appendix 1, Attachments 9 and 10, respectively. Analytical data from previously collected waste rock samples are summarized in Appendix 2, Table 6.

Sediment Pond

The sediment pond has been monitored since its construction in November 2008 in accordance with DRMS stipulations. Although storm events and significant snow melt events have occurred, none have resulted in storm water discharge from the pond. As a result, no storm water samples have been collected from the pond to date. EFRI will continue to monitor the sediment pond for discharge and will collect samples in the event that a discharge is observed.

Dolores River

In accordance with BLM stipulations, the Dolores River is required to be monitored for selenium upstream and downstream from the confluence of Lumsden Creek when all of the following conditions are met:

- 1) The Mine treatment plant is discharging treated water,
- 2) There is continuous flow from the middle tributary of Lumsden Creek to the Dolores River, and
- 3) Selenium levels have been in exceedance of the CDPS permit effluent limits in the past two years.

Because water treatment of mine water has been suspended, it was unnecessary to monitor Lumsden Creek for discharge to the Dolores River in the third quarter 2022. EFRI will commence monitoring the Dolores River for discharge from Lumsden Creek and take samples, as necessary, at such time that treatment and discharge of mine water resumes.

Hydrological Monitoring Summary

Refer to Appendix 2, Table 7 for the hydrological compliance monitoring summary and status for the Mine.

APPENDIX 1

HYDROLOGICAL REPORTS

**WHIRLWIND MINE, PERMIT NO. M-2007-044
THIRD QUARTER 2022 HYDROLOGICAL REPORT**

Attachment 1. Mine Water Treatment & Discharge

Month	Volume (gal)	Comments
2007 Total	549,868	
2008 Total	1,240,889	
2009 Total	961,406	Pumping and treatment suspended as of Dec. 2009
2010 Total	0	
2011 Total	0	
2012 Total	0	
2013 Total	0	
2014 Total	0	
2015 Total	0	
2016 Total	0	
2017 Total	0	
2018 Total	0	
2019 Total	0	
2020 Total	0	
2021 Total	0	
Jan-22	0	
Feb-22	0	
Mar-22	0	
Apr-22	0	
May-22	0	
Jun-22	0	
Jul-22	0	
Aug-22	0	
Sep-22	0	
2022 Total	0	
Grand Total	2,752,163	

**WHIRLWIND MINE, PERMIT NO. M-2007-044
THIRD QUARTER 2022 HYDROLOGICAL REPORT**

Attachment 2. Whirlwind Decline

Monitoring Date	Sample Location	Inflow Rate ⁽¹⁾ (gpm)	Field pH (s.u.)	Temperature (deg. C)	Dissolved Oxygen (mg/L)	Specific Conductance (uS/cm)	Oxygen-Reduction Potential (mV)	Comments
3/10/2008	WW Sump	2.4	8.30	11.0	NM	NM	NM	See Table 1
6/19/2008	WW Sump	2.8	10.26	11.5	0.78	592	114	See Table 1
9/8/2008	WW Sump	2.2	9.11	11.0	8.48	649	62	See Table 1
12/16/2008	WW Sump	1.7	8.75	10.7	5.22	609	149	See Table 1
3/5/2009	WW Sump	2.1	8.52	11.1	8.24	618	151	No analytical samples collected
4/20/2009	WW Sump	2.2	8.41	11.2	6.68	626	177	No analytical samples collected
8/11/2009	WW Sump	1.6	8.76	11.9	6.44	599	152	No analytical samples collected
12/1/2009	WW Sump	1.4	8.61	11.5	6.54	624	160	No analytical samples collected
2/2/2010	WW Decline	2.0	7.06	11.3	7.02	597	170	No analytical samples collected
4/21/2010	WW Decline	1.9	8.07	12.3	6.76	576	201	See Table 1
9/8/2010	WW Decline	1.7	8.65	11.9	4.53	592	133	No analytical samples collected
11/4/2010	WW Decline	3.4	8.49	11.6	2.22	578	207	No analytical samples collected
2/7/2011	WW Decline	1.7	8.49	11.3	2.26	590	151	See Table 1
6/20/2011	WW Decline	1.2	8.17	11.7	2.42	620	159	No analytical samples collected
8/20/2011	WW Decline	1.3	8.54	11.6	2.54	644	163	No analytical samples collected
10/25/2011	WW Decline	1.0	8.48	11.5	2.63	618	157	No analytical samples collected
11/9/2011	WW Decline	1.0	8.19	11.5	3.09	631	234	See Table 1
3/28/2012	WW Decline	0.7	8.32	11.5	2.41	592	173	See Note (2)

(1) From First Quarter 2008 to Fourth Quarter 2009, the inflow rate was estimated over the quarter by calculating the volume of water pumped out of the mine and treated and estimations of the volume of water evaporated off the untreated water tank and brought out of the mine as moisture in waste rock, ore, and ventilated air. As of the First Quarter 2010, water inflow is estimated based on the approximate water elevation and the void volume of the mine workings.

(2) Access to the mine was temporarily restricted as of the third quarter 2012. Inflow rate measurements will be resumed when the portal is reopened.

Attachment 3. Packrat Mine

Not Accessible

WHIRLWIND MINE, PERMIT NO. M-2007-044
THIRD QUARTER 2022 HYDROLOGICAL REPORT

**WHIRLWIND MINE, PERMIT NO. M-2007-044
THIRD QUARTER 2022 HYDROLOGICAL REPORT**

Attachment 4, DP Spring

Monitoring Date	Sampled (Y/N)	Inflow Rate (gpm)	Field pH (s.u.)	Temperature (deg. C)	Dissolved Oxygen (mg/L)	Specific Conductance (uS/cm)	Oxygen-Reduction Potential (mV)	Comments
3/10/2008	No	6 to 7	NM	NM	NM	NM	NM	Sunny, Ave. of 2 feet snowpack
6/19/2008	No	7.2	7.42	11.0	7.22	524	126	Sunny, Dry
9/8/2008	No	5.2	8.00	11.9	9.49	544	166	Sunny, Dry
12/15/2008	No	8.2	7.96	4.8	9.42	532	97	Snowing, 4" snowpack
2/10/2009	No	8.5	5.22	4.7	9.30	562	126	Sunny, Cold, 3-4" snowpack
4/20/2009	No	8.3	7.64	6.6	9.16	546	190	Sunny, Dry
8/11/2009	No	5.9	7.68	12.0	8.25	532	190	Sunny, Hot, Dry
12/1/2009	No	7.9	8.11	4.8	10.54	548	115	Cold, clear skies
2/2/2010	No	7.9	6.73	4.7	10.71	526	177	Cold, clear skies, 3 ft of snow
6/2/2010	No	8.3	7.53	8.8	11.62	554	200	Sunny, Dry
7/28/2010	No	6.8	7.68	12.6	7.57	535	114	Sunny, Dry
11/4/2010	No	7.0	7.94	7.1	8.66	535	190	Sunny, Dry
4/18/2011	No	8.1	7.59	6.6	9.23	533	NM*	Make-up for missed 1Q11 monitoring, Sunny, warm, clear skies
5/24/2011	No	9.2	7.81	8.0	8.43	551	62	Light showers, warm
8/15/2011	No	7.9	7.59	12.2	7.07	560	203	Partly cloudy, warm
10/25/2011	No	8.1	7.51	11.8	7.64	545	198	Overcast, light rain
3/28/2012	No	7.7	7.62	10.8	7.98	568	186	Dry and calm
8/7/2012	No	7.5	7.66	12.0	8.06	569	249	Clear water In Tank
11/14/2012	No	NM	6.05	7.8	54.8%	769	129.2	
3/18/2013	No	8.0	7.56	5.3	44.9%	577	231.7	
6/4/2013	No	6.7	8.57	9.6	87.1%	533	217.1	water was clear
8/14/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	field notes were lost
11/12/2013	No	5.9	6.44	10.6	7.66	501	126.8	
Q1 2014	No	NM	NM	NM	NM	NM	NM	Inaccessible due to county road conditions
6/17/2014	No	6.0	6.0	11.36	6.05	629.0	185.1	
9/9/2014	No	6.0	7.1	12.81	4.93	536.6	184	
11/13/2014	No	7.0	7.1	7.54	5.64	537.0	119	
3/31/2015	No	6.7	7.2	10.00	5.40	578.0	167	
5/29/2015	No	7.0	7.1	11.40	8.02	532.7	261	
11/9/2015	No	4.0	6.6	9.00	4.05	528.7	359	
11/9/2015	No	4.0	6.6	9.00	4.05	528.7	359	
3/31/2016	No	8.0	7.26	6.9	1.26	523.5	252	
6/1/2016	Yes	6.5	6.05	9.1	1.25	541	476	
8/3/2016	No	3.8	7.31	15.32	9.39	549.4	255	
10/12/2016	No	4.3	7.27	11.26	9.97	545.4	220	
3/24/2017	No	7.5	6.86	9.34	11.25	513.0	456	

WHIRLWIND MINE, PERMIT NO. M-2007-044
THIRD QUARTER 2022 HYDROLOGICAL REPORT

Attachment 4. DP Spring

Monitoring Date	Sampled (Y/N)	Inflow Rate (gpm)	Field pH (s.u.)	Temperature (deg. C)	Dissolved Oxygen (mg/L)	Specific Conductance (uS/cm)	Oxygen-Reduction Potential (mV)	Comments
6/7/2017	Yes	6.0	7.17	12.52	5.06	522.7	367	
9/8/2017	No	4.5	6.93	14.04	8.83	563.6	246	
10/20/2017	No	4.5	6.25	9.31	8.03	549.0	179.1	
3/22/2018	No	6.3	7.47	6.08	10.31	370.0	46.1	
6/20/2018	Yes	6.0	7.14	10.25	10.46	384.0	6.9	
9/7/2018	No	4.9	7.39	11.06	12.04	375.0	283.9	
12/14/2018	No	4.5	6.83	6.02	***	557.0	337	
Q1 2019	No	NM	NM	NM	NM	NM	NM	Inaccessible due to county road conditions
6/25/2019	Yes	6.0	7.17	10.05	9.13	550.0	210	
9/13/2019	No	2.5	7.45	10.82	10.06	541.0	163	
11/8/2019	No	4.3	7.65	8.59	11.52	563.8	275	
3/27/2020	No	6.0	7.58	5.49	12.37	558.0	528	
6/24/2020	Yes	4.0	6.89	10.24	10.82	500.0	196	
9/11/2020	No	4.5	7.41	10.60	10.65	587.0	286	
11/6/2020	No	5.0	7.45	8.81	15.70	619.0	89	
Q1 2021	No	NM	NM	NM	NM	NM	NM	Inaccessible due to county road conditions
6/18/2021	No	4.0	7.77	10.74	10.33	594.0	152.4	
7/13/2021	Yes	4.0	7.61	14.98	10.30	557.7	109.0	
9/9/2021	No	4.0	6.18	11.49	9.97	618.0	246.9	
11/9/2021	No	4.6	7.60	9.02	13.88	668.0	67.2	
3/30/2022	Yes	5.7	7.12	5.80	12.88	565.0	60.6	
6/23/2022	No	4.0	7.33	10.62	12.11	635.0	233.3	
8/1/2022	Yes	3.7	6.34	11.60	10.12	558.5	528.0	

* - ORP Probe broke during 4/18/11 Monitoring Event.

*** - Meter malfunctioned during site visit - no measurements were taken.

NM = Not Measured

**WHIRLWIND MINE, PERMIT NO. M-2007-044
THIRD QUARTER 2022 HYDROLOGICAL REPORT**

Attachment 5. PR Spring

Monitoring Date	Sampled (Y/N)	Inflow Rate (gpm)	Field pH (s.u.)	Temperature (deg. C)	Dissolved Oxygen (mg/L)	Specific Conductance (uS/cm)	Oxygen-Reduction Potential (mV)	Comments
3/10/2008	Yes	4 to 5	8.1	8.6	NM	NM	NM	Sunny, Ave. of 1 foot snowpack, see Table 2
6/19/2008	Yes	4.7	7.90	13.8	9.95	762	140	Sunny, Dry, see Table 2
9/8/2008	Yes	4.1	8.36	13.4	8.39	883	166	Sunny, Dry, see Table 2
12/15/2008	Yes	4.5	8.31	9.1	8.20	790	-35	Overcast, 4" snowpack, see Table 2
2/10/2009	Yes	4.5	6.68	9.2	7.27	923	90	Sunny, Cold, 1-2" snowpack, see Table 2
4/20/2009	Yes	4.5	8.24	12.3	8.45	898	195	Sunny, Dry, see Table 2
8/11/2009	No	4.7	8.48	13.9	8.25	889	133	Sunny, Hot, Dry
12/1/2009	No	1.5	9.15	8.6	11.54	881	116	Flow restricted by vegetation
6/2/2010	Yes	2.3	8.52	13.2	2.27	880	172	Flow restricted by vegetation, see Table 2
7/28/2010	No	5.2	8.44	13.4	8.04	880	99	Sunny, Dry, Vegetation removed
11/4/2010	No	5.1	8.47	10.1	8.51	856	157	Sunny, Dry
4/18/2011	No	4.3	8.46	10.0	9.40	822	NM*	Make-up for missed 1Q11 monitoring, Sunny, warm, clear skies
5/24/2011	Yes	4.8	8.60	10.8	9.09	858	35	Lt showers, warm, see Table 2
8/15/2011	No	4.2	8.43	12.1	6.86	871	225	Partly cloudy, warm
10/25/2011	No	4.2	8.38	11.7	7.14	844	214	Overcast, light rain
3/28/2012	No	4.3	8.42	10.6	6.99	854	199	Dry and calm
5/30/2012	Yes	4.5	8.40	11.5	7.57	901	NM	ORP Probe Broken
8/7/2012	No	4.0	8.32	13.8	6.97	869	223	Clear Water In tank
11/14/2012	No	NM	7.56	11.6	45.7%	1194	96.4	Looks good enough to drink
3/18/2013	No	3.8	8.13	10.5	42.6%	794	219.8	
6/4/2013	Yes	3.9	8.15	11.7	83.5%	844	261.2	water was clear
8/14/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	field notes were lost
11/12/2013	No	2.1	7.36	10.9	7.08	767	85.9	
Q1 2014	No	NM	NM	NM	NM	NM	NM	Inaccessible due to county road conditions
6/17/2014	Yes	2.0	7.7	12.5	4.4	878.0	108.6	
9/9/2014	No	1.4	7.7	13.3	4.9	873.5	273	
11/13/2014	No	1.5	6.6	10.0	4.7	1219.0	272	
3/31/2015	No	1.6	7.0	10.0	5.0	1100.0	270	
5/29/2015	No	1.5	7.6	12.1	8.0	859.2	301	
8/5/2015	Yes	1.0	7.6	12.2	2.4	922.0	381	
11/9/2015	No	0.5	7.6	10.8	5.0	862.8	341	
3/31/2016	No	1.5	7.43	9.61	1.99	839.9	302	
6/1/2016	Yes	0.6	6.49	12.42	0.91	867.1	464	
8/3/2016	No	0.47	7.43	16.14	8.59	894.5	276	
10/12/2016	No	0.10	7.08	13.92	8.59	861.9	287	
3/24/2017	No	N/A	6.99	12.02	9.20	785.4	400	Could not get flow rate due to pipe being clogged with roots.
6/7/2017	Yes	1.0	7.25	14.31	7.18	803.2	284	Flow rate was reduced due to pipe being clogged with roots.
9/8/2017	No	4.8	6.91	13.96	7.34	838.3	275	Cleaned out discharge line. Flow rate has improved.
10/20/2017	No	6.0	5.88	11.33	8.30	812.0	192	
3/22/2018	No	6.0	7.91	9.60	11.00	577.0	120	
6/20/2018	Yes	5.0	7.82	11.93	9.64	613.0	-4.7	
9/7/2018	No	4.5	7.95	12.68	12.15	588.0	164	
12/14/2018	No	4.5	6.83	6.02	**	557.0	337	

**WHIRLWIND MINE, PERMIT NO. M-2007-044
THIRD QUARTER 2022 HYDROLOGICAL REPORT**

Attachment 5. PR Spring

Monitoring Date	Sampled (Y/N)	Inflow Rate (gpm)	Field pH (s.u.)	Temperature (deg. C)	Dissolved Oxygen (mg/L)	Specific Conductance (uS/cm)	Oxygen-Reduction Potential (mV)	Comments
Q1 2019	No	NM	NM	NM	NM	NM	NM	Inaccessible due to county road conditions
6/25/2019	Yes	6.5	8.03	12.20	6.44	785.0	238	
9/13/2019	No	4.2	7.88	12.59	9.27	812.0	295	
11/8/2019	No	4.9	8.10	11.14	10.34	802.7	337	
3/27/2020	No	2.5	8.10	9.19	10.70	773.0	896	
6/24/2020	Yes	4.5	7.98	11.49	9.88	754.0	413	
9/11/2020	No	2.8	8.10	11.65	8.51	883.0	242	
11/6/2020	No	2.0	8.25	11.19	8.92	853.0	251	
Q1 2021	No	NM	NM	NM	NM	NM	NM	Inaccessible due to county road conditions
6/18/2021	No	2.0	6.78	12.06	10.48	860.0	176	
7/13/2021	Yes	5.0	7.58	14.15	9.55	819.0	255	
9/9/2021	No	5.0	7.91	12.26	9.25	857.0	253	
11/9/2021	No	4.5	7.60	9.02	13.88	668.0	67.2	
3/30/2022	Yes	6.6	7.87	9.45	13.38	765.0	132.7	
6/23/2022	No	4.5	8.43	11.07	12.21	828.0	235.7	
8/1/2022	Yes	5.0	7.98	13.00	9.57	827.6	412.0	

* - ORP Probe broken during 4/18/11 Monitoring Event.

