May 14, 2023

Nikie Gagnon
Colorado Division of Reclamation, Mining, and Safety
1313 Sherman St, Rm. 215
Denver, CO 80203

Delivered Via Email
RE: Ewing Gravel Pit, DRMS File M2023-033
Technical Revision 01 – Adequacy Response

Nikie Gagnon

The attached letter addresses each adequacy item in your May 13, 2024 letter regarding the Ewing Gravel Pit Technical Revision 01. Feel free to contact my office with any questions.

Regards,

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1. *The Appendix 1 data table submitted reports a uranium (dissolved) value of 0.29 collected on 12/12/2023 for GW-2. Based on the data sheet included in the final Groundwater Quality Monitoring Plan submitted with the 1/16/2024 Adequacy Review Response, this value should be 0.0290. Please correct the table and resubmit the replacement page to the Division.*

A corrected replacement page of the Appendix 1 data table is attached.

2. *For GW-2, the sulfate value reported for five of the six quarters exceeds the Regulation 41 standard. Once site disturbance begins, the Operator will be required to notify the Division of exceedances of the standard within five working days of receiving an analytical report from the laboratory. Please explain the potential cause or source of the sulfate exceedance and why you are not proposing a site-specific numeric protection level (NPL) for sulfate based on the baseline condition.*

A site-specific numeric protection level for sulfate has been added. The revised page of Appendix G-2 is attached.

GW-2 is located on the northeast corner of the Ewing site, nearest the highway and neighboring properties to the east. The cause of the elevated baseline levels of sulfate in the groundwater at this well is not known, but given that the elevated levels of sulfate are not shown in most of the other well data, the elevated sulfate is likely just a localized hydrogeologic phenomenon.

3. *The Division accepts the site-specific NPLs for manganese and uranium proposed by the Operator. Please acknowledge that if future monitoring data and trend analyses indicate an ongoing exceedance of the site specific NPLs or any other table value standards, the Operator may be required to further evaluate the reason for the exceedance and submit additional information to the Division.*

The Operator acknowledges that if future monitoring data and trend analyses indicate an ongoing exceedance of the site specific NPLs or any other table value standards, the Operator may be required to further evaluate the reason for the exceedance and submit additional information to the Division.