** - Meter malfunctioned during site visit - no measurements were taken.

Note: PR Spring not accessible in February or March, 2010 due to deep snow

NM = Not Measured

**WHIRLWIND MINE, PERMIT NO. M-2007-044
THIRD QUARTER 2022 HYDROLOGICAL REPORT**

Monitoring Date	Sampled (Y/N)	Water Level (ft BTOC)	Field pH (s.u.)	Temperature (deg. C)	Dissolved Oxygen (mg/L or %)	Specific Conductance (uS/cm)	Oxygen-Reduction Potential (mV)	Comments
10/21/2008	Yes	73.22	7.96	10.5	0.95	1543	124	Sunny, Dry, see Table 3
12/16/2008	Yes	74.44	7.73	9.9	1.47	1329	187	Overcast, 4" snow, see Table 3
2/10/2009	Yes	74.73	7.82	10.1	0.93	1251	5	Sunny, Cold, 1-2" snowpack, see Table 3
4/20/2009	Yes	75.00	7.34	10.9	0.13	1209	80	Sunny, Dry, see Table 3
6/24/2009	Yes	74.96	7.63	10.9	--	1157	--	Raining, cool, see Table 3
9/11/2009	Yes	74.84	7.91	11.3	0.23	1219	-75	Sunny, dry, see Table 3
12/10/2009	Yes	74.69	7.66	9.8	1.65	1182	80	Cold, overcast, see Table 3
2/4/2010	Yes	74.40	7.01	10.7	0.61	1240	-74	Cold, clear skies, 3 ft of snow, see Table 3
6/7/2010	Yes	73.98	7.73	12.2	0.25	1239	-111	Hot, clear skies, dry, see Table 3
7/28/2010	No	73.48	NM	NM	NM	NM	NM	Water level measurement only
11/4/2010	No	74.00	NM	NM	NM	NM	NM	Water level measurement only
4/18/2011	No	73.94	NM	NM	NM	NM	NM	Make-up for missed 1Q11 monitoring
5/24/2011	Yes	73.77	7.85	11.0	0.11	1210	10	Ply cloudy, warm, see Table 3
8/16/2011	No	73.72	NM	NM	NM	NM	NM	Water level measurement only
10/25/2011	No	73.94	NM	NM	NM	NM	NM	Water level measurement only, Overcast, light rain
3/28/2012	No	73.98	NM	NM	NM	NM	NM	Water level measurement only, weather dry and calm
5/30/2012	Yes	73.98	7.72	10.9	1.61	1252	NM	ORP Probe Broken
8/7/2012	No	74.00	NM	NM	NM	NM	NM	
11/14/2012	No	74.05	NM	NM	NM	NM	NM	
3/18/2013	No	73.95	NM	NM	NM	NM	NM	
6/17/2013	Yes	74.02	7.31	11.2	37.6%	1216	54.4	First bail the water was clear, but was muddy for the remainder of the purge.
8/14/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Field notes were lost.
11/8/2013	No	73.89	6.38	10.6	0.206	1186	50.5	
Q1 2014	No	NM	NM	NM	NM	NM	NM	Inaccessible due to county road conditions.
6/18/2014	Yes	73.27	6.42	11.3	1.7	1349	75	
9/9/2014	No	74.19	6.04	14.1	1.4	1386	317	
11/13/2014	No	74.29	6.61	11.0	4.6	1219	272	
3/31/2015	No	74.36	6.50	11.4	5.0	1340	282	
5/29/2015	No	74.42	6.74	12.5	3.0	1438	328	
8/5/2015	Yes	74.54	7.40	12.2	2.5	1484	330	
11/9/2015	No	74.39	7.40	11.9	3.5	1250	326	
3/31/2016	No	74.40	7.13	11.05	1.7	1539	425	
6/1/2016	Yes	74.40	7.26	12.04	3.4	1432	421	
8/3/2016	No	74.60	6.51	15.94	2.8	1463	301	
10/12/2016	No	74.60	6.20	14.58	5.5	1507	290	
3/24/2017	No	74.66	6.15	12.75	4.2	1332	504	
6/7/2017	Yes	74.65	7.22	12.66	6.6	1502	375	
9/8/2017	No	74.50	6.95	15.25	5.0	1438	290	
10/20/2017	No	74.47	6.27	11.33	8.8	1376	80.3	
3/22/2018	No	74.69	7.22	10.88	4.8	1048	290	
6/20/2018	Yes	74.69	7.45	11.46	6.5	1014	-7.7	
9/7/2018	No	74.69	7.19	11.65	4.5	962	-349.9	

Attachment 6. Monitoring Well W-1

WHIRLWIND MINE, PERMIT NO. M-2007-044
THIRD QUARTER 2022 HYDROLOGICAL REPORT

Monitoring Date	Sampled (Y/N)	Water Level (ft BTOC)	Field pH (s.u.)	Temperature (deg. C)	Dissolved Oxygen (mg/L or %)	Specific Conductance (uS/cm)	Oxygen-Reduction Potential (mV)	Comments
12/14/2018	No	74.69	5.99	11.01	NM	1366	293	
Q1 2019	No	NM	NM	NM	NM	NM	NM	Inaccessible due to county road conditions.
6/25/2019	Yes	74.59	7.53	11.04	7.0	1265	176.6	
9/13/2019	No	74.70	7.03	11.20	2.6	1376	215	
11/8/2019	No	74.80	7.61	11.93	2.1	1475	261	
3/27/2020	No	74.70	7.25	10.06	2.7	1350	115	
6/24/2020	Yes	74.88	7.63	11.12	3.7	1310	-250	
9/11/2020	No	75.02	7.72	10.49	7.1	1380	54	
11/6/2020	No	74.83	6.93	11.55	2.2	1610	143	
Q1 2021	No	NM	NM	NM	NM	NM	NM	Inaccessible due to county road conditions.
6/18/2021	No	74.95	7.71	11.65	3.0	1519	-39.8	
7/13/2021	Yes	74.50	6.96	15.01	2.4	1542	480	
9/9/2021	No	74.80	7.87	12.41	2.0	1537	47.9	
11/9/2021	No	75.30	6.81	12.76	6.8	1572	164.9	
3/29/2022	Yes	75.30	7.00	10.66	7.78	1360.0	127.5	
6/29/2022	No	75.20	7.82	13.18	1.72	1557.0	292.0	
8/1/2022	Yes	75.52	7.83	13.26	2.46	1308.0	456.0	

NM = Not Measured

WHIRLWIND MINE, PERMIT NO. M-2007-044
THIRD QUARTER 2022 HYDROLOGICAL REPORT

Attachment 7. Lumsden Canyon Seep

Sample Date	Sampled (Y/N)	Inflow Rate (gpm)	Field pH (s.u.)	Temperature (deg. C)	Dissolved Oxygen (mg/L)	Specific Conductance (uS/cm)	Oxygen-Reduction Potential (mV)	Comments
6/19/2008	Yes	NM	7.18	18.4	5.56	825	214	Sunny, Dry, see Table 4
12/4/2008	Yes	NM	7.47	11.6	6.69	985	99.5	Overcast, Cold, Dry, see Table 4

**WHIRLWIND MINE, PERMIT NO. M-2007-044
THIRD QUARTER 2022 HYDROLOGICAL REPORT**

Attachment 8. Rajah 49 Mine Thornton Portal

Sample Date	Sampled (Y/N)	Inflow Rate (gpm)	Field pH (s.u.)	Temperature (deg. C)	Dissolved Oxygen (mg/L)	Specific Conductance (uS/cm)	Oxygen-Reduction Potential (mV)	Comments
9/21/2009	Yes	1-2 gpm	8.58	10.6	7.71	938	130	Sunny, dry, see Table 5
6/30/2010	Yes	1-2 gpm	8.9	7.8	10.12	889	153	Hot, clear skies, dry, see Table 5
5/24/2011	Yes	negligible	9.16	11.1	8.03	906	120	Ptly cloudy, warm, see Table 5
5/30/2012	Yes	<1 gpm	9.67	6.4	9.19	939	NM	OPR Probe Broken
6/17/2013	Yes	<1 gpm	8.48	7.95	14.7%	928	-57.2	water was clear
6/17/2014	Yes	<1 gpm	8.64	10.85	6.3	973	146.2	
8/5/2015	Yes	<1gpm	8.35	12.98	3.61	1030	251	
6/2/2016	Yes	<1gpm	8.17	10.04	1.60	888.8	214	
6/7/2017	Yes	<1gpm	8.15	12.21	4.52	910.7	329	
6/20/2018	Yes	<1gpm	8.59	9.55	12.04	642	-4.5	
6/25/2019	Yes	<1gpm	8.80	10.5	4.46	859	196	
6/24/2020	Yes	negligible	8.75	10.1	12.68	827	86.2	
7/13/2021	Yes	negligible	8.01	13.43	12.42	907.5	428	
8/1/2022	Yes	negligible	8.40	13.7	10.04	903.4	419	

WHIRLWIND MINE, PERMIT NO. M-2007-044
THIRD QUARTER 2022 HYDROLOGICAL REPORT

Attachment 9. Ore Production and Stockpiling

Month	Mined (ton)	Shipped (ton)	Stockpiled (ton)
2008 Total	0	0	0
2009 Total	0	0	0
2010 Total	0	0	0
2011 Total	0	0	0
2012 Total	0	0	0
2013 Total	0	0	0
2014 Total	0	0	0
2015 Total	0	0	0
2016 Total	0	0	0
2017 Total	0	0	0
2018 Total	0	0	0
2019 Total	0	0	0
2020 Total	0	0	0
2021 Total	0	0	0
Jan-22	0	0	0
Feb-22	0	0	0
Mar-22	0	0	0
Apr-22	0	0	0
May-22	0	0	0
Jun-22	0	0	0
Jul-22	0	0	0
Aug-22	0	0	0
Sep-22	0	0	0
2022 Total	0	0	0
Grand Total	0	0	0

Attachment 10. Waste Production and On-Site Disposal

Month	Mined (ton, dry)
2008 Total	4,259
2009 Total	0
2010 Total	0
2011 Total	0
2012 Total	0
2013 Total	0
2014 Total	0
2015 Total	0
2016 Total	0
2017 Total	0
2018 Total	0
2019 Total	0
2020 Total	0
2021 Total	0
Jan-22	0
Feb-22	0
Mar-22	0
Apr-22	0
May-22	0
Jun-22	0
Jul-22	27.5
Aug-22	27.5
Sep-22	27.5
2022 Total	83
Grand Total	4,342

APPENDIX 2

DATA TABLES

Table 1 Whirlwind Mine Water

Sample Information	General Parameters							Major Ions (mg/L)										Metals (mg/L) (i)				
	Flow Rate (gpm)	TSS (mg/L)	TDS (mg/L)	pH (s.u.)	Hard (mg/L)	Alk (mg/L)	Cond (µS/cm)	Na	Ca	Mg	K	Cl	F	NO ₃	P	HCO ₃	SO ₄	Al	Sb	As	Ba	Be
Whirlwind Mine																						
WW-1, EFRC, 9/11/06	NA		390	7.5	57	302	708	144	13	6	10.5	29	0.39	0.72	0.01	365	19			0.015	0.3	
Whirlwind. EFRC, 10/24/06	NA		382	8.3		280		140	12.4	4.8	9.0	20	0.6	1.2			36	1.5		0.023	0.2	
WW Pool, EFRC, 1/17/07	NA	21.3	340	8.60	43.8	266	595	123	9.2	5.0	9.3	17	0.3	0.5	<0.1	314	28	0.2	<0.05	0.027	0.1	<0.01
Whirlwind Pool, EFRC, 4/27/07	NA	<1.0	358	8.72	48.5	268		106	10.2	5.6	9.9	14	0.5	0.5	<0.1	311	27	0.1	<0.0006	0.026	0.1	<0.01
WW Sump, EFRC, 3/10/08	2.4	3,540	661	8.21		296		143	116	22.9	21.9	53	0.4	4.3	2.85	361	38			0.062		<0.01
WW Sump, EFRC, 6/19/08	2.8	132	536	10.0		252	592	150	4	1	6	17	0.7	1.9	0.25	90	88			0.046	0.1	<0.01
WW Sump, EFRC, 9/8/08*	2.2	26	460	9.11		260	649	138	10	7	8	16	0.5	1.8	0.08	318	62			0.044	0.1	<0.01
WW Sump, EFRC, 12/16/08	2.2			8.75			609															
WW Decline, EFRC, 4/21/10	1.9			8.07			576															
WW Decline, EFRC, 2/7/11	1.7			8.49			590															
WW Decline, EFRC, 11/9/11	1.0		356	8.33			631							0.3			42					
Whirlwind Decline (Brushy Basin Formation)																						
Whirlwind Seep, EFRC, 5/3/07	2 to 4		360	8.64		278		119	10.7	5.8	21.8	33	0.5	0.2	<0.3	326	30	0.1		0.024	0.2	
"Upper" Whirlwind Sump, EFRC, 5/3/07	NA		574	8.69		362		188	9.8	4.7	12.0	14	1.6	3.1	<0.3	421	93	1.29		0.032	<0.1	
Colorado Water Standards																						
Ground Water, Domestic				6.5 to 8.5								250	4.0	10.0			250		0.006	0.01	2.0	0.004
Ground Water, Agriculture				6.5 to 8.5									2	100				5		0.1		0.1
Surface Water, Stream (e,f)				6.5 to 9.0													250			0.100		0.100
Surface Water, Domestic				5.0 to 9.0								250	2.0	10.0			250			0.1(g)	1.0	0.004
Surface Water, Agriculture														100						0.1		0.1
EPA Water Standards (h)																						
Maximum		30		6.0 to 9.0																		
Average		20		6.0 to 9.0																		

Notes:
1. Water standards are provided for reference only. These standards do not apply to the mine water unless it is discharged or used for drinking water, irrigation, or other regulated uses.
2. Concentrations or activity levels above a state or federal standard are shaded for reference purposes. Shading indicates that the measured level is elevated compared to certain standards of water use.
3. Metal and radionuclide levels are reported as total recoverable.
* Nitrate sample recollected on 9/18/08 due to hold time exceedance on 9/8/08 sample

Table 1 Whirlwind Mine Water

Sample Information	Metals (mg/L) (i) <i>(continued)</i>																Radionuclides (pCi/L) (i)					
	B	Cd	Cr	Cu	Fe	Pb	Mn	Hg	Mo	Ni	Se	Ag	Tl	U	V	Zn	U	Gross alpha	Gross Beta	Ra-226	Ra-228	Ra-226 Ra-228
Whirlwind Mine																						
WW-1, EFRC, 9/11/06	0.04	<0.0001	<0.001	<0.001	0.07	<0.001	0.025	<0.00001	0.005		0.040	<0.0001		0.098	<0.01	0.06	66.3			4.6		
Whirlwind. EFRC, 10/24/06		<0.01		<0.01	1.07	<0.005	0.03		<0.1	<0.05	0.016			0.189	<0.1	<0.01	128			9.7		
WW Pool, EFRC, 1/17/07	0.1	<0.01	<0.05	<0.01	0.09	<0.05	<0.01	<0.001	<0.1	<0.05	0.030	<0.01	<0.1	0.130	<0.1	<0.01	88.0	92.3	28.6	3.2	2.0	5.2
Whirlwind Pool, EFRC, 4/27/07	0.1	<0.01	<0.05	<0.01	0.05	<0.05	<0.01	<0.001	<0.1	<0.05	0.022	<0.01	<0.001	0.161	<0.1	<0.01	109	101		6.9	<1.0	<7.9
WW Sump, EFRC, 3/10/08	0.2	<0.01	0.08			0.11	0.93		<0.1	<0.05	0.024			0.210	0.6	0.26	142			40.1	1.4	41.5
WW Sump, EFRC, 6/19/08	0.2	<0.01	<0.05			<0.05	0.09		<0.1	<0.05	0.020			0.104	<0.1	0.05	70.4			2.1	<1.2	<3.3
WW Sump, EFRC, 9/8/08*	0.1	<0.01	<0.05			<0.05	0.03		<0.1	<0.05	0.030			0.463	0.3	0.18	313			16	<1.3	<17
WW Sump, EFRC, 12/16/08											0.015											
WW Decline, EFRC, 4/21/10											0.017									5.3	<1.2	<6.5
WW Decline, EFRC, 2/7/11											0.029									5.1	<0.87	<6.0
WW Decline, EFRC, 11/9/11	<0.1	<0.001	<0.01		0.15	<0.01	0.012			<0.01	0.031			0.211	0.014	0.134	143			5.0	0.9	5.9
Whirlwind Decline (Brushy Basin Formation)																						
Whirlwind Seep, EFRC, 5/3/07		<0.01		<0.01	0.08	<0.05	<0.01		<0.1	<0.05	0.023			0.0828	<0.1	<0.01	55.48			6.5	0.9	7.4
"Upper" Whirlwind Sump, EFRC, 5/3/07		<0.01		<0.01	0.55	<0.05	<0.01		<0.1	<0.05	0.040			0.109	<0.1	<0.01	73.0					
Colorado Water Standards																						
Ground Water, Domestic		0.005	0.1	1	0.3	0.05	0.05	0.002	0.035	0.1	0.05	0.05	0.002	0.03		5	20	15(a)		5(c)	5(c)	5
Ground Water, Agriculture	0.75	0.01	0.1	0.2	5	0.1	0.2	0.01		0.2	0.02				0.1	2			(b)			5
Surface Water, Stream (e,f)	0.75 dis	0.010	0.100	0.200	0.3 dis	0.100	0.200			0.200	0.200			(d)		2				5(c)	5(c)	
Surface Water, Domestic		0.005	0.05	1.0	0.3	0.05	0.05	0.002		0.1	0.05	0.1	0.0005	0.03		5	20			5(c)	5(c)	5
Surface Water, Agriculture	0.75	0.01	0.1	0.2		0.1	0.2			0.2	0.02					2						
EPA Water Standards (h)																						
Maximum														4		1.0				10 dis, 30 tot		
Average														2		0.5				3 dis, 10 tot		

Notes:
1. Water standards are provided for reference only. These standards do not apply to the mine water unless it is discharged or used for drinking water, irrigation, or other regulated uses.
2. Concentrations or activity levels above a state or federal standard are shaded for reference purposes. Shading indicates that the measured level is elevated compared to certain standards of water use.
3. Metal and radionuclide levels are reported as total recoverable.
* Nitrate sample recollected on 9/18/08 due to hold time exceedance on 9/8/08 sample

Table 2 PR Spring

Sample Information	General Parameters							Major Ions (mg/L)										Metals (mg/L) (i)				
	Flow (gpm)	TSS (mg/L)	TDS (mg/L)	pH (s.u.)	Hard (mg/L)	Alk (mg/L)	Cond (µS/cm)	Na	Ca	Mg	K	Cl	F	NO ₃	P	HCO ₃	SO ₄	Al	Sb	As	Ba	Be
PR Spring (aka. Pack Rat Spring, Lower Spring) - Salt Wash																						
Pack Rat Spring, Umetco, 3/21/1980	–		630	7.6				135	23.6	28.2		22				327	109					
Packrat Sp., BLM, 7/7/93	6		830	7.8	258	328	980	138	47	34	6.6	9	0.49	1.39	0.03	397	195			0.210	0.06	
DP-93-6, Peel, 9/9/93	–		552	7.87				158	36.5	22.5	6.2	28				292	162			0.281		
Pack Rat Spring, Umetco, 6/26/96	9	0		7.95			600													0.42		
PRSPRING, WWE, 7/15/97	6.3	<10	528	7.99		308		168	26	15.5	<5	23		0.8		308	125	<0.1		0.379	0.05	<0.05
PRSPRING, WWE, 10/26/97	7.9	<10	492			311		148	23.6	14	6	23		0.8		311	126	<0.05		0.411	0.03	<0.002
Pack Rat Spring, Umetco 6/1/99	5.3	14	509	7.47			894	133	26.4	15	5	24				306	120			0.382		
Pack Rat Spring, Umetco 5/24/00	–	<10	460	8.24		310		160	26	15	<5	22				310	110	<0.05		0.46	0.033	<0.002
Lower Spring, EFRC, 10/24/06	–		538	8.20		312		163	24.8	15.9	5.5	21	0.6	0.4			110	<0.1		0.369	<0.1	
LS Tank, EFRC, 1/17/07	–	<1.0	500	8.36	126	315	847	160	24.6	15.6	5.5	22	0.4	0.4	<0.1	384	120	<0.1	<0.05	0.394	<0.1	<0.1
PS Spring , EFRC, 4/27/07	4.3	<1.0	540	8.38	108	318		147	21.5	13.2	5.2	22	0.6	0.4	<0.1	379	116	<0.1	0.0007	0.357	<0.1	<0.01
PR Springs , EFRC, 3/10/08	4.25	<1	537	8.18		324		162	21.1	13.4	5.6	21	0.4	0.4	0.037	395	121			0.388	<0.1	<0.01
PR Springs , EFRC, 6/19/08	4.7	<1	553	8.25		300	762	172	24	15	6	25	0.4	0.4	0.02	366	122			0.413	<0.1	<0.01
PR Springs , EFRC, 9/8/08*	4.1	<1	534	8.36		303	883	173	23	15	5	23	0.4	0.5	0.02	370	125			0.510	<0.1	<0.01
PR Springs , EFRC, 12/15/08	4.5	8	572	8.31		311	790	171	24	15	5	20	0.4	0.4	0.01	359	123			0.394	<0.1	<0.01
PR Springs , EFRC, 2/10/09	4.5	<1	518	6.68		310	923	152	22	14	4	20	0.4	0.4	0.01	378	120			0.400	<0.1	<0.01
PR Springs , EFRC, 4/20/09	4.5	<4	542	8.24		325	898	150	22	14	5	18	0.5	<0.1	<0.01	387	122			0.384	<0.1	<0.01
PR Springs , EFRC, 6/2/10	2.3	<4	544	8.52		331	880	165	23	14	6	21	0.4	0.4	0.025	384	123			0.406	<0.1	<0.01
PR Springs , EFRC, 5/24/11	4.8	<4	523	8.60		322	858	166	25	14	6	22	0.4	0.4	0.025	393	116			0.425	<0.1	<0.01
PR Spring, EFRC, 5/30/12	4.5	<4	560	8.31		319	901	151	27	17	5	21	0.4	0.3	0.016	371	136			0.377	<0.1	<0.01
PR Spring, EFRC, 6/4/13	3.9	<10	535	8.19		326	844	164	25	15	6	20	0.4	0.3	0.011	394	109			0.367	<0.1	<0.01
PR Spring, EFRC, 6/17/14	2	<10	521	8.12		324	878	147	28	14	5	22	0.4	0.3	0.038	391	108			0.324	<0.1	<0.01
PR Spring, EFRI, 8/5/15	1	<10	539	7.61		327	922	155	27	14	5	21	0.4	0.2	0.010	386	110			0.373	<0.1	<0.01
PR Spring, EFRI, 6/1/16	0.6	<10	535	8.32		333	867	157	25	14	5	20	0.3	0.2	0.013	384	100			0.310	<0.1	<0.01
PR Spring, EFRI, 6/7/17	1	2	476	8.09		302	803	121	40	17	5	23	0.4	0.28	0.01	365	103			0.243	<0.1	<0.01
PR Spring, EFRI, 6/20/18	5	<1	520	8.10		307	613	142	33	16	5	22	0.4	0.28	0.016	375	101			0.313	<0.1	<0.01
PR Spring, EFRI, 6/25/19	6.5	<1	489	8.03		306	785	118	40	16	5	22	0.4	0.25	0.012	360	98			0.242	<0.1	<0.01
PR Spring, EFRI, 6/24/20	4.5	<1	506	8.15		314	754	128	34	15	5	20	0.4	0.26	0.015	382	100			0.306	<0.05	<0.001
PR Spring, EFRI, 7/13/21	5	<1	517	8.10		310	819	136	31	14	5	20	0.4	0.25	0.078	379	103			0.322	<0.05	<0.001
PR Spring, EFRI, 8/1/22	5	<1	525	8.20		317	827.6	147	29	14	5	19	0.4	0.25	0.021	387	102			0.359	<0.05	<0.001
Colorado Water Standards																						
Ground Water, Domestic				6.5 to 8.5								250	4.0	10.0			250		0.006	0.01	2.0	0.004
Ground Water, Agriculture				6.5 to 8.5									2	100				5		0.1		0.1
Surface Water, Stream (e,f)				6.5 to 9.0													250			0.100		0.100
Surface Water, Domestic				5.0 to 9.0								250	2.0	10.0			250			0.1(g)	1.0	0.004
Surface Water, Agriculture														100						0.1		0.1
EPA Water Standards (h)																						
Maximum		30		6.0 to 9.0																		
Average		20		6.0 to 9.0																		

Notes:

1. Water standards are provided for reference only. These standards do not apply to the spring water unless it is used for drinking water, irrigation, or other regulated uses.

2. Concentrations or activity levels above a state or federal standard are shaded for reference purposes. Shading indicates that the measured level is elevated compared to certain standards of water use.

3. Metal and radionuclide levels are reported as total recoverable.

* Nitrate sample recollected on 9/18/08 due to hold time exceedance on 9/8/08 sample

Table 2 PR Spring

Sample Information	Metals (mg/L) (i) (continued)																Radionuclides (pCi/L) (i)					
	B	Cd	Cr	Cu	Fe	Pb	Mn	Hg	Mo	Ni	Se	Ag	Tl	U	V	Zn	U	Gross alpha	Gross Beta	Ra-226	Ra-228	Ra-226 Ra-228
PR Spring (aka. Pack Rat Spring, Lower Spring) - Salt Wash																						
Pack Rat Spring, Umetco, 3/21/1980														0.23			152					
Packrat Sp., BLM, 7/7/93	0.18	0.0004	0.001	<0.001	0.10	<0.001	0.005	<0.00001	0.120		<0.001	<0.0001		1.80		<0.001	1220	237	210	7.4		
DP-93-6, Peel, 9/9/93		<0.005	<0.01	<0.01	<0.02		<0.01	<0.0002			0.309			1.68		<0.005	1140			5.4		
Pack Rat Spring, Umetco, 6/26/96														1.70		<0.025	1200			3.7	<0.1	<3.8
PRSPRING, WWE, 7/15/97	0.1	0.003	<0.05	<0.01	<0.10	<0.002	<0.05	<0.0002		<0.05	0.193	<0.05		1.60	0.34	<0.025	1100	1,660	353	3	0.8	3.8
PRSPRING, WWE, 10/26/97	<0.1	<0.005	<0.01	<0.01	<0.055	<0.0045	<0.005	<0.0002		<0.04	0.217	<0.01		1.60	0.34	<0.01	1100	1,290	206	3	0.3	3.3
Pack Rat Spring, Umetco 6/1/99											0.187			1.40		<0.025	950			3.3	0.3	3.6
Pack Rat Spring, Umetco 5/24/00	0.12	<0.001	<0.01	<0.01	<0.01	<0.05	0.0078	<0.0002		<0.04	0.21	<0.01		1.50	0.32	0.030	1000	1,300	180	4.0	<0.025	4.0
Lower Spring, EFRC, 10/24/06		<0.01		<0.01	<0.03	<0.05	<0.01		0.10	<0.05	0.160			1.61	0.30	0.01	1090			3.6		
LS Tank, EFRC, 1/17/07	0.1	<0.01	<0.05	<0.01	<0.03	<0.05	<0.01	<0.001	0.10	<0.05	0.202	<0.01	<0.1	1.15	0.30	<0.01	779	869	219	3.9	1.7	5.6
PS Spring , EFRC, 4/27/07	0.1	<0.01	<0.05	<0.01	<0.03	<0.05	<0.01	<0.001	0.10	<0.05	0.168	<0.01	<0.001	1.40	0.30	<0.01	948	804		9.2	<1.0	<10.2
PR Springs , EFRC, 3/10/08	0.1	<0.01	<0.05			<0.05	<0.01		0.10	<0.05	0.183			1.50	0.30	<0.01	1020			3.5	<1.6	<5.1
PR Springs , EFRC, 6/19/08	0.1	<0.01	<0.05			<0.05	<0.01		0.10	<0.05	0.203			1.53	0.30	<0.01	1040			3.4	<1.2	<4.6
PR Springs , EFRC, 9/8/08*	0.2	<0.01	<0.05			<0.05	<0.01		0.10	<0.05	0.243			1.26	0.40	<0.01	853			2.8	<1.3	<4.1
PR Springs , EFRC, 12/15/08	0.1	<0.01	<0.05			<0.05	<0.01		0.10	<0.05	0.184			1.50	0.30	<0.01	1020			3.8	2.2	6
PR Springs , EFRC, 2/10/09	<0.1	<0.01	<0.05			<0.05	<0.01		0.10	<0.05	0.189			1.58	0.40	<0.01	1070			3.6	<0.3	<4.9
PR Springs , EFRC, 4/20/09	<0.1	<0.01	<0.05			<0.05	<0.01		0.10	<0.05	0.186			1.45	0.30	<0.01	982			3.9	<1.1	<5
PR Springs , EFRC, 6/2/10	0.1	<0.01	<0.05			<0.05	<0.01		0.10	<0.05	0.175			1.50	0.40	<0.01	1020			3.7	<1.2	<4.9
PR Springs , EFRC, 5/24/11	<0.1	<0.01	<0.05			<0.05	<0.01		0.10	<0.05	0.179			1.38	0.30	<0.01	934			4.3	<1.4	<5.7
PR Spring, EFRC, 5/30/12	<0.1	<0.01	<0.05			<0.05	<0.01		0.10	<0.05	0.178			1.42	0.30	<0.01	961			3.8	<.73	<4.5
PR Spring, EFRC, 6/4/13	0.1	<0.01	<0.05			<0.05	<0.01		<0.1	<0.05	0.156			1.42	0.30	<0.01	961			4.2	<0.77	<4.97
PR Spring, EFRC, 6/17/14	0.1	<0.01	<0.05			<0.05	<0.01		<0.1	<0.05	0.156			1.26	0.30	<0.01	853			4.3	<0.1	<4.4
PR Spring, EFRI, 8/5/15	0.1	<0.01	<0.05			<0.05	<0.01		0.10	<0.05	0.162			1.32	0.30	<0.01	894			3.4	1.3	4.7
PR Spring, EFRI, 6/1/16	0.1	<0.01	<0.05			<0.05	<0.01		0.10	<0.05	0.172			1.22	0.30	<0.01	826			4.4	<1.6	<6.0
PR Spring, EFRI, 6/7/17	<0.1	<0.01	<0.05			<0.05	<0.01		<0.1	<0.05	0.128			1.06	0.20	<0.01	718			4.2	0.5	4.7
PR Spring, EFRI, 6/20/18	0.1	<0.01	<0.05			<0.05	<0.01		<0.1	<0.05	0.133			0.94	0.20	<0.01	636			4.2	<1.5	<5.7
PR Spring, EFRI, 6/25/19	0.1	<0.01	<0.05			<0.05	<0.01		<0.1	<0.05	0.117			1.07	0.20	<0.01	724			5.20	1.9	7
PR Spring, EFRI, 6/24/20	0.1	<0.001	<0.005			<0.001	<0.001		0.088	<0.005	0.124			1.01	0.23	<0.01	684			3.0	<0.7	<3.7
PR Spring, EFRI, 7/13/21	0.1	<0.001	<0.005			<0.001	<0.001		0.091	<0.005	0.131			1.06	0.24	<0.01	718			4.0	<1.1	<5.1
PR Spring, EFRI, 8/1/22	0.11	<0.001	<0.005			<0.001	<0.001		0.091	<0.005	0.140			1.13	0.28	<0.01	765			7.1	<2.1	<9.2
Colorado Water Standards																						
Ground Water, Domestic		0.005	0.1	1	0.3	0.05	0.05	0.002	0.035	0.1	0.05	0.05	0.002	0.03		5	20	15(a)		5(c)	5(c)	5
Ground Water, Agriculture	0.75	0.01	0.1	0.2	5	0.1	0.2	0.01		0.2	0.02				0.1	2			(b)			
Surface Water, Stream (e,f)	0.75 dis	0.010	0.100	0.200	0.3 dis	0.100	0.200			0.200	0.200			(d)		2				5(c)	5(c)	5
Surface Water, Domestic		0.005	0.05	1.0	0.3	0.05	0.05	0.002		0.1	0.05	0.1	0.0005	0.03		5	20			5(c)	5(c)	5
Surface Water, Agriculture	0.75	0.01	0.1	0.2		0.1	0.2			0.2	0.02					2						
EPA Water Standards (h)																						
Maximum														4		1.0				10 dis, 30 tot		
Average														2		0.5				3 dis, 10 tot		

Notes:

1. Water standards are provided for reference only. These standards do not apply to the spring water unless it is used for drinking water, irrigation, or other regulated uses.

2. Concentrations or activity levels above a state or federal standard are shaded for reference purposes. Shading indicates that the measured level is elevated compared to certain standards of water use.

3. Metal and radionuclide levels are reported as total recoverable.

* Nitrate sample recollected on 9/18/08 due to hold time exceedance on 9/8/08 sample

Table 3 Monitoring Well W-1

Sample Information	General Parameters							Major Ions (mg/L)										Dissolved Metals (mg/L)			
	Aquifer	TSS (mg/L)	TDS (mg/L)	pH (s.u.)	Hard (mg/L)	Alk (mg/L)	Cond (µS/cm)	Na	Ca	Mg	K	Cl	F	NO ₃	P	HCO ₃	SO ₄	Al	As	Ba	Be

Whirlwind Monitoring Well, W-1

W-1, EFRC, 10/21/08	LBB	37	901	7.96	165	269	1543	286	43	14	13	173	0.3	<0.1	0.08	328	237	<0.1	0.009	<0.1	<0.01
W-1, EFRC, 12/16/08	LBB	110	824	7.73		287	1329	265	36	12	12	145	0.4	<0.1	0.03	350	174		0.015	<0.1	<0.01
W-1, EFRC, 2/10/09	LBB	2	696	7.82		300	1251	200	24	8	8	42	0.4	<0.1	<0.01	366	149		0.018	<0.1	<0.01
W-1, EFRC, 4/20/09	LBB	<4	698	7.82		298	1209	206	25	8	9	113	0.5	0.4	0.02	363	139		0.022	<0.1	<0.01
W-1, EFRC, 6/24/09	LBB	<4	730	7.63		287	1157	222	27	9	11	113	0.4	<0.1	<0.01	350	158		0.023	<0.1	<0.01
W-1, EFRC, 9/11/09	LBB	<4	733	7.91		294	1219	229	29	9	11	113	0.4	<0.1	<0.005	358	166		0.025	<0.1	<0.01
W-1, EFRC, 12/10/09	LBB	<4	713	7.96		296	1182	220	28	9	11	122	0.4	<0.1	<0.005	361	168		0.026	<0.1	<0.01
W-1, EFRC, 2/4/10	LBB	4	695	7.01		308	1240	216	29	9	10	122	0.4	<0.1	0.008	367	164		0.025	<0.1	<0.01
MW-1, EFRC, 6/7/10	LBB	<4	751	7.73		301	1239	233	31	10	11	113	0.4	<0.1	<0.005	367	159		0.025	<0.1	<0.01
MW-1, EFRC, 5/24/11	LBB	<4	715	7.85		299	1210	240	29	9	11	119	0.4	<0.1	0.009	365	149		0.028	<0.1	<0.01
MW-1, EFRC, 6/4/12	LBB	155	727	7.92		306	1252	208	35	9	11	112	0.4	<0.1	0.076	373	133		0.028	<0.1	<0.01
MW-1, EFRC, 6/17/2013	LBB	235	710	7.31		303	1216	237	30	9	11	114	0.4	<0.1	0.178	370	136		0.028	<0.1	<0.01
MW-1, EFRC, 6/18/2014	LBB	158	724	7.76		313	1349	227	33	10	11	119	0.4	<0.1	0.24	381	141		0.026	<0.1	<0.01
MW-1, EFRI, 8/5/2015	LBB	97	871	7.40		291	1484	259	49	13	13	163	0.4	<0.1	0.066	355	201		0.026	<0.1	<0.01
MW-1, EFRI, 6/1/2016	LBB	30	846	7.76		298	1432	256	43	13	13	154	0.3	<0.1	0.061	363	180		0.033	<0.1	<0.01
MW-1, EFRI, 6/7/2017	LBB	54	920	7.79		305	1502	259	40	13	12	173	0.3	0.02	0.057	372	229		0.021	<0.1	<0.01
MW-1, EFRI, 6/20/2018	LBB	8	829	7.74		270	1367	271	41	14	13	165	0.3	0.04	0.022	329	173		0.025	<0.1	<0.01
MW-1, EFRI, 6/25/2019	LBB	18	939	7.68		317	1265	277	44	13	13	171	0.3	0.07	0.029	387	219		0.023	<0.1	<0.01
MW-1, EFRI, 6/24/2020	LBB	16	885	7.73		305	1310	254	43	14	13	165	0.3	0.03	<0.005	372	195		0.026	<0.05	<0.001
MW-1, EFRI, 7/13/2021	LBB	25	937	7.80		312	1542	264	43	14	13	173	0.3	0.02	0.008	381	225		0.023	0.05	<0.001
MW-1, EFRI, 8/1/2022	LBB	110	939	7.80		320	1308	273	43	13	13	169	0.3	<0.05	0.059	391	211		0.022	<0.05	<0.001

Colorado Water Standards

Ground Water, Domestic				6.5 to 8.5								250	4.0	10.0			250		0.01	2.0	0.004
Ground Water, Agriculture				6.5 to 8.5									2	100				5	0.1		0.1
Surface Water, Stream (e,f)				6.5 to 9.0															0.100		0.100
Surface Water, Domestic				5.0 to 9.0								250	2.0	10			250		0.1(g)	1.0	0.004
Surface Water, Agriculture														100					0.1		0.1

EPA Water Standards (h)

Maximum		30		6.0 to 9.0																	
Average		20		6.0 to 9.0																	

Notes:

1. Water standards are provided for reference only. These standards do not apply to the site groundwater unless it is used for drinking water, irrigation, or other regulated uses.
2. Concentrations or activity levels above a state or federal standards are shaded for reference purposes. Shading indicates that the measured level is elevated compared to certain standards of water use.
3. Metal levels are reported as dissolved and radionuclide levels are reported as total recoverable.