Attachments

Revised Appendix G-2 table

Revised Appendix G-2 page 11

Parameter, Limit	GW-1 9/28/22	2/8/23	3/30/23	6/29/23	12/12/23	3/27/2024	GW-2 9/28/23	2/8/23	3/30/23	6/29/23	12/12/2023	3/27/2024	GW-3 9/28/22	2/8/23	3/30/2023	6/29/23	12/12/23	3/27/2024	Compiled Standards
Aluminum, Dissolved	ND	0.002	ND	0.003	ND	.001	ND	0.006	0.002	0.005	.001	.002	ND	0.003	0.006	0.003	ND	.002	5.0
Antimony, Dissolved	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.006
Arsenic, Dissolved	0.0018	0.0008	0.0006	ND	0.002	.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.01
Barium, Total	0.094	0.09	0.078	0.069	0.125		0.111	0.039	0.057	0.049	0.041		0.053	0.053	0.095	0.063	0.064		2.0
Beryllium, Dissolved	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.004
Boron, Dissolved	0.22	0.22	0.35	0.25	0.16	.15	0.24	0.24	0.30	0.31	0.21	.23	0.21	0.16	0.21	0.23	0.20	0.24	0.75
Cadmium, Dissolved	0.0001	0.0002	ND	0.0001	ND	.0001	ND	0.0002	0.0002	0.0002	0.0002	.0001	0.0002	0.0001	ND	0.0001	ND	0.0001	0.005
Chloride	128.97	150.66	137.06	141.61	136.00	150.	164.92	173.75	164.13	156.98	161.00	150.	160.13	174.77	177.58	198.43	165.00	150.	250
Chromium, Dissolved	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.1
Cobalt, Dissolved	0.0004	0.0008	0.0011	0.0016	0.0002	.001	0.0009	0.001	0.001	0.0009	0.0009	.001	0.0066	0.0058	0.0057	0.0078	0.002	0.003	0.05
Copper, Dissolved	0.0062	0.0015	0.0017	0.002	.003	.004	0.0008	0.0009	0.0008	0.0008	.001	.001	0.0025	0.0022	0.002	0.0029	.001	0.001	0.2
Cyanide-Weak Acid Dissociable	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Field - Dissolved Oxygen	3.9	0.0033	0.001	0.69	4.8		2.75	0.0219	12.8937	1.13	5.27		0.9	ND	12.04	1.19	4.83		
Field - Electroconductivity	1290.0	0.01	0.0	1180.0	1073.0		893.0	ND	19.59	1614.0	1520.0		771.0	7.27	16.08	1506.0	1353.0		
Field - pH	6.9	7.2	7.1	7.3	7.0	6.7	7.8	7.3	7.4	7.4	6.9	6.9	7.4	7.3	10.2	7.5	6.9	6.8	6.5-8.5
Field - Temperature	20.0	20.0	20.0	19.4	14.0		15.5	20.0	20.0	15.9	13.8		17.8	20.0	20.0	14.4	12.2		
Field - Water Table Elevation	4811.00	4808.80	4810.02	4812.91	4810.18	4809.43	4810.60	4806.70	4809.99	4814.32	4811.40	4810.57	4810.70	4806.70	4809.33	4813.63	4810.74	4810.39	
Fluoride	0.91	1.52	1.5	1.45	0.76	.71	1.58	1.69	1.64	1.65	1.63	1.63	1.24	1.32	1.26	1.21	1.09	1.19	2.0
Iron, Dissolved	0.007	0.027	0.012	ND	0.006	.006	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.012	ND	ND	0.3
Lead, Dissolved	ND	ND	ND	ND	0.000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.000	ND	ND	0.05
Manganese, Dissolved	0.001	0.057	0.065	0.102	0.001	.004	0.571	1.1	0.995	0.999	0.926	1.01	0.001	0.004	0.005	0.004	0.002	0.003	0.05
Mercury, Dissolved		ND	ND	ND	ND	ND		ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	0.002
Molybdenum, Dissolved	0.006	0.004	0.004	0.004	0.004	.007	0.009	0.006	0.005	0.004	0.005	0.005	0.003	0.004	0.004	0.003	0.003	0.004	0.21
Nickel, Dissolved	0.0023	0.003	0.003	0.0038	0.0016	.002	0.0033	0.0032	0.0031	0.0029	0.003	0.003	0.0052	0.0052	0.0046	0.0054	0.0023	0.002	0.1
Nitrate Nitrogen	0.72	5.9	4.1	3.95	3.01	1.15	7.27	7.83	7.28	7.91	6.27	4.73	2.9	3.7	4.94	9.4	9.35	6.89	10.0
Nitrate/ Nitrite Nitrogen	0.72	5.9	4.1	3.95	3.01	1.15	7.27	7.83	7.28	7.91	6.27	4.73	2.9	3.7	4.94	9.4	9.35	6.89	10.0
Nitrite Nitrogen	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.0
Selenium, Dissolved	ND	0.002	ND	ND	0.001	.003	0.007	0.01	0.011	0.01	0.009	0.011	ND	ND	ND	ND	0.002	0.005	0.02
Silver, Dissolved	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.05
Sulfate	144.6	198.1	167.4	166.0	257.0	169.	276.1	286.6	266.0	243.6	257.0	253.	168.6	187.3	186.7	202.6	198.0	189.	250
Thallium, Dissolved	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0002	ND	ND	ND	ND	ND	0.002
Total Dissolved Solids	596.0	757.0	699.0	704.0	664.0	677.	1012.0	1047.0	1029.0	1009.0	1033.0	963.	733.0	738.0	788.0	918.0	916.0	820.	400 or 1.25x Background
Uranium, Dissolved	0.0084	0.0167	0.0094	0.0097	0.0074	.007	0.0219	0.0398	0.0366	0.0338	0.029	0.032	0.0069	0.0082	0.0082	0.02	0.0127	0.017	0.0168 - 0.03
Vanadium, Dissolved	0.001	ND	ND	ND	0.001	.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.1
Zinc, Dissolved	0.001	ND	0.001	0.001	ND	.001	ND	ND	ND	ND	ND	.001	0.001	ND	ND	ND	ND	ND	2.0

Revision (TR) with the Division to comply with the DRMS defined table value standards, as well as the DRMS' proposed action trigger levels and corrective actions.

Table 5. Proposed Ambient Standards

Parameter (mg/L)	Average	Two-Sigma	Reg 41 – Drinking Water	Reg 41 – Ag. Water	Reg 41 – Human Health	Samples in Excess of Standards
Manganese	0.325	1.21	0.05	0.2	N/A	9
Uranium	0.018	0.04	N/A	N/A	0.03	3
Sulfate	207	294	250	N/A	N/A	6

4.6. State Water Quality Standards

The analytical results of water quality testing during mining will be compared to the regulatory limits established by Water Quality Control Commission (WQCC) and those otherwise defined by the DRMS. The groundwater of the Ewing Gravel Mine is subject to the statewide groundwater quality standards as defined in Tables 1-4 of the WQCC Regulation 41. The site is not within any specified areas identified by the WQCC to have specific groundwater quality standards. Final site-specific standards will be determined by the DRMS and implemented as the exceedance action trigger level in a subsequent TR. If any exceedance of these standards or the ambient values are detected during mining at the Ewing Gravel Mine, the DRMS will be notified in accordance with Rule 3.1.7(9) and BURNCO will initiate a water quality mitigation plan as proposed by the DRMS.

If any exceedances of the WQCC Regulation 41 basic groundwater standards are encountered, BURNCO will implement the following reporting and mitigation procedures:

- Notify the DRMS of the exceedance within five (5) working days of receiving the analytical report from the laboratory.
- Implement DRMS proposed corrective actions, as defined in a subsequent TR, such as the following:
- Identify the potential cause or source of the exceedance.
- Implement supplemental water quality sampling. Sampling and testing of the groundwater well will be increased until the parameter(s) drop below the allowable limit. Only parameter(s) that were in exceedance will be measured as part of this supplemental sampling.
- Consult with the Weld County Department of Environmental Health on appropriate mitigation methods of the exceedance.
- Provide a report to Weld County staff and the DRMS with details of the exceedance, mitigation measures, and results.