Table 3 Water Quality Data
Monitoring Well W-1

Table 3 Monitoring Well W-1

Sample Information	Dissolved Metals (mg/L) (continued)													Dissolved Radionuclides (pCi/L)			
	B	Cd	Cr	Cu	Pb	Mn	Mo	Ni	Se	Ag	U	V	Zn	U	Ra-226	Ra-228	Ra-226 Ra-228

Whirlwind Monitoring Well, W-1

W-1, EFRC, 10/21/08	0.6	<0.01	<0.05	<0.01	<0.05	0.01	<0.1	<0.05	<0.001	<0.01	0.397	<0.1	<0.01	269	0.84	<1.3	<2.1
W-1, EFRC, 12/16/08	0.7	<0.01	<0.05		<0.05	0.01	<0.1	<0.05	<0.001		0.210	<0.1	<0.01	142	0.46	<1.1	<1.6
W-1, EFRC, 2/10/09	0.5	<0.01	<0.05		<0.05	<0.01	<0.1	<0.05	0.002		0.195	<0.1	<0.01	132	0.50	<1.3	<1.8
W-1, EFRC, 4/20/09	0.6	<0.01	<0.05		<0.05	<0.01	<0.1	<0.05	<0.001		0.161	<0.1	<0.01	109	0.38	<1.1	<1.5
W-1, EFRC, 6/24/09	0.7	<0.01	<0.05		<0.05	<0.01	<0.1	<0.05	<0.001		0.148	<0.1	<0.01	100	0.21	<1.2	<1.4
W-1, EFRC, 9/11/09	0.7	<0.01	<0.05		<0.05	<0.01	<0.1	<0.05	<0.001		0.146	<0.1	<0.01	98.8	0.39	<1.0	<1.4
W-1, EFRC, 12/10/09	0.7	<0.01	<0.05		<0.05	0.01	<0.1	<0.05	<0.001		0.122	<0.1	<0.01	82.6	0.36	<1.1	<1.5
W-1, EFRC, 2/4/10	0.7	<0.01	<0.05		<0.05	0.01	<0.1	<0.05	<0.001		0.139	<0.1	<0.01	94.1	0.34	<0.94	<1.3
MW-1, EFRC, 6/7/10	0.5	<0.01	<0.05		<0.05	0.01	<0.1	<0.05	0.002		0.143	<0.1	0.04	96.8	0.42	<1.3	<1.7
MW-1, EFRC, 5/24/11	0.7	<0.01	<0.05		<0.05	0.01	<0.1	<0.05	0.002		0.118	<0.1	0.04	79.9	0.28	<1.4	<1.7
MW-1, EFRC, 6/4/12	0.7	<0.01	<0.05		<0.05	0.02	<0.1	<0.05	<0.001		0.115	<0.1	<0.01	77.9	1.30	1.7	3
MW-1, EFRC, 6/17/2013	0.7	<0.01	<0.05		<0.05	0.02	<0.1	<0.05	0.002		0.126	<0.1	<0.01	85.3	1.60	<1.7	<3.3
MW-1, EFRC, 6/18/2014	0.7	<0.01	<0.05		<0.05	0.02	<0.1	<0.05	<0.001		0.121	<0.1	0.01	81.9	0.94	<0.34	<1.28
MW-1, EFRI, 8/5/2015	0.6	<0.01	<0.05		<0.05	0.01	<0.1	<0.05	0.004		0.151	<0.1	<0.01	102.2	0.62	1.7	2.32
MW-1, EFRI, 6/1/2016	0.7	<0.01	<0.05		<0.05	0.02	<0.1	<0.05	0.002		0.181	<0.1	<0.01	122.5	1.20	<1.5	<2.7
MW-1, EFRI, 6/7/2017	0.7	<0.01	<0.05		<0.05	0.02	<0.1	<0.05	<0.001		0.195	<0.1	<0.01	132.0	0.80	1.3	2.10
MW-1, EFRI, 6/20/2018	0.7	<0.01	<0.05		<0.05	0.02	<0.1	<0.05	0.002		0.191	<0.1	<0.01	129.3	0.90	<1.2	2.10
MW-1, EFRI, 6/25/2019	0.7	<0.01	<0.05		<0.05	0.02	<0.1	<0.05	<0.001		0.228	<0.1	<0.01	154.4	0.90	<0.4	0.94
MW-1, EFRI, 6/24/2020	0.65	<0.001	<0.005		<0.001	0.028	0.002	<0.005	<0.001		0.204	<0.01	<0.01	138	0.80	<1.3	<2.1
MW-1, EFRI, 7/13/2021	0.64	<0.001	<0.005		<0.001	0.015	0.002	<0.005	<0.001		0.218	<0.01	<0.01	148	1.00	<1.1	<2.1
MW-1, EFRI, 8/1/2022	0.7	<0.001	<0.005		<0.001	0.015	0.002	<0.005	<0.001		0.228	<0.01	<0.01	154	1.20	<2.0	<3.2

Colorado Water Standards

Ground Water, Domestic		0.005	0.1	1	0.05	0.05	0.035	0.1	0.05	0.05	0.03		5	20	5(c)	5(c)	5
Ground Water, Agriculture	0.75	0.01	0.1	0.2	0.1	0.2		0.2	0.02			0.1	2				
Surface Water, Stream (e,f)	0.75 dis	0.010	0.100	0.200	0.100	0.200		0.200			(d)		2	(d)	5(c)	5(c)	5
Surface Water, Domestic		0.005	0.05	1.0	0.05	0.05		0.1	0.05	0.1	0.03		5	20	5(c)	5(c)	5
Surface Water, Agriculture	0.75	0.01	0.1	0.2	0.1	0.2		0.2	0.02				2				

EPA Water Standards (h)

Maximum											4		1.0		10 dis, 30 tot		
Average											2		0.5		3 dis, 10 tot		

Notes:

1. Water standards are provided for reference only. These standards do not apply to the spring water unless it is used for drinking water, irrigation, or other regulated uses.
2. Concentrations or activity levels above a state or federal standard are shaded for reference purposes. Shading indicates that the measured level is elevated compared to certain standards of water use.
3. Metal levels are reported as dissolved and radionuclide levels are reported as total recoverable.

Table 4 Lumsden Canyon Seep

Sample Information	General Parameters						Major Ions (mg/L)									
	Flow	TSS (mg/L)	TDS (mg/L)	pH (s.u.)	Alk (mg/L)	Cond (µS/cm)	Na	Ca	Mg	K	Cl	F	NO ₃	P	HCO ₃	SO ₄
Lumsden Canyon Seep (aka Lumsden Canyon Spring)																
Lumsden Spring, EFRC, 4/25/07	7		648	7.68	264		43.7	118	27.5	4.3	23	0.4	0.5	<0.3	322	232
Lumsden Canyon Mouth, EFRC, 6/19/08	<1.0	4	668	7.57	251	825	44	135	31	4	22	0.4	0.4	0.02	306	252
Lumsden Canyon Mouth, WWL, 12/04/08	<1.0	<1	695	7.71	261	985	46	146	34	4	19	0.4	0.3	<0.01	318	265
Colorado Water Standards																
Ground Water, Domestic				6.5 to 8.5							250	4.0	10.0			250
Ground Water, Agriculture				6.5 to 8.5								2	100			
Surface Water, Stream (e,f)				6.5 to 9.0												
Surface Water, Domestic				5.0 to 9.0							250	2.0	10			250
Surface Water, Agriculture													100			
EPA Water Standards (h)																
Maximum		30		6.0 to 9.0												
Average		20		6.0 to 9.0												

- Notes:**
- 1. Water standards are provided for reference only. These standards do not apply to the site groundwater unless it is used for drinking water, irrigation, or other regulated uses.
 - 2. Concentrations or activity levels above a state or federal standards are shaded for reference purposes. Shading indicates that the measured level is elevated compared to certain standards of water use.
 - 3. Metal and radionuclide levels are reported as total recoverable.

Table 4 Lumsden Canyon Seep

Sample Information	Dissolved Metals (mg/L)														Dissolved Radionuclides (pCi/L)			
	As	Ba	Be	B	Cd	Cr	Pb	Mn	Mo	Ni	Se	U	V	Zn	U	Ra-226	Ra-228	Ra-226 Ra-228
Lumsden Canyon Seep (aka Lumsden Canyon Spring)																		
Lumsden Spring, EFRC, 4/25/07	0.004	<0.1			<0.01		<0.05	<0.01	<0.1	<0.05	0.086	0.216	<0.1	<0.01	146	1.3	0.4	1.7
Lumsden Canyon Mouth, EFRC, 6/19/08	0.003	<0.1	<0.01	<0.1	<0.01	<0.05	<0.05	<0.01	<0.1	<0.05	0.085	0.194	<0.1	0.01	131	1.1	0.2	1.3
Lumsden Canyon Mouth, WWL, 12/04/08	0.008	<0.1	<0.01	0.2	<0.01	<0.05	<0.05	0.02	<0.1	<0.05	0.07	0.201	<0.1	<0.01	136	2.5	1.6	4.1
Colorado Water Standards																		
Ground Water, Domestic	0.01	2.0	0.004		0.005	0.1	0.05	0.05	0.035	0.1	0.05	0.03		5	20	5(c)	5(c)	5
Ground Water, Agriculture	0.1		0.1	0.75	0.01	0.1	0.1	0.2		0.2	0.02		0.1	2				
Surface Water, Stream (e,f)	0.100		0.100	0.75 dis	0.010	0.100	0.100	0.200		0.200		(d)		2		5(c)	5(c)	5
Surface Water, Domestic	0.1(g)	1.0	0.004		0.005	0.05	0.05	0.05		0.1	0.05	0.03		5	20	5(c)	5(c)	5
Surface Water, Agriculture	0.1		0.1	0.75	0.01	0.1	0.1	0.2		0.2	0.02			2				
EPA Water Standards (h)																		
Maximum												4		1.0		10 dis, 30 tot		
Average												2		0.5		3 dis, 10 tot		

- Notes:**
- 1. Water standards are provided for reference only. These standards do not apply to the spring water unless it is used for drinking water, irrigation, or other regulated uses.
 - 2. Concentrations or activity levels above a state or federal standard are shaded for reference purposes. Shading indicates that the measured level is elevated compared to certain standards of water use.
 - 3. Metal and radionuclide levels are reported as total recoverable.

Table 5 Rajah 49 Mine, Thornton Portal (Rajah Spring)

Sample Information	General Parameters						Major Ions (mg/L)									
	Flow	TSS (mg/L)	TDS (mg/L)	pH (s.u.)	Alk (mg/L)	Cond (µS/cm)	Na	Ca	Mg	K	Cl	F	NO ₃	P	HCO ₃	SO ₄
Thornton Portal (Rajah Spring)																
Thornton Portal, EFRC, 9/21/09	1-2	5	581	8.58	373	938	209	7	3	6	20	0.4	0.3	0.062	412	96
Thornton Portal, EFRC, 6/30/10	1-2	<4	537	8.9	379	889	207	7	3	7	23	0.3	0.2	0.102	431	86
Thornton Portal, EFRC, 5/24/11	<1	<4	571	9.16	360	985	216	7	3	6	24	0.4	0.2	0.091	403	93
Thorton Portal, EFRC, 5/30/12	<1	6	550	8.8	361	939	201	9	3	6	23	0.3	0.2	0.058	404	87
Thorton Portal, EFRC, 6/17/2013	<1	412	691	7.95	379	844	92	9	3	7	25	0.3	0.32	0.192	441	92
Thorton Portal, EFRC, 6/17/2014	<1	<10	579	8.69	366	973	209	7	3	6	24	0.3	0.5	0.196	414	94
Thornton Portal, EFRI, 8/5/15	<1	<10	578	8.35	352	1030	210	8	3	6	24	0.4	0.5	0.053	393	92
Thornton Portal, EFRI, 6/1/16	<1	<10	584	8.77	386	888	207	7	3	6	22	0.3	0.6	0.053	430	84
Thornton Portal, EFRI, 6/7/17	<1	10	569	8.74	360	910.7	200	7	3	6	25	0.3	0.7	0.053	405	100
Thornton Portal, EFRI, 6/20/18	<1	3	599	8.75	356	642	219	6	3	6	24	0.3	0.58	0.074	399	93
Thornton Portal, EFRI, 6/25/19	<1	<1	563	8.72	357	859	199	7	3	6	23	0.3	0.43	0.08	396	88
Thornton Portal, EFRI, 6/24/20	<1	<1	577	8.76	363	827	223	7	3	6	22	0.3	0.61	0.130	409	84
Thornton Portal, EFRI, 7/13/21	<1	1	580	8.8	355	907.5	202	7	3	6	24	0.3	0.48	0.066	402	98
Thornton Portal, EFRI, 8/1/22	<1	6	580	8.70	358	903.4	209	7	3	6	22	0.3	0.44	0.163	409	91
Colorado Water Standards																
Ground Water, Domestic				6.5 to 8.5							250	4.0	10.0			250
Ground Water, Agriculture				6.5 to 8.5								2	100			
Surface Water, Stream (e,f)				6.5 to 9.0												
Surface Water, Domestic				5.0 to 9.0							250	2.0	10			250
Surface Water, Agriculture													100			
EPA Water Standards (h)																
Maximum		30		6.0 to 9.0												
Average		20		6.0 to 9.0												

- Notes:**
1. Water standards are provided for reference only. These standards do not apply to the site groundwater unless it is used for drinking water, irrigation, or other regulated uses.
 2. Concentrations or activity levels above a state or federal standards are shaded for reference purposes. Shading indicates that the measured level is elevated compared to certain standards of water use.
 3. Metal and radionuclide levels are reported as total recoverable.

Table 5 Rajah 49 Mine, Thornton Portal (Rajah Spring)

Sample Information	Dissolved Metals (mg/L)														Dissolved Radionuclides (pCi/L)			
	As	Ba	Be	B	Cd	Cr	Pb	Mn	Mo	Ni	Se	U	V	Zn	U	Ra-226	Ra-228	Ra-226 Ra-228
Thornton Portal (Rajah Spring)																		
Thornton Portal, EFRC, 9/21/09	1.49	<0.1	<0.01	0.2	<0.01	<0.05	<0.05	<0.01	0.3	<0.05	0.154	2.02	0.3	0.01	1370	9.7	<0.51	<10.2
Thornton Portal, EFRC, 6/30/10	1.39	<0.1	<0.01	<0.2	<0.01	<0.05	<0.05	<0.01	0.2	<0.05	0.146	1.81	0.5	<0.01	1230	15	<1.0	<16
Thornton Portal, EFRC, 5/24/11	1.51	<0.1	<0.01	0.2	<0.01	<0.05	<0.05	<0.01	0.3	<0.05	0.142	1.86	0.4	<0.01	1260	12	<1.4	<13
Thorton Portal, EFRC, 5/30/12	1.75	<0.1	<0.01	0.1	<0.01	<0.05	<0.05	0.01	0.3	<0.05	0.189	2.06	0.4	<0.01	1390	11	<.68	<12
Thorton Portal, EFRC, 6/17/2013	1.39	<0.1	<0.01	0.1	<0.01	<0.05	<0.05	0.09	0.3	<0.05	0.154	2.43	0.4	<0.01	1650	16	<1.9	<17.9
Thorton Portal, EFRC, 6/17/2014	1.63	<0.1	<0.01	0.1	<0.01	<0.05	<0.05	0.01	0.3	<0.05	0.19	2.22	0.4	0.01	1500	9.7	<1.0	<10.7
Thornton Portal, EFRI, 8/5/15	2.28	<0.1	<0.01	0.2	<0.01	<0.05	<0.05	<0.01	0.3	<0.05	0.266	2.04	0.4	<0.01	1380	7.4	1.8	9.2
Thornton Portal, EFRI, 6/1/16	1.84	<0.1	<0.01	0.1	<0.01	<0.05	<0.05	<0.01	0.3	<0.05	0.35	2	0.4	<0.01	1350	11	<1.6	<12.6
Thornton Portal, EFRI, 6/7/17	2.11	<0.1	<0.01	0.1	<0.01	<0.05	<0.05	<0.01	0.2	<0.05	0.226	2.34	0.4	<0.01	1580	9.9	1.9	11.8
Thornton Portal, EFRI, 6/20/18	2.51	<0.1	<0.01	0.1	<0.01	<0.05	<0.05	<0.01	0.2	<0.05	0.221	1.68	0.5	<0.01	1140	8.6	<0.5	9.1
Thornton Portal, EFRI, 6/25/19	1.87	<0.1	<0.01	0.1	<0.01	<0.05	<0.05	<0.01	0.2	<0.05	0.193	1.94	0.4	<0.01	1310	12.5	1.6	14.1
Thornton Portal, EFRI, 6/24/20	2.48	<0.05	<0.001	<0.05	<0.001	<0.005	<0.001	<0.001	0.245	<0.005	0.217	1.97	0.36	<0.01	1330	8.3	<0.8	<9.1
Thornton Portal, EFRI, 7/13/21	2.54	<0.05	<0.001	0.14	<0.001	<0.005	<0.001	0.001	0.234	<0.005	0.23	2.03	0.38	<0.01	1370	9.1	<0.9	<10.0
Thornton Portal, EFRI, 8/1/22	2.4	<0.05	<0.001	0.15	<0.001	<0.005	<0.001	0.003	0.221	<0.005	0.222	2.05	0.39	<0.01	1390	12.3	<2.1	<14.4
Colorado Water Standards																		
Ground Water, Domestic	0.01	2.0	0.004		0.005	0.1	0.05	0.05	0.035	0.1	0.05	0.03		5	20	5(c)	5(c)	5
Ground Water, Agriculture	0.1		0.1	0.75	0.01	0.1	0.1	0.2		0.2	0.02		0.1	2				
Surface Water, Stream (e,f)	0.100		0.100	0.75 dis	0.010	0.100	0.100	0.200		0.200		(d)		2		5(c)	5(c)	5
Surface Water, Domestic	0.1(g)	1.0	0.004		0.005	0.05	0.05	0.05		0.1	0.05	0.03		5	20	5(c)	5(c)	5
Surface Water, Agriculture	0.1		0.1	0.75	0.01	0.1	0.1	0.2		0.2	0.02			2				
EPA Water Standards (h)																		
Maximum												4		1.0		10 dis, 30 tot		
Average												2		0.5		3 dis, 10 tot		

- Notes:**
- 1. Water standards are provided for reference only. These standards do not apply to the spring water unless it is used for drinking water, irrigation, or other regulated uses.
 - 2. Concentrations or activity levels above a state or federal standard are shaded for reference purposes. Shading indicates that the measured level is elevated compared to certain standards of water use.
 - 3. Metal and radionuclide levels are reported as total recoverable.

Table 6 Whirlwind Mine Waste Rock

		Whirlwind Mine Waste Rock Samples			
Sample ID	WW 04	WW 05	WW 06	WW WR	
Collection Date(s)	11/18/07	11/18/07	11/18/07	3Q08-4Q09	
Constituents	Units				
TOTAL ANALYSES					
Total Major Ions					
Calcium	mg/kg	17100	12000	18900	28300
Magnesium	mg/kg	4020	2760	5720	3300
Phosphorous	mg/kg	174	101	299	247
Potassium	mg/kg	1800	852	6510	1380
Silica	mg/kg	1610	1100	1180	2290
Sodium	mg/kg	101	105	220	211
Total Metals					
Aluminum	mg/kg	8600	5590	17300	4190
Antimony	mg/kg	<0.5	<0.5	<0.5	<0.5
Arsenic	mg/kg	4.6	1.4	3.8	14.5
Barium	mg/kg	558	771	35.9	234
Beryllium	mg/kg	<0.5	<0.5	0.7	<0.5
Boron	mg/kg	5.6	<5.0	11.4	<5.0
Cadmium	mg/kg	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	4.1	2.5	14.6	4.9
Copper	mg/kg	0.7	3.4	7.5	20.4
Iron	mg/kg	2790	3450	13800	5060
Lead	mg/kg	7.8	1.2	4.7	16.1
Manganese	mg/kg	102	90.4	133	190
Mercury	mg/kg	<0.05	<0.05	<0.05	<0.05
Molybdenum	mg/kg	<0.5	<0.5	1.2	<0.5
Nickel	mg/kg	2.7	1.9	11.6	3.2
Selenium	mg/kg	3.0	<0.5	<0.5	4.0
Silver	mg/kg	<0.5	<0.5	<0.5	<0.5
Thallium	mg/kg	<0.5	<0.5	<0.5	<0.5
Uranium	mg/kg	10.9	6.4	2.7	7.8
Uranium as U ₃ O ₈	mg/kg	12.8	7.6	3.2	9.2
Vanadium	mg/kg	336	47.2	88.4	51.8
Vanadium as V ₂ O ₅	mg/kg	599	84.3	158	92.4
Zinc	mg/kg	9.1	9.1	21.0	32.1
Total Radionuclides					
Gross Alpha	pCi/g	20.4	13.0	9.4	21.5
Gross Beta	pCi/g	26.0	17.9	15.0	29.4
Radium-226	pCi/g	4.2	2.8	3.8	3.7
Radium-228	pCi/g	<0.1	<0.1	0.3	<0.5
Radium-226 + -228	pCi/g	<4.3	<2.9	4.1	<4.2
SYNTHETIC PRECIPITATION LEACHING PROCEDURE (SPLP) ANALYSES					
SPLP Extractable Physical Properties					
TDS	mg/L	52	40	52	30
pH	s.u.	10.1	10.2	10.1	9.87
Hardness	mg/L	17.5	17	10.7	13
Alkalinity	mg/L	34	37	36	35
Conductance	µS/cm	83.5	87.9	92.6	96
SPLP Extractable Major Ions					
Sodium	mg/L	10	8.6	11.2	12.3
Calcium	mg/L	5.2	5.3	3.0	3.4
Magnesium	mg/L	1.1	0.9	0.8	1.0
Potassium	mg/L	<0.5	<0.5	2.6	4.0
Chloride	mg/L	<1	<1	<1	2
Flouride	mg/L	<0.1	<0.1	0.1	0.1
Nitrate	mg/L	<0.1	<0.1	<0.1	1.2
Nitrite	mg/L	<0.1	<0.1	<0.1	<0.1
Phosphorous	mg/L	<0.1	<0.1	<0.1	<0.1
Bicarbonate as HCO ₃	mg/L	24	25	24	23
Silica	mg/L	2.6	2.8	3.3	4.7
Sulfate	mg/L	4	2	3	6
SPLP Extractable Metals					
Aluminum	mg/L	0.2	0.2	0.2	0.7
Antimony	mg/L	<0.001	<0.001	<0.001	<0.001
Arsenic	mg/L	0.033	0.002	0.026	0.040
Barium	mg/L	<0.1	0.2	<0.1	<0.1
Beryllium	mg/L	<0.001	<0.001	<0.001	<0.001
Boron	mg/L	<0.1	<0.1	<0.1	<0.1
Cadmium	mg/L	<0.002	<0.002	<0.001	<0.001
Chromium	mg/L	<0.05	<0.05	<0.05	<0.05
Copper	mg/L	<0.01	<0.01	<0.01	<0.01
Iron	mg/L	0.07	0.05	0.11	0.32
Lead	mg/L	<0.001	<0.001	<0.001	0.002
Manganese	mg/L	<0.01	<0.01	<0.01	<0.01
Mercury	mg/L	<0.001	<0.001	<0.001	<0.001
Molybdenum	mg/L	<0.1	<0.1	<0.1	<0.1
Nickel	mg/L	<0.05	<0.05	<0.05	<0.05
Selenium	mg/L	0.014	<0.004	<0.004	0.012
Silver	mg/L	<0.01	<0.01	<0.01	<0.01
Thallium	mg/L	<0.001	<0.001	<0.001	<0.001
Uranium	mg/L	<0.0004	<0.0004	<0.0004	0.0066
Uranium as U ₃ O ₈	mg/L	<0.0004	<0.0004	<0.0004	0.0077
Vanadium	mg/L	<0.1	<0.1	<0.1	<0.1
Vanadium as V ₂ O ₅	mg/L	<0.2	<0.2	<0.2	<0.2
Zinc	mg/L	0.05	0.02	0.02	0.01
SPLP Extractable Radionuclides					
Uranium	pCi/L	<0.3	<0.3	<0.3	4.5
Gross Alpha	pCi/L	5.3	2.4	2.6	6.7
Gross Beta	pCi/L	6.4	<2.0	4.7	<5.5
Radium-226	pCi/L	<0.2	<0.2	<0.2	0.20
Radium-228	pCi/L	<1.0	<1.0	<1.0	<1.4
Radium-226 + -228	pCi/L	<1.2	<1.2	<1.2	<1.6

Notes:

1. 3Q08-4Q09 sample was a composite of waste rock grab samples collected on 11/4/08, 3/5/09, 6/19/09 and 9/8/09.

APPENDIX 3

FIELD SAMPLING FORMS

[illegible]

Field Measurements at Time of Sampling					
Parameter	Reading	Time	Measurement (In situ/Container)	Instrument	Comments
Air Temp °C				Thermometer	
Water Temp °C	13.0			pHCon10, YSI	
pH (s.u.)	7.98			pHCon10/YSI	
SpC/Conductivity (mS/cm, µS/cm)	827.6			pHCon10/YSI	
ORP (rmV)	412			pH310/YSI	
DO (mg/L, %)	90.8			DO310/YSI	
Turbidity (NTU)	0.0			MicroTPI	
Discharge (ft³/s, L/s, gpm)	56 gpm			Flow meter/ bucket/estimate	
Number and type of filters used:					
GPS Coordinates:					

* Duplicate of PR spring

Station/Well: Rajah Spring Date: 8-1-2020 Observer: Trent H / Abel M
Location: Whirlwind Start Time: 1042 Sampling: Tanner H.
Site: _____ End Time: 1127 Team: _____
Description: _____ Lead Signature: Trent Hallyday
Project: Annual Sampling Date: 8 / 1 / 2020
Sampling Instruments: HydroLab

[illegible]

Field Measurements at Time of Sampling					
Parameter	Reading	Time	Measurement (In situ/Container)	Instrument	Comments
Air Temp °C				Thermometer	
Water Temp °C	13.7			pHCon10, YSI	
pH (s.u.)	8.4			pHCon10/YSI	
SpC/Conductivity (mS/cm, µS/cm)	903.4			pHCon10/YSI	
ORP (rmV)	419			pH310/YSI	
DO (mg/L, %)	96.8			DO310/YSI	
Turbidity (NTU)	2.4			MicroTPI	
Discharge (ft ³ /s, L/s, gpm)	N/A			Flow meter/ bucket/estimate	
Number and type of filters used:					
GPS Coordinates:					









APPENDIX 4

ANNUAL SEEPS AND SPRINGS FIELD SURVEY



Energy Fuels Resources (USA) Inc.
6425 South Highway 191, PO Box 191
Blanding, UT 84511
435 678 2221, fax 435 678 2224
www.energyfuels.com

Annual Seeps and Springs Field Survey

8-1-2022

Survey started at 0904 hours and finished at 1127 hours. Weather was sunny with scattered skies.

DP Springs flowrate was 3.75 gallons per minute. Light vegetation growing around tank.
Holding tank is in good condition.

Monitor Well outer casing has some rust but in good condition.

PR Springs flowrate was 5 gallons per minute. There was lots of vegetation growing around the holding tank.
Holding tank is in good condition.

Rajah Springs had no flowrate to be measured. There was vegetation growing around a 3 x 5 Foot puddle in front of Mine portal. Spring looks to be in good condition.

Survey performed by Abel Mendoza, Trent Holliday, and Tanner Holliday





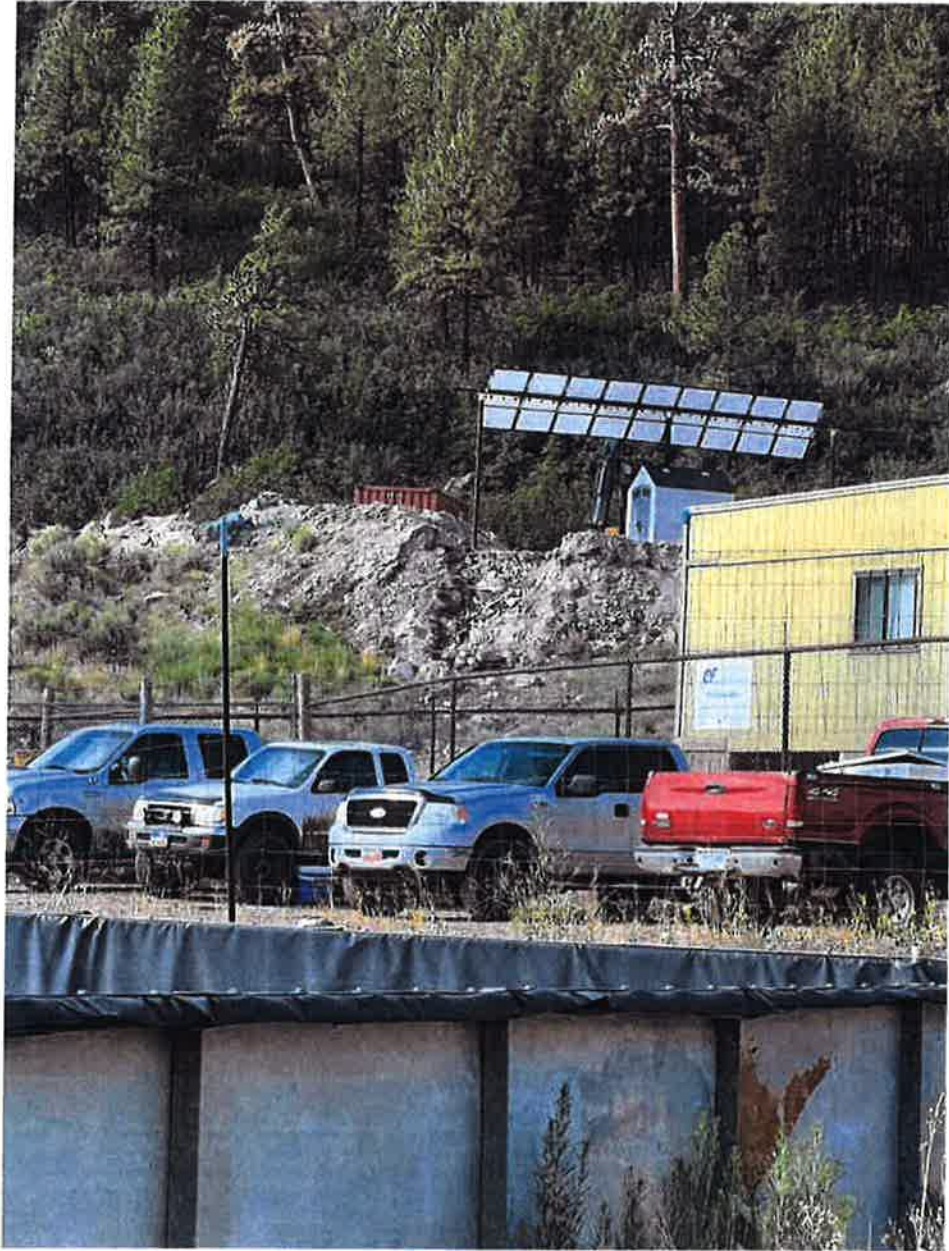




















APPENDIX 5

LABORATORY ANALYSIS



ANALYTICAL SUMMARY REPORT

September 01, 2022

Energy Fuels Resources (USA) Inc
44 Union Blvd Ste 600
Lakewood, CO 80228-1826

Work Order: C22080249 Quote ID: C5881

Project Name: Not Indicated

Energy Laboratories, Inc. Casper WY received the following 5 samples for Energy Fuels Resources (USA) Inc on 8/4/2022 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C22080249-001	PR Spring	08/01/22 10:15	08/04/22	Aqueous	Metals by ICP/ICPMS, Dissolved Alkalinity to pH 4.5 Anion - Cation Balance Fluoride Anions by Ion Chromatography Nitrogen, Nitrite Nitrogen, Nitrate + Nitrite Nitrogen, Nitrate as N pH Digestion, Total P Phosphorus, Total Radium 226 + Radium 228, Total Radium 226, Total Radium 228, Total Solids, Total Dissolved Solids, Total Dissolved - Calculated Solids, Total Suspended Sulfide, Iodine Titrimetric
C22080249-002	DP Spring	08/01/22 9:10	08/04/22	Aqueous	Same As Above
C22080249-003	MW	08/01/22 9:30	08/04/22	Aqueous	Same As Above
C22080249-004	Rajah Spring	08/01/22 10:55	08/04/22	Aqueous	Same As Above
C22080249-005	Bear Spring	08/01/22 10:15	08/04/22	Aqueous	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601, 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.

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

Report Approved By:


Project Manager

Digitally signed by
Ashley L. Wilson
Date: 2022.09.01 11:18:11 -06:00



CLIENT: Energy Fuels Resources (USA) Inc
Project: Not Indicated
Work Order: C22080249

Report Date: 09/01/22

CASE NARRATIVE

ORIGINAL SAMPLE SUBMITTAL(S)

All original sample submittals have been returned with the data package.

SAMPLE TEMPERATURE COMPLIANCE: 4°C (±2°C)

Temperature of samples received may not be considered properly preserved by accepted standards. Samples that are hand delivered immediately after collection shall be considered acceptable if there is evidence that the chilling process has begun.

GROSS ALPHA ANALYSIS

Method 900.0 for gross alpha and gross beta is intended as a drinking water method for low TDS waters. Data provided by this method for non potable waters should be viewed as inconsistent.

RADON IN AIR ANALYSIS

The desired exposure time is 48 hours (2 days). The time delay in returning the canister to the laboratory for processing should be as short as possible to avoid excessive decay. Maximum recommended delay between end of exposure to beginning of counting should not exceed 8 days.

SOIL/SOLID SAMPLES

All samples reported on an as received basis unless otherwise indicated.

ATRAZINE, SIMAZINE AND PCB ANALYSIS

Data for PCBs, Atrazine and Simazine are reported from EPA 525.2. PCB data reported by ELI reflects the results for seven individual Aroclors. When the results for all seven are ND (not detected), the sample meets EPA compliance criteria for PCB monitoring.

SUBCONTRACTING ANALYSIS

Subcontracting of sample analyses to an outside laboratory may be required. If so, ENERGY LABORATORIES will utilize its branch laboratories or qualified contract laboratories for this service. Any such laboratories will be indicated within the Laboratory Analytical Report.

BRANCH LABORATORY LOCATIONS

eli-b - Energy Laboratories, Inc. - Billings, MT
eli-g - Energy Laboratories, Inc. - Gillette, WY
eli-h - Energy Laboratories, Inc. - Helena, MT

ISO 17025 DISCLAIMER:

The results of this Analytical Report relate only to the items submitted for analysis.

ENERGY LABORATORIES, INC. - CASPER, WY certifies that certain method selections contained in this report meet requirements as set forth by the above accrediting authorities. Some results requested by the client may not be covered under these certifications. All analysis data to be submitted for regulatory enforcement should be certified in the sample state of origin. Please verify ELI's certification coverage by visiting www.energylab.com

ELI appreciates the opportunity to provide you with this analytical service. For additional information and services visit our web page www.energylab.com.



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: Not Indicated
Lab ID: C22080249-001
Client Sample ID: PR Spring

Report Date: 09/01/22
Collection Date: 08/01/22 10:15
Date Received: 08/04/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Alkalinity, Total as CaCO ₃	317	mg/L		5		A2320 B	08/05/22 15:15 / slf
Bicarbonate as HCO ₃	387	mg/L		6		A2320 B	08/05/22 15:15 / slf
Chloride	19	mg/L		1		E300.0	08/08/22 23:03 / dmb
Fluoride	0.4	mg/L		0.1		A4500-F C	08/05/22 12:10 / slf
Sulfate	102	mg/L		1		E300.0	08/08/22 23:03 / dmb
Calcium	29	mg/L		1		E200.7	08/12/22 18:31 / eli-b
Magnesium	14	mg/L		1		E200.7	08/12/22 18:31 / eli-b
Potassium	5	mg/L		1		E200.7	08/12/22 18:31 / eli-b
Sodium	147	mg/L		1		E200.7	08/12/22 18:31 / eli-b
INORGANICS							
Sulfide	ND	mg/L		1		A4500-S F	08/05/22 14:39 / erc
Sulfide as Hydrogen Sulfide (H ₂ S)	ND	mg/L		1		A4500-S F	08/05/22 14:39 / erc
PHYSICAL PROPERTIES							
pH	8.2	s.u.	H	0.1		A4500-H B	08/05/22 11:23 / mnm
pH Measurement Temp	18.3	°C				A4500-H B	08/05/22 11:23 / mnm
Solids, Total Dissolved TDS @ 180 C	525	mg/L		20		A2540 C	08/05/22 12:31 / slf
Solids, Total Suspended TSS @ 105 C	ND	mg/L		1		A2540 D	08/08/22 12:37 / mnm
NUTRIENTS							
Nitrogen, Nitrate as N	0.25	mg/L		0.05		E353.2	08/10/22 08:25 / tlf
Nitrogen, Nitrite as N	ND	mg/L	H	0.01		A4500-NO ₂ B	08/05/22 14:12 / erc
Nitrogen, Nitrate+Nitrite as N	0.25	mg/L		0.05		E353.2	08/05/22 15:04 / erc
Phosphorus, Total as P	0.021	mg/L		0.005		E365.1	08/13/22 10:48 / dmb
- H - sample was analyzed beyond recommended hold time due to receiving it with insufficient hold time remaining.							
METALS, DISSOLVED							
Arsenic	0.359	mg/L		0.001		E200.8	08/13/22 21:56 / eli-b
Barium	ND	mg/L		0.05		E200.7	08/12/22 18:31 / eli-b
Beryllium	ND	mg/L		0.001		E200.8	08/18/22 13:23 / eli-b
Boron	0.11	mg/L		0.05		E200.7	08/12/22 18:31 / eli-b
Cadmium	ND	mg/L		0.001		E200.8	08/13/22 21:56 / eli-b
Chromium	ND	mg/L		0.005		E200.8	08/13/22 21:56 / eli-b
Lead	ND	mg/L		0.001		E200.8	08/13/22 21:56 / eli-b
Manganese	ND	mg/L		0.001		E200.8	08/13/22 21:56 / eli-b
Molybdenum	0.091	mg/L		0.001		E200.8	08/13/22 21:56 / eli-b
Nickel	ND	mg/L		0.005		E200.8	08/13/22 21:56 / eli-b
Selenium	0.140	mg/L		0.001		E200.8	08/13/22 21:56 / eli-b
Uranium	1.13	mg/L		0.0003		E200.8	08/20/22 17:44 / eli-b
Vanadium	0.28	mg/L		0.01		E200.8	08/16/22 13:45 / eli-b
Zinc	ND	mg/L		0.01		E200.8	08/13/22 21:56 / eli-b

Report RL - Analyte Reporting Limit

Definitions: QCL - Quality Control Limit

H - Analysis performed past the method holding time

MCL - Maximum Contaminant Level

ND - Not detected at the Reporting Limit (RL)



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: Not Indicated
Lab ID: C22080249-001
Client Sample ID: PR Spring

Report Date: 09/01/22
Collection Date: 08/01/22 10:15
Date Received: 08/04/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
Solids, Total Dissolved - Calculated	508	mg/L		1.00		A1030 E	08/23/22 15:28 / tlf
A/C Balance	0.19	%				A1030 E	08/23/22 15:28 / tlf
Anions	9.06	meq/L				A1030 E	08/23/22 15:28 / tlf
Cations	9.09	meq/L				A1030 E	08/23/22 15:28 / tlf
RADIONUCLIDES, TOTAL							
Radium 226	7.1	pCi/L				E903.0	08/16/22 14:19 / kdk
Radium 226 precision (±)	1.5	pCi/L				E903.0	08/16/22 14:19 / kdk
Radium 226 MDC	0.4	pCi/L				E903.0	08/16/22 14:19 / kdk
Radium 228	-1	pCi/L	U			RA-05	08/11/22 14:19 / trs
Radium 228 precision (±)	1.2	pCi/L				RA-05	08/11/22 14:19 / trs
Radium 228 MDC	2.1	pCi/L				RA-05	08/11/22 14:19 / trs
Radium 226 + Radium 228	6.1	pCi/L				A7500-RA	08/17/22 16:48 / dmf
Radium 226 + Radium 228 precision (±)	1.9	pCi/L				A7500-RA	08/17/22 16:48 / dmf
Radium 226 + Radium 228 MDC	2.1	pCi/L				A7500-RA	08/17/22 16:48 / dmf

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
U - Not detected at Minimum Detectable Concentration (MDC)

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



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: Not Indicated
Lab ID: C22080249-002
Client Sample ID: DP Spring

Report Date: 09/01/22
Collection Date: 08/01/22 09:10
Date Received: 08/04/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Alkalinity, Total as CaCO ₃	248	mg/L		5		A2320 B	08/05/22 15:38 / slf
Bicarbonate as HCO ₃	303	mg/L		6		A2320 B	08/05/22 15:38 / slf
Chloride	13	mg/L		1		E300.0	08/08/22 23:22 / dmb
Fluoride	0.3	mg/L		0.1		A4500-F C	08/05/22 12:13 / slf
Sulfate	34	mg/L		1		E300.0	08/08/22 23:22 / dmb
Calcium	89	mg/L		1		E200.7	08/12/22 18:36 / eli-b
Magnesium	9	mg/L		1		E200.7	08/12/22 18:36 / eli-b
Potassium	1	mg/L		1		E200.7	08/12/22 18:36 / eli-b
Sodium	19	mg/L		1		E200.7	08/12/22 18:36 / eli-b
INORGANICS							
Sulfide	1	mg/L		1		A4500-S F	08/05/22 14:39 / erc
Sulfide as Hydrogen Sulfide (H ₂ S)	1	mg/L		1		A4500-S F	08/05/22 14:39 / erc
PHYSICAL PROPERTIES							
pH	7.7	s.u.	H	0.1		A4500-H B	08/05/22 11:26 / mnm
pH Measurement Temp	18.3	°C				A4500-H B	08/05/22 11:26 / mnm
Solids, Total Dissolved TDS @ 180 C	336	mg/L		20		A2540 C	08/05/22 12:32 / slf
Solids, Total Suspended TSS @ 105 C	5	mg/L		1		A2540 D	08/08/22 12:37 / mnm
NUTRIENTS							
Nitrogen, Nitrate as N	0.17	mg/L		0.05		E353.2	08/10/22 08:25 / tif
Nitrogen, Nitrite as N	ND	mg/L	H	0.01		A4500-NO2 B	08/05/22 14:12 / erc
Nitrogen, Nitrate+Nitrite as N	0.17	mg/L		0.05		E353.2	08/05/22 15:05 / erc
Phosphorus, Total as P	0.009	mg/L		0.005		E365.1	08/13/22 10:49 / dmb
- H - sample was analyzed beyond recommended hold time due to receiving it with insufficient hold time remaining.							
METALS, DISSOLVED							
Arsenic	0.005	mg/L		0.001		E200.8	08/13/22 22:02 / eli-b
Barium	0.11	mg/L		0.05		E200.7	08/12/22 18:36 / eli-b
Beryllium	ND	mg/L		0.001		E200.8	08/18/22 13:30 / eli-b
Boron	ND	mg/L		0.05		E200.7	08/12/22 18:36 / eli-b
Cadmium	ND	mg/L		0.001		E200.8	08/13/22 22:02 / eli-b
Chromium	ND	mg/L		0.005		E200.8	08/13/22 22:02 / eli-b
Lead	ND	mg/L		0.001		E200.8	08/13/22 22:02 / eli-b
Manganese	ND	mg/L		0.001		E200.8	08/13/22 22:02 / eli-b
Molybdenum	ND	mg/L		0.001		E200.8	08/13/22 22:02 / eli-b
Nickel	ND	mg/L		0.005		E200.8	08/13/22 22:02 / eli-b
Selenium	0.002	mg/L		0.001		E200.8	08/13/22 22:02 / eli-b
Uranium	0.0011	mg/L		0.0003		E200.8	08/16/22 14:04 / eli-b
Vanadium	ND	mg/L		0.01		E200.8	08/16/22 14:04 / eli-b
Zinc	ND	mg/L		0.01		E200.8	08/13/22 22:02 / eli-b

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
H - Analysis performed past the method holding time

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



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: Not Indicated
Lab ID: C22080249-002
Client Sample ID: DP Spring

Report Date: 09/01/22
Collection Date: 08/01/22 09:10
Date Received: 08/04/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
Solids, Total Dissolved - Calculated	316	mg/L		1.00		A1030 E	08/23/22 15:29 / tif
A/C Balance	0.15	%				A1030 E	08/23/22 15:29 / tif
Anions	6.07	meq/L				A1030 E	08/23/22 15:29 / tif
Cations	6.09	meq/L				A1030 E	08/23/22 15:29 / tif
RADIONUCLIDES, TOTAL							
Radium 226	0.5	pCi/L				E903.0	08/16/22 14:19 / kdk
Radium 226 precision (±)	0.3	pCi/L				E903.0	08/16/22 14:19 / kdk
Radium 226 MDC	0.4	pCi/L				E903.0	08/16/22 14:19 / kdk
Radium 228	-1	pCi/L	U			RA-05	08/11/22 16:23 / trs
Radium 228 precision (±)	1.3	pCi/L				RA-05	08/11/22 16:23 / trs
Radium 228 MDC	2.4	pCi/L				RA-05	08/11/22 16:23 / trs
Radium 226 + Radium 228	-0.7	pCi/L	U			A7500-RA	08/17/22 16:48 / dmf
Radium 226 + Radium 228 precision (±)	1.4	pCi/L				A7500-RA	08/17/22 16:48 / dmf
Radium 226 + Radium 228 MDC	2.4	pCi/L				A7500-RA	08/17/22 16:48 / dmf

Report Definitions:	RL - Analyte Reporting Limit QCL - Quality Control Limit U - Not detected at Minimum Detectable Concentration (MDC)	MCL - Maximum Contaminant Level ND - Not detected at the Reporting Limit (RL)
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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: Not Indicated
Lab ID: C22080249-003
Client Sample ID: MW

Report Date: 09/01/22
Collection Date: 08/01/22 09:30
Date Received: 08/04/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Alkalinity, Total as CaCO ₃	320	mg/L		5		A2320 B	08/05/22 15:47 / slf
Bicarbonate as HCO ₃	391	mg/L		6		A2320 B	08/05/22 15:47 / slf
Chloride	169	mg/L		1		E300.0	08/08/22 23:42 / dmb
Fluoride	0.3	mg/L		0.1		A4500-F C	08/05/22 12:16 / slf
Sulfate	211	mg/L	D	2		E300.0	08/08/22 23:42 / dmb
Calcium	43	mg/L		1		E200.7	08/12/22 18:40 / eli-b
Magnesium	13	mg/L		1		E200.7	08/12/22 18:40 / eli-b
Potassium	13	mg/L		1		E200.7	08/12/22 18:40 / eli-b
Sodium	273	mg/L		1		E200.7	08/12/22 18:40 / eli-b
INORGANICS							
Sulfide	ND	mg/L		1		A4500-S F	08/05/22 14:39 / erc
Sulfide as Hydrogen Sulfide (H ₂ S)	ND	mg/L		1		A4500-S F	08/05/22 14:39 / erc
PHYSICAL PROPERTIES							
pH	7.8	s.u.	H	0.1		A4500-H B	08/05/22 11:29 / mnm
pH Measurement Temp	18.4	°C				A4500-H B	08/05/22 11:29 / mnm
Solids, Total Dissolved TDS @ 180 C	939	mg/L		20		A2540 C	08/05/22 12:32 / slf
Solids, Total Suspended TSS @ 105 C	110	mg/L	D	3		A2540 D	08/08/22 12:37 / mnm
NUTRIENTS							
Nitrogen, Nitrate as N	ND	mg/L		0.05		E353.2	08/10/22 08:25 / tlf
Nitrogen, Nitrite as N	ND	mg/L	H	0.01		A4500-NO ₂ B	08/05/22 14:12 / erc
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.05		E353.2	08/05/22 15:07 / erc
Phosphorus, Total as P	0.059	mg/L		0.005		E365.1	08/13/22 10:50 / dmb
- H - sample was analyzed beyond recommended hold time due to receiving it with insufficient hold time remaining.							
METALS, DISSOLVED							
Arsenic	0.022	mg/L		0.001		E200.8	08/13/22 22:09 / eli-b
Barium	ND	mg/L		0.05		E200.8	08/13/22 22:09 / eli-b
Beryllium	ND	mg/L		0.001		E200.8	08/18/22 13:36 / eli-b
Boron	0.7	mg/L	D	0.1		E200.7	08/12/22 18:40 / eli-b
Cadmium	ND	mg/L		0.001		E200.8	08/13/22 22:09 / eli-b
Chromium	ND	mg/L		0.005		E200.8	08/13/22 22:09 / eli-b
Lead	ND	mg/L		0.001		E200.8	08/13/22 22:09 / eli-b
Manganese	0.015	mg/L		0.001		E200.8	08/13/22 22:09 / eli-b
Molybdenum	0.002	mg/L		0.001		E200.8	08/13/22 22:09 / eli-b
Nickel	ND	mg/L		0.005		E200.8	08/13/22 22:09 / eli-b
Selenium	ND	mg/L		0.001		E200.8	08/13/22 22:09 / eli-b
Uranium	0.228	mg/L		0.0003		E200.8	08/13/22 22:09 / eli-b
Vanadium	ND	mg/L		0.01		E200.8	08/16/22 14:10 / eli-b
Zinc	ND	mg/L		0.01		E200.8	08/13/22 22:09 / eli-b

Report	RL - Analyte Reporting Limit	MCL - Maximum Contaminant Level
Definitions:	QCL - Quality Control Limit	ND - Not detected at the Reporting Limit (RL)
	D - Reporting Limit (RL) increased due to sample matrix	H - Analysis performed past the method holding time



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: Not Indicated
Lab ID: C22080249-003
Client Sample ID: MW

Report Date: 09/01/22
Collection Date: 08/01/22 09:30
Date Received: 08/04/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
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DATA QUALITY

Solids, Total Dissolved - Calculated	915	mg/L		1.00		A1030 E	08/23/22 15:29 / tif
A/C Balance	-0.55	%				A1030 E	08/23/22 15:29 / tif
Anions	15.6	meq/L				A1030 E	08/23/22 15:29 / tif
Cations	15.4	meq/L				A1030 E	08/23/22 15:29 / tif

RADIONUCLIDES, TOTAL

Radium 226	1.2	pCi/L				E903.0	08/16/22 14:19 / kdk
Radium 226 precision (±)	0.4	pCi/L				E903.0	08/16/22 14:19 / kdk
Radium 226 MDC	0.3	pCi/L				E903.0	08/16/22 14:19 / kdk
Radium 228	0.2	pCi/L	U			RA-05	08/11/22 16:23 / trs
Radium 228 precision (±)	1.2	pCi/L				RA-05	08/11/22 16:23 / trs
Radium 228 MDC	2.0	pCi/L				RA-05	08/11/22 16:23 / trs
Radium 226 + Radium 228	1.5	pCi/L	U			A7500-RA	08/17/22 16:48 / dmf
Radium 226 + Radium 228 precision (±)	1.3	pCi/L				A7500-RA	08/17/22 16:48 / dmf
Radium 226 + Radium 228 MDC	2.1	pCi/L				A7500-RA	08/17/22 16:48 / dmf

Report Definitions:

RL - Analyte Reporting Limit
QCL - Quality Control Limit
U - Not detected at Minimum Detectable Concentration (MDC)

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



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: Not Indicated
Lab ID: C22080249-004
Client Sample ID: Rajah Spring

Report Date: 09/01/22
Collection Date: 08/01/22 10:55
Date Received: 08/04/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Alkalinity, Total as CaCO ₃	358	mg/L		5		A2320 B	08/05/22 15:55 / slf
Bicarbonate as HCO ₃	409	mg/L		6		A2320 B	08/05/22 15:55 / slf
Chloride	22	mg/L		1		E300.0	08/09/22 00:01 / dmb
Fluoride	0.3	mg/L		0.1		A4500-F C	08/05/22 12:19 / slf
Sulfate	91	mg/L		1		E300.0	08/09/22 00:01 / dmb
Calcium	7	mg/L		1		E200.7	08/12/22 18:44 / eli-b
Magnesium	3	mg/L		1		E200.7	08/12/22 18:44 / eli-b
Potassium	6	mg/L		1		E200.7	08/12/22 18:44 / eli-b
Sodium	209	mg/L		1		E200.7	08/12/22 18:44 / eli-b
INORGANICS							
Sulfide	1	mg/L		1		A4500-S F	08/05/22 14:39 / erc
Sulfide as Hydrogen Sulfide (H ₂ S)	1	mg/L		1		A4500-S F	08/05/22 14:39 / erc
PHYSICAL PROPERTIES							
pH	8.7	s.u.	H	0.1		A4500-H B	08/05/22 11:32 / mnm
pH Measurement Temp	18.6	°C				A4500-H B	08/05/22 11:32 / mnm
Solids, Total Dissolved TDS @ 180 C	580	mg/L		20		A2540 C	08/05/22 12:33 / slf
Solids, Total Suspended TSS @ 105 C	6	mg/L		1		A2540 D	08/08/22 12:37 / mnm
NUTRIENTS							
Nitrogen, Nitrate as N	0.44	mg/L		0.05		E353.2	08/10/22 08:25 / tif
Nitrogen, Nitrite as N	ND	mg/L	H	0.01		A4500-NO ₂ B	08/05/22 14:12 / erc
Nitrogen, Nitrate+Nitrite as N	0.45	mg/L		0.05		E353.2	08/05/22 15:08 / erc
Phosphorus, Total as P	0.163	mg/L		0.005		E365.1	08/13/22 10:51 / dmb
- H - sample was analyzed beyond recommended hold time due to receiving it with insufficient hold time remaining.							
METALS, DISSOLVED							
Arsenic	2.4	mg/L	D	0.2		E200.7	08/12/22 18:44 / eli-b
Barium	ND	mg/L		0.05		E200.7	08/12/22 18:44 / eli-b
Beryllium	ND	mg/L		0.001		E200.8	08/18/22 13:43 / eli-b
Boron	0.15	mg/L		0.05		E200.7	08/12/22 18:44 / eli-b
Cadmium	ND	mg/L		0.001		E200.8	08/13/22 22:16 / eli-b
Chromium	ND	mg/L		0.005		E200.8	08/13/22 22:16 / eli-b
Lead	ND	mg/L		0.001		E200.8	08/13/22 22:16 / eli-b
Manganese	0.003	mg/L		0.001		E200.8	08/13/22 22:16 / eli-b
Molybdenum	0.221	mg/L		0.001		E200.8	08/13/22 22:16 / eli-b
Nickel	ND	mg/L		0.005		E200.8	08/13/22 22:16 / eli-b
Selenium	0.222	mg/L		0.001		E200.8	08/13/22 22:16 / eli-b
Uranium	2.05	mg/L		0.0003		E200.8	08/22/22 13:41 / eli-b
Vanadium	0.39	mg/L		0.01		E200.8	08/16/22 14:16 / eli-b
Zinc	ND	mg/L		0.01		E200.8	08/13/22 22:16 / eli-b

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)
H - Analysis performed past the method holding time



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: Not Indicated
Lab ID: C22080249-004
Client Sample ID: Rajah Spring

Report Date: 09/01/22
Collection Date: 08/01/22 10:55
Date Received: 08/04/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
Solids, Total Dissolved - Calculated	562	mg/L		1.00		A1030 E	08/23/22 15:29 / tif
A/C Balance	0.27	%				A1030 E	08/23/22 15:29 / tif
Anions	9.73	meq/L				A1030 E	08/23/22 15:29 / tif
Cations	9.79	meq/L				A1030 E	08/23/22 15:29 / tif
RADIONUCLIDES, TOTAL							
Radium 226	12.3	pCi/L				E903.0	08/16/22 14:19 / kdk
Radium 226 precision (±)	2.4	pCi/L				E903.0	08/16/22 14:19 / kdk
Radium 226 MDC	0.3	pCi/L				E903.0	08/16/22 14:19 / kdk
Radium 228	-1	pCi/L	U			RA-05	08/11/22 16:23 / trs
Radium 228 precision (±)	1.2	pCi/L				RA-05	08/11/22 16:23 / trs
Radium 228 MDC	2.1	pCi/L				RA-05	08/11/22 16:23 / trs
Radium 226 + Radium 228	10.8	pCi/L				A7500-RA	08/17/22 16:48 / dmf
Radium 226 + Radium 228 precision (±)	2.7	pCi/L				A7500-RA	08/17/22 16:48 / dmf
Radium 226 + Radium 228 MDC	2.1	pCi/L				A7500-RA	08/17/22 16:48 / dmf

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
U - Not detected at Minimum Detectable Concentration (MDC)

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



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: Not Indicated
Lab ID: C22080249-005
Client Sample ID: Bear Spring

Report Date: 09/01/22
Collection Date: 08/01/22 10:15
Date Received: 08/04/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Alkalinity, Total as CaCO ₃	320	mg/L		5		A2320 B	08/05/22 16:03 / slf
Bicarbonate as HCO ₃	387	mg/L		6		A2320 B	08/05/22 16:03 / slf
Chloride	19	mg/L		1		E300.0	08/09/22 00:20 / dmb
Fluoride	0.4	mg/L		0.1		A4500-F C	08/05/22 12:23 / slf
Sulfate	100	mg/L		1		E300.0	08/09/22 00:20 / dmb
Calcium	29	mg/L		1		E200.7	08/12/22 18:58 / eli-b
Magnesium	13	mg/L		1		E200.7	08/12/22 18:58 / eli-b
Potassium	5	mg/L		1		E200.7	08/12/22 18:58 / eli-b
Sodium	146	mg/L		1		E200.7	08/12/22 18:58 / eli-b
INORGANICS							
Sulfide	1	mg/L		1		A4500-S F	08/05/22 14:39 / erc
Sulfide as Hydrogen Sulfide (H ₂ S)	2	mg/L		1		A4500-S F	08/05/22 14:39 / erc
PHYSICAL PROPERTIES							
pH	8.2	s.u.	H	0.1		A4500-H B	08/05/22 11:35 / mnm
pH Measurement Temp	18.5	°C				A4500-H B	08/05/22 11:35 / mnm
Solids, Total Dissolved TDS @ 180 C	523	mg/L		20		A2540 C	08/05/22 12:34 / slf
Solids, Total Suspended TSS @ 105 C	ND	mg/L		1		A2540 D	08/08/22 12:37 / mnm
NUTRIENTS							
Nitrogen, Nitrate as N	0.24	mg/L		0.05		E353.2	08/10/22 08:25 / tlf
Nitrogen, Nitrite as N	ND	mg/L	H	0.01		A4500-NO ₂ B	08/05/22 14:12 / erc
Nitrogen, Nitrate+Nitrite as N	0.24	mg/L		0.05		E353.2	08/05/22 15:09 / erc
Phosphorus, Total as P	0.024	mg/L		0.005		E365.1	08/13/22 10:52 / dmb
- H - sample was analyzed beyond recommended hold time due to receiving it with insufficient hold time remaining.							
METALS, DISSOLVED							
Arsenic	0.356	mg/L		0.001		E200.8	08/13/22 22:36 / eli-b
Barium	ND	mg/L		0.05		E200.7	08/12/22 18:58 / eli-b
Beryllium	ND	mg/L		0.001		E200.8	08/18/22 13:50 / eli-b
Boron	0.11	mg/L		0.05		E200.7	08/12/22 18:58 / eli-b
Cadmium	ND	mg/L		0.001		E200.8	08/13/22 22:36 / eli-b
Chromium	ND	mg/L		0.005		E200.8	08/13/22 22:36 / eli-b
Lead	ND	mg/L		0.001		E200.8	08/13/22 22:36 / eli-b
Manganese	ND	mg/L		0.001		E200.8	08/13/22 22:36 / eli-b
Molybdenum	0.091	mg/L		0.001		E200.8	08/13/22 22:36 / eli-b
Nickel	ND	mg/L		0.005		E200.8	08/13/22 22:36 / eli-b
Selenium	0.141	mg/L		0.001		E200.8	08/13/22 22:36 / eli-b
Uranium	1.14	mg/L		0.0003		E200.8	08/20/22 18:18 / eli-b
Vanadium	0.28	mg/L		0.01		E200.8	08/16/22 14:22 / eli-b
Zinc	ND	mg/L		0.01		E200.8	08/13/22 22:36 / eli-b

Report RL - Analyte Reporting Limit

Definitions: QCL - Quality Control Limit

H - Analysis performed past the method holding time

MCL - Maximum Contaminant Level

ND - Not detected at the Reporting Limit (RL)



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: Not Indicated
Lab ID: C22080249-005
Client Sample ID: Bear Spring

Report Date: 09/01/22
Collection Date: 08/01/22 10:15
Date Received: 08/04/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
Solids, Total Dissolved - Calculated	505	mg/L		1.00		A1030 E	08/23/22 15:30 / tif
A/C Balance	0	%				A1030 E	08/23/22 15:30 / tif
Anions	9.04	meq/L				A1030 E	08/23/22 15:30 / tif
Cations	9.04	meq/L				A1030 E	08/23/22 15:30 / tif
RADIONUCLIDES, TOTAL							
Radium 226	2.6	pCi/L				E903.0	08/29/22 16:50 / trs
Radium 226 precision (±)	0.5	pCi/L				E903.0	08/29/22 16:50 / trs
Radium 226 MDC	0.1	pCi/L				E903.0	08/29/22 16:50 / trs
Radium 228	-2	pCi/L	U			RA-05	08/11/22 16:23 / trs
Radium 228 precision (±)	1.4	pCi/L				RA-05	08/11/22 16:23 / trs
Radium 228 MDC	2.6	pCi/L				RA-05	08/11/22 16:23 / trs
Radium 226 + Radium 228	0.6	pCi/L	U			A7500-RA	08/31/22 12:12 / dmf
Radium 226 + Radium 228 precision (±)	1.5	pCi/L				A7500-RA	08/31/22 12:12 / dmf
Radium 226 + Radium 228 MDC	2.6	pCi/L				A7500-RA	08/31/22 12:12 / dmf

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
U - Not detected at Minimum Detectable Concentration (MDC)

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



QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc

Work Order: C22080249

Report Date: 08/13/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B										Analytical Run: MANTECH_220805B
Lab ID: ICV		Initial Calibration Verification Standard								08/05/22 14:49
pH		8.01	s.u.	0.010	100	98	102			
Method: A2320 B										Batch: R285660
Lab ID: MBLK		Method Blank								08/05/22 14:58
Alkalinity, Total as CaCO ₃		ND	mg/L	2						Run: MANTECH_220805B
Lab ID: LCS		Laboratory Control Sample								08/05/22 15:07
Alkalinity, Total as CaCO ₃		252	mg/L	5.0	101	90	110			Run: MANTECH_220805B
Lab ID: C22080249-001ADUP		Sample Duplicate								08/05/22 15:23
Alkalinity, Total as CaCO ₃		319	mg/L	5.0				0.6	10	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)



QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc

Work Order: C22080249

Report Date: 08/13/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C										Batch: TDS220805A
Lab ID: MB-1_220805A		Method Blank					Run: BAL-111_220805A			08/05/22 12:20
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	10						
Lab ID: LCS-2_220805A										08/05/22 12:21
Solids, Total Dissolved TDS @ 180 C		1000	mg/L	20	100	90	110			
Lab ID: C22080239-001D DUP		Sample Duplicate					Run: BAL-111_220805A			08/05/22 12:30
Solids, Total Dissolved TDS @ 180 C		683	mg/L	20				0	5	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)



QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc

Work Order: C22080249

Report Date: 08/13/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 D										Batch: TSS220808A
Lab ID: MB-1_220808A		Method Blank								Run: BAL-111_220808A 08/08/22 12:37
Solids, Total Suspended TSS @ 105 C		ND	mg/L	0.4						
Lab ID: LCS-2_220808A										Run: BAL-111_220808A 08/08/22 12:37
Solids, Total Suspended TSS @ 105 C		93.0	mg/L	10	93	80	120			
Lab ID: C22080251-002B DUP										Run: BAL-111_220808A 08/08/22 12:37
Solids, Total Suspended TSS @ 105 C		ND	mg/L	1.0						5

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)



QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc

Work Order: C22080249

Report Date: 08/13/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-F C										Batch: R285601
Lab ID: LCS		Laboratory Control Sample					Run: MANTECH_220805A			08/05/22 11:19
Fluoride		1.93	mg/L	0.10	96	90	110			
Lab ID: MBLK		Method Blank					Run: MANTECH_220805A			08/05/22 11:33
Fluoride		ND	mg/L	0.04						
Lab ID: C22080279-002AMS		Sample Matrix Spike					Run: MANTECH_220805A			08/05/22 12:45
Fluoride		2.97	mg/L	0.10	107	90	110			
Lab ID: C22080279-003ADUP		Sample Duplicate					Run: MANTECH_220805A			08/05/22 12:52
Fluoride		0.820	mg/L	0.10				2.4	10	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)



QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc

Work Order: C22080249

Report Date: 08/13/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-H B								Analytical Run: PHSC_101-C_220805A		
Lab ID: 8.0	2	Initial Calibration Verification Standard							08/05/22 08:36	
pH		8.0	s.u.	0.1	100	98	102			
pH Measurement Temp		21.6	°C			0	0			
Lab ID: CCV - pH 7	2	Continuing Calibration Verification Standard							08/05/22 11:03	
pH		7.0	s.u.	0.1	101	98	102			
pH Measurement Temp		20.4	°C			0	0			
Method: A4500-H B								Batch: R285577		
Lab ID: C22080241-002BDUP	2	Sample Duplicate				Run: PHSC_101-C_220805A			08/05/22 11:15	
pH		7.6	s.u.	0.1				0.3	1.5	
pH Measurement Temp		18.2	°C							

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)



QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc

Work Order: C22080249

Report Date: 08/13/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-NO2 B										Batch: R285598
Lab ID: MBLK		Method Blank					Run: SPECC-101_220805A			08/05/22 14:12
Nitrogen, Nitrite as N		ND	mg/L	0.002						
Lab ID: LCS										08/05/22 14:12
Nitrogen, Nitrite as N		0.0557	mg/L	0.011	106	90	110			
Lab ID: C22080240-001BMS										08/05/22 14:12
Nitrogen, Nitrite as N		0.0559	mg/L	0.011	106	90	110			
Lab ID: C22080240-001BMDS										08/05/22 14:12
Nitrogen, Nitrite as N		0.0531	mg/L	0.011	101	90	110	5.3	10	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)



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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc

Work Order: C22080249

Report Date: 08/13/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-S F										Batch: ttrsulfide220805A
Lab ID: MBLK		Method Blank								Run: TITRATION_220805A 08/05/22 14:39
Sulfide		0.9	mg/L	0.5						
Lab ID: LCS		Laboratory Control Sample								Run: TITRATION_220805A 08/05/22 14:39
Sulfide		80.4	mg/L	5.0	100	70	130			
Lab ID: C22080249-001EMS		Sample Matrix Spike								Run: TITRATION_220805A 08/05/22 14:39
Sulfide		16.5	mg/L	1.0	99	80	120			
Lab ID: C22080249-001EMSD		Sample Matrix Spike Duplicate								Run: TITRATION_220805A 08/05/22 14:39
Sulfide		16.2	mg/L	1.0	98	80	120	1.5	20	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)



QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc

Work Order: C22080249

Report Date: 08/13/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0 Analytical Run: IC3-C_220808A										
Lab ID: ICV	2	Initial Calibration Verification Standard 08/08/22 11:33								
Chloride		9.28	mg/L	1.0	93	90	110			
Sulfate		37.6	mg/L	1.0	94	90	110			
Lab ID: CCV	2	Continuing Calibration Verification Standard 08/08/22 21:27								
Chloride		19.9	mg/L	1.0	100	90	110			
Sulfate		80.0	mg/L	1.0	100	90	110			
Method: E300.0 Batch: R285730										
Lab ID: ICB	2	Method Blank Run: IC3-C_220808A 08/08/22 11:52								
Chloride		ND	mg/L	0.01						
Sulfate		ND	mg/L	0.2						
Lab ID: LFB	2	Laboratory Fortified Blank Run: IC3-C_220808A 08/08/22 12:11								
Chloride		8.97	mg/L	1.0	93	90	110			
Sulfate		36.7	mg/L	1.0	95	90	110			
Lab ID: C22080229-001AMS	2	Sample Matrix Spike Run: IC3-C_220808A 08/08/22 22:06								
Chloride		238	mg/L	1.0	89	80	120			
Sulfate		1750	mg/L	4.2	87	80	120			
Lab ID: C22080229-001AMSD	2	Sample Matrix Spike Duplicate Run: IC3-C_220808A 08/08/22 22:25								
Chloride		241	mg/L	1.0	92	80	120	1.3	20	
Sulfate		1780	mg/L	4.2	94	80	120	1.7	20	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)



QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc

Work Order: C22080249

Report Date: 08/13/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E353.2								Analytical Run: FIA201-C_220805B		
Lab ID: ICV	Initial Calibration Verification Standard								08/05/22	13:24
Nitrogen, Nitrate+Nitrite as N	1.01	mg/L	0.050	101	90	110				
Lab ID: CCV								08/05/22 14:55		
Continuing Calibration Verification Standard										
Nitrogen, Nitrate+Nitrite as N	1.01	mg/L	0.050	101	90	110				
Method: E353.2								Batch: R285604		
Lab ID: MBLK	Method Blank						Run: FIA201-C_220805B		08/05/22	13:25
Nitrogen, Nitrate+Nitrite as N	ND	mg/L	0.01							
Lab ID: LFB								08/05/22 13:26		
Laboratory Fortified Blank							Run: FIA201-C_220805B			
Nitrogen, Nitrate+Nitrite as N	1.05	mg/L	0.050	106	90	110				
Lab ID: C22080232-003AMS								08/05/22 14:58		
Sample Matrix Spike							Run: FIA201-C_220805B			
Nitrogen, Nitrate+Nitrite as N	3.73	mg/L	0.050	112	90	110				S
Lab ID: C22080232-003AMSD								08/05/22 14:59		
Sample Matrix Spike Duplicate							Run: FIA201-C_220805B			
Nitrogen, Nitrate+Nitrite as N	3.73	mg/L	0.050	112	90	110	0.0	10		S

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

S - Spike recovery outside of advisory limits



QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc

Work Order: C22080249

Report Date: 08/13/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E365.1										
Analytical Run: FIA201-C_220813A										
Lab ID: ICV-67887	Initial Calibration Verification Standard									
Phosphorus, Total as P		0.202	mg/L	0.0050	101	90	110			08/13/22 10:38
Method: E365.1										
Batch: 67887										
Lab ID: MB-67887	Method Blank									
Phosphorus, Total as P		ND	mg/L	0.004				Run: FIA201-C_220813A		08/13/22 10:36
Lab ID: LCS-67887	Laboratory Control Sample									
Phosphorus, Total as P		0.209	mg/L	0.0050	104	90	110	Run: FIA201-C_220813A		08/13/22 10:37
Lab ID: C22080112-001EMS	Sample Matrix Spike									
Phosphorus, Total as P		0.247	mg/L	0.0050	79	90	110	Run: FIA201-C_220813A		08/13/22 10:42 S
Lab ID: C22080112-001EMSD	Sample Matrix Spike Duplicate									
Phosphorus, Total as P		0.242	mg/L	0.0050	77	90	110	Run: FIA201-C_220813A	2.0	08/13/22 10:43 10 S

Qualifiers:

RL - Analyte Reporting Limit

S - Spike recovery outside of advisory limits

ND - Not detected at the Reporting Limit (RL)



QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Energy Fuels Resources (USA) Inc

Work Order: C22080249

Report Date: 08/23/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										Analytical Run: ICP203-B_220812A
Lab ID: ICV	7	Continuing Calibration Verification Standard							08/12/22 10:45	
Arsenic		2.41	mg/L	0.20	96	95	105			
Barium		2.49	mg/L	0.10	100	95	105			
Boron		2.47	mg/L	0.10	99	95	105			
Calcium		25.4	mg/L	1.0	102	95	105			
Magnesium		25.2	mg/L	1.0	101	95	105			
Potassium		25.2	mg/L	1.0	101	95	105			
Sodium		25.1	mg/L	1.0	100	95	105			
Lab ID: CCV	7	Continuing Calibration Verification Standard							08/12/22 18:18	
Arsenic		2.51	mg/L	0.20	101	90	110			
Barium		2.55	mg/L	0.10	102	90	110			
Boron		2.45	mg/L	0.10	98	90	110			
Calcium		24.6	mg/L	1.0	99	90	110			
Magnesium		25.3	mg/L	1.0	101	90	110			
Potassium		24.4	mg/L	1.0	98	90	110			
Sodium		24.6	mg/L	1.0	98	90	110			
Method: E200.7										Batch: R386265
Lab ID: MB-7500DIS220812A	7	Method Blank							Run: ICP203-B_220812A 08/12/22 10:54	
Arsenic		ND	mg/L	0.02						
Barium		ND	mg/L	0.001						
Boron		ND	mg/L	0.008						
Calcium		ND	mg/L	0.1						
Magnesium		ND	mg/L	0.02						
Potassium		ND	mg/L	0.1						
Sodium		ND	mg/L	0.2						
Lab ID: LFB-7500DIS220812A	7	Laboratory Fortified Blank							Run: ICP203-B_220812A 08/12/22 11:03	
Arsenic		1.04	mg/L	0.21	104	85	115			
Barium		1.03	mg/L	0.10	103	85	115			
Boron		1.03	mg/L	0.10	103	85	115			
Calcium		52.4	mg/L	1.0	105	85	115			
Magnesium		51.4	mg/L	1.0	103	85	115			
Potassium		52.2	mg/L	1.0	104	85	115			
Sodium		52.4	mg/L	1.0	105	85	115			
Lab ID: C22080249-004CMS2	7	Sample Matrix Spike							Run: ICP203-B_220812A 08/12/22 18:49	
Arsenic		3.54	mg/L	0.21	111	70	130			
Barium		1.14	mg/L	0.050	109	70	130			
Boron		1.18	mg/L	0.052	104	70	130			
Calcium		58.4	mg/L	1.0	103	70	130			
Magnesium		54.5	mg/L	1.0	104	70	130			
Potassium		57.9	mg/L	1.0	104	70	130			
Sodium		260	mg/L	1.0		70	130			A

Qualifiers:

RL - Analyte Reporting Limit

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

ND - Not detected at the Reporting Limit (RL)



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QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Energy Fuels Resources (USA) Inc

Work Order: C22080249

Report Date: 08/23/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										Batch: R386265
Lab ID: C22080249-004CMSD 7 Sample Matrix Spike Duplicate										Run: ICP203-B_220812A 08/12/22 18:53
Arsenic		3.54	mg/L	0.21	110	70	130	0	20	
Barium		1.13	mg/L	0.050	109	70	130	0.8	20	
Boron		1.18	mg/L	0.052	103	70	130	0.6	20	
Calcium		57.5	mg/L	1.0	102	70	130	1.5	20	
Magnesium		53.7	mg/L	1.0	102	70	130	1.5	20	
Potassium		57.2	mg/L	1.0	103	70	130	1.2	20	
Sodium		259	mg/L	1.0		70	130	0.5	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



QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Energy Fuels Resources (USA) Inc

Work Order: C22080249

Report Date: 08/23/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8										Analytical Run: ICPMS207-B_220816A
Lab ID: QCS	2	Initial Calibration Verification Standard								08/16/22 10:47
Uranium		0.0491	mg/L	0.00030	98	90	110			
Vanadium		0.0506	mg/L	0.10	101	90	110			
Lab ID: CCV	2	Continuing Calibration Verification Standard								08/16/22 11:48
Uranium		0.0499	mg/L	0.00030	100	90	110			
Vanadium		0.0504	mg/L	0.10	101	90	110			
Lab ID: CCV	2	Continuing Calibration Verification Standard								08/16/22 13:51
Uranium		0.0504	mg/L	0.00030	101	90	110			
Vanadium		0.0550	mg/L	0.10	110	90	110			
Method: E200.8										Batch: R386400
Lab ID: LRB	2	Method Blank								Run: ICPMS207-B_220816A 08/16/22 11:12
Uranium		ND	mg/L	0.00002						
Vanadium		ND	mg/L	0.002						
Lab ID: LFB	2	Laboratory Fortified Blank								Run: ICPMS207-B_220816A 08/16/22 11:18
Uranium		0.0537	mg/L	0.00030	107	85	115			
Vanadium		0.0533	mg/L	0.10	107	85	115			
Lab ID: B22080890-001BMS	2	Sample Matrix Spike								Run: ICPMS207-B_220816A 08/16/22 13:21
Uranium		0.100	mg/L	0.00030	100	70	130			
Vanadium		0.101	mg/L	0.021	101	70	130			
Lab ID: B22080890-001BMDS	2	Sample Matrix Spike Duplicate								Run: ICPMS207-B_220816A 08/16/22 13:27
Uranium		0.0990	mg/L	0.00030	99	70	130	1.2	20	
Vanadium		0.103	mg/L	0.021	103	70	130	2.2	20	
Method: E200.8										Analytical Run: ICPMS207-B_220822A
Lab ID: QCS		Initial Calibration Verification Standard								08/22/22 11:58
Uranium		0.0471	mg/L	0.00030	94	90	110			
Lab ID: CCV		Continuing Calibration Verification Standard								08/22/22 12:59
Uranium		0.0483	mg/L	0.00030	97	90	110			
Method: E200.8										Batch: R386692
Lab ID: LRB		Method Blank								Run: ICPMS207-B_220822A 08/22/22 12:22
Uranium		ND	mg/L	0.00002						
Lab ID: LFB		Laboratory Fortified Blank								Run: ICPMS207-B_220822A 08/22/22 12:29
Uranium		0.0488	mg/L	0.00030	98	85	115			
Lab ID: B22081732-002DMS		Sample Matrix Spike								Run: ICPMS207-B_220822A 08/22/22 13:53
Uranium		0.252	mg/L	0.00030	100	70	130			
Lab ID: B22081732-002DMSD		Sample Matrix Spike Duplicate								Run: ICPMS207-B_220822A 08/22/22 13:59
Uranium		0.265	mg/L	0.00030	106	70	130	5.1	20	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)



QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Energy Fuels Resources (USA) Inc

Work Order: C22080249

Report Date: 08/23/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8		Analytical Run: ICPMS208-B_220812A								
Lab ID: QCS	11 Initial Calibration Verification Standard									08/13/22 14:42
Arsenic		0.0523	mg/L	0.0050	105	90	110			
Barium		0.0502	mg/L	0.10	100	90	110			
Cadmium		0.0258	mg/L	0.0010	103	90	110			
Chromium		0.0478	mg/L	0.010	96	90	110			
Lead		0.0470	mg/L	0.010	94	90	110			
Manganese		0.254	mg/L	0.010	102	90	110			
Molybdenum		0.0502	mg/L	0.0050	100	90	110			
Nickel		0.0503	mg/L	0.010	101	90	110			
Selenium		0.0507	mg/L	0.0050	101	90	110			
Uranium		0.0468	mg/L	0.00030	94	90	110			
Zinc		0.0529	mg/L	0.010	106	90	110			
Lab ID: CCV	11 Continuing Calibration Verification Standard									08/13/22 20:56
Arsenic		0.0495	mg/L	0.0050	99	90	110			
Barium		0.0497	mg/L	0.10	99	90	110			
Cadmium		0.0501	mg/L	0.0010	100	90	110			
Chromium		0.0478	mg/L	0.010	95	90	110			
Lead		0.0468	mg/L	0.010	94	90	110			
Manganese		0.0504	mg/L	0.010	101	90	110			
Molybdenum		0.0503	mg/L	0.0050	101	90	110			
Nickel		0.0498	mg/L	0.010	100	90	110			
Selenium		0.0501	mg/L	0.0050	100	90	110			
Uranium		0.0454	mg/L	0.00030	91	90	110			
Zinc		0.0493	mg/L	0.010	99	90	110			
Lab ID: CCV	11 Continuing Calibration Verification Standard									08/13/22 22:22
Arsenic		0.0500	mg/L	0.0050	100	90	110			
Barium		0.0479	mg/L	0.10	96	90	110			
Cadmium		0.0485	mg/L	0.0010	97	90	110			
Chromium		0.0458	mg/L	0.010	92	90	110			
Lead		0.0471	mg/L	0.010	94	90	110			
Manganese		0.0493	mg/L	0.010	99	90	110			
Molybdenum		0.0463	mg/L	0.0050	93	90	110			
Nickel		0.0504	mg/L	0.010	101	90	110			
Selenium		0.0509	mg/L	0.0050	102	90	110			
Uranium		0.0473	mg/L	0.00030	95	90	110			
Zinc		0.0515	mg/L	0.010	103	90	110			
Method: E200.8		Batch: R386286								
Lab ID: LRB	11 Method Blank									Run: ICPMS208-B_220812A 08/12/22 11:29
Arsenic		ND	mg/L	0.00004						
Barium		ND	mg/L	0.00006						
Cadmium		ND	mg/L	0.00002						
Chromium		ND	mg/L	0.0002						
Lead		ND	mg/L	0.00003						
Manganese		ND	mg/L	0.00008						

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)



QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Energy Fuels Resources (USA) Inc

Work Order: C22080249

Report Date: 08/23/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8										Batch: R386286
Lab ID: LRB	11	Method Blank						Run: ICPMS208-B_220812A		08/12/22 11:29
Molybdenum		ND	mg/L	0.00008						
Nickel		ND	mg/L	0.0005						
Selenium		ND	mg/L	0.00006						
Uranium		ND	mg/L	0.00001						
Zinc		ND	mg/L	0.001						
Lab ID: LFB	11	Laboratory Fortified Blank						Run: ICPMS208-B_220812A		08/12/22 11:35
Arsenic		0.0508	mg/L	0.0050	102	85	115			
Barium		0.0506	mg/L	0.10	101	85	115			
Cadmium		0.0496	mg/L	0.0010	99	85	115			
Chromium		0.0514	mg/L	0.010	103	85	115			
Lead		0.0505	mg/L	0.010	101	85	115			
Manganese		0.0502	mg/L	0.010	100	85	115			
Molybdenum		0.0498	mg/L	0.0050	100	85	115			
Nickel		0.0507	mg/L	0.010	101	85	115			
Selenium		0.0497	mg/L	0.0050	99	85	115			
Uranium		0.0509	mg/L	0.00030	102	85	115			
Zinc		0.0512	mg/L	0.010	102	85	115			
Lab ID: B22080872-003BMS	11	Sample Matrix Spike						Run: ICPMS208-B_220812A		08/13/22 19:36
Arsenic		0.0519	mg/L	0.0010	100	70	130			
Barium		0.219	mg/L	0.050	116	70	130			
Cadmium		0.0511	mg/L	0.0010	102	70	130			
Chromium		0.0465	mg/L	0.0050	93	70	130			
Lead		0.0478	mg/L	0.0010	96	70	130			
Manganese		0.0635	mg/L	0.0010	99	70	130			
Molybdenum		0.0571	mg/L	0.0010	102	70	130			
Nickel		0.0493	mg/L	0.0050	99	70	130			
Selenium		0.0511	mg/L	0.0010	102	70	130			
Uranium		0.0480	mg/L	0.00030	94	70	130			
Zinc		0.0532	mg/L	0.010	98	70	130			
Lab ID: B22080872-003BMSD	11	Sample Matrix Spike Duplicate						Run: ICPMS208-B_220812A		08/13/22 19:42
Arsenic		0.0535	mg/L	0.0010	104	70	130	3.2	20	
Barium		0.216	mg/L	0.050	110	70	130	1.2	20	
Cadmium		0.0517	mg/L	0.0010	103	70	130	1.2	20	
Chromium		0.0486	mg/L	0.0050	97	70	130	4.2	20	
Lead		0.0491	mg/L	0.0010	98	70	130	2.7	20	
Manganese		0.0654	mg/L	0.0010	103	70	130	3.0	20	
Molybdenum		0.0575	mg/L	0.0010	103	70	130	0.6	20	
Nickel		0.0506	mg/L	0.0050	101	70	130	2.5	20	
Selenium		0.0520	mg/L	0.0010	104	70	130	1.7	20	
Uranium		0.0494	mg/L	0.00030	96	70	130	2.7	20	
Zinc		0.0559	mg/L	0.010	103	70	130	4.8	20	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)



QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Energy Fuels Resources (USA) Inc

Work Order: C22080249

Report Date: 08/23/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8 Analytical Run: ICPMS208-B_220817A										
Lab ID: QCS		Initial Calibration Verification Standard								
Beryllium		0.0259	mg/L	0.0010	104	90	110			08/18/22 09:42
Lab ID: CCV Continuing Calibration Verification Standard										
Beryllium		0.0501	mg/L	0.0010	100	90	110			08/18/22 12:56
Method: E200.8 Batch: R386494										
Lab ID: LRB		Method Blank								
Beryllium		ND	mg/L	0.0001						08/17/22 16:00
Lab ID: LFB Laboratory Fortified Blank										
Beryllium		0.0535	mg/L	0.0010	107	85	115			08/17/22 16:07
Lab ID: B22080872-003BMS Sample Matrix Spike										
Beryllium		0.0516	mg/L	0.0010	103	70	130			08/18/22 12:43
Lab ID: B22080872-003BMSD Sample Matrix Spike Duplicate										
Beryllium		0.0535	mg/L	0.0010	107	70	130	3.5	20	08/18/22 12:50
Method: E200.8 Analytical Run: ICPMS208-B_220819A										
Lab ID: QCS		Initial Calibration Verification Standard								
Uranium		0.0519	mg/L	0.00030	104	90	110			08/20/22 13:50
Lab ID: CCV Continuing Calibration Verification Standard										
Uranium		0.0507	mg/L	0.00030	101	90	110			08/20/22 16:57
Method: E200.8 Batch: R386608										
Lab ID: LRB		Method Blank								
Uranium		ND	mg/L	0.00001						08/19/22 13:42
Lab ID: LFB Laboratory Fortified Blank										
Uranium		0.0498	mg/L	0.00030	100	85	115			08/19/22 13:49
Lab ID: C22080249-001CMS Sample Matrix Spike										
Uranium		1.25	mg/L	0.00030		70	130			08/20/22 17:51 A
Lab ID: C22080249-001CMSD Sample Matrix Spike Duplicate										
Uranium		1.27	mg/L	0.00030		70	130	1.1	20	08/20/22 17:58 A

Qualifiers:

RL - Analyte Reporting Limit

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

ND - Not detected at the Reporting Limit (RL)



QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc

Work Order: C22080249

Report Date: 08/31/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0										Batch: RA226-10591
Lab ID: LCS-RA226-10591	3	Laboratory Control Sample				Run: G5000W_220822A				08/29/22 10:10
Radium 226		12	pCi/L		112	70	130			
Radium 226 precision (±)		2.3	pCi/L							
Radium 226 MDC		0.27	pCi/L							
Lab ID: MB-RA226-10591										08/29/22 10:10
Radium 226		-0.02	pCi/L							U
Radium 226 precision (±)		0.2	pCi/L							
Radium 226 MDC		0.2	pCi/L							
Lab ID: C22080249-005FDUP										08/29/22 16:50
Radium 226		3.2	pCi/L					20	30	
Radium 226 precision (±)		0.65	pCi/L							
Radium 226 MDC		0.16	pCi/L							
- The RER result is 0.70.										
Method: E903.0										Batch: RA226-10578R
Lab ID: LCS-RA226-10578	3	Laboratory Control Sample				Run: G542M-2_220805A				08/16/22 12:26
Radium 226		9.3	pCi/L		91	70	130			
Radium 226 precision (±)		2.0	pCi/L							
Radium 226 MDC		0.53	pCi/L							
Lab ID: MB-RA226-10578										08/16/22 12:26
Radium 226		0.08	pCi/L							U
Radium 226 precision (±)		0.2	pCi/L							
Radium 226 MDC		0.4	pCi/L							
Lab ID: C22080249-001FDUP										08/16/22 14:19
Radium 226		6.6	pCi/L					7.0	30	
Radium 226 precision (±)		1.4	pCi/L							
Radium 226 MDC		0.42	pCi/L							
- The RER result is 0.23.										

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

U - Not detected at Minimum Detectable Concentration (MDC)



QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc

Work Order: C22080249

Report Date: 08/31/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RA-05										Batch: RA228-6881
Lab ID: LCS-228-RA226-10578	3	Laboratory Control Sample			Run: TENNELEC-4_220805A			08/11/22 14:19		
Radium 228		7.9	pCi/L		103	70	130			
Radium 228 precision (±)		2.0	pCi/L							
Radium 228 MDC		1.9	pCi/L							
Lab ID: MB-RA226-10578	3	Method Blank			Run: TENNELEC-4_220805A			08/11/22 14:19		
Radium 228		-1	pCi/L							U
Radium 228 precision (±)		1	pCi/L							
Radium 228 MDC		2	pCi/L							
Lab ID: C22080249-001FDUP	3	Sample Duplicate			Run: TENNELEC-4_220805A			08/11/22 14:19		
Radium 228		0.011	pCi/L					200	30	UR
Radium 228 precision (±)		1.2	pCi/L							
Radium 228 MDC		2.0	pCi/L							

- Duplicate RPD is outside of the acceptance range for this analysis. However, the RER is less than the limit of 3, the RER result is 0.59.

Qualifiers:

RL - Analyte Reporting Limit

R - Relative Percent Difference (RPD) exceeds advisory limit

ND - Not detected at the Reporting Limit (RL)

U - Not detected at Minimum Detectable Concentration (MDC)



Work Order Receipt Checklist

Energy Fuels Resources (USA) Inc

C22080249

Login completed by: Kirsten L. Smith

Date Received: 8/4/2022

Reviewed by: Chantel S. Johnson

Received by: cml

Reviewed Date: 8/5/2022

Carrier name: UPS

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

Standard Reporting Procedures:

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

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

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

Contact and Corrective Action Comments:

Temperature Blank temperature of cooler 1 was 3.3°C, Cooler 2 was 12.8°C, Cooler 3 was 9.5°C, and Cooler 4 was 16.8°C.

Cooler 2, 3, and 4 were all received with melted ice. 8/4/2022-KS



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Page 1 of 1

Report Information (if different than Account Information)

Comments

Company Name _____
 Contact _____
 Phone _____
 Mailing Address _____
 City, State, Zip _____
 Email _____

Reactive Report ☐ Hard Copy ☐ Email

Special Report/Format:

☐ LEVEL IV ☐ NEALAC ☐ EDD/EDT (contact laboratory) ☐ Other _____

All turnaround times are standard unless marked as RUSH.

ELI LAB-ID
Laboratory Use Only

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

Received by laboratory (print) _____

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.

Table 7 Hydrological Monitoring Summary

Sampling Point	Schedule	Status
Treatment Plant Discharge	Sample weekly during discharge	Ongoing; sampling conducted as required during discharge events. Treatment and discharge has been suspended as of December 9, 2009 until further notice.
Whirlwind Decline (Sump)	Sample for 2 quarters and measure flow for 4 quarters	Completed
Packrat Mine Water	Sample for 2 quarters when accessible	Not Started; the Packrat Mine is not yet accessible.
DP Spring	Measure flow quarterly	Ongoing
PR Spring	Sample and measure flow quarterly for 5 quarters	Completed
	Measure flow quarterly and sample annually thereafter	Ongoing
Monitoring Well W-1	8 samples over 15 months	Completed
	Measure quarterly and sample annually thereafter	Ongoing
Lumsden Canyon	As needed in support of Hydrogeological Report to be prepared by Western Water & Land	Completed; Two samples collected from 3 points in Lumsden Canyon. No further sampling events are scheduled at this time.
Seep Surveys	Annually	Ongoing
Rajah 49 Mine, Thornton Portal (Rajah Spring)	Sample as discharge is observed in annual seep surveys	Ongoing
Waste Rock	Collect grab sample quarterly and composite annually for analysis	1 annual composite sample collected to date. Sampling continues quarterly.
Sediment Pond Sampling	Sample quarterly if discharging	Ongoing Monitoring; no samples collected to date.
Dolores River Sampling	Sample during treatment discharge if flowing into Dolores River	Suspended; not required until water treatment plant resumes operation. No samples collected to date.