

STATE OF
COLORADO

Lennberg - DNR, Patrick <patrick.lennberg@state.co.us>

Technical Revision Request for Non Detect testing removal

1 message

Daniel Takami <danieltakami@gmail.com>

Tue, Aug 27, 2024 at 9:17 AM

To: Patrick Lennberg - DNR <patrick.lennberg@state.co.us>, Je'an-Paul Brewer <jpbrewer@nedmining.com>, Richard Mittasch <rmittasch@nedmining.com>, Sergio Rivera <sergio.rivera@novametallix.com>, Brooke Molson Moran <bmolsonm@g.emporio.edu>

Patrick,

Enclosed is a TR to remove certain water quality testing parameters that report as Non Detect associated with DRMS's approved TR-10.

We did not list a specific TR number as it can be categorized as TR-14 or TR-15. Please let me know if you have any questions or concerns. Have a great afternoon and we will see you on Friday.

Respectfully,

Daniel J. Takami

President, Sustainable Metal Solutions, LLC

President, Grand Island Resources, LLC

danieltakami@gmail.com

501.256.4444

*******Confidentiality Statement*******

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M-1977-410 Technical Revision Request 27 Aug 2024 Final.pdf

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COLORADO DIVISION OF RECLAMATION, MINING AND SAFETY

1313 Sherman Street, Room 215, Denver, Colorado 80203 ph(303) 866-3567

REQUEST FOR TECHNICAL REVISION (TR) COVER SHEET

File No.: M- _____ Site Name: _____

County _____ TR# _____ (DRMS Use only)

Permittee: _____

Operator (If Other than Permittee): _____

Permittee Representative: _____

Please provide a brief description of the proposed revision: _____

As defined by the Minerals Rules, a Technical Revision (TR) is: “a change in the permit or application which does not have more than a minor effect upon the approved or proposed Reclamation or Environmental Protection Plan.” The Division is charged with determining if the revision as submitted meets this definition. If the Division determines that the proposed revision is beyond the scope of a TR, the Division may require the submittal of a permit amendment to make the required or desired changes to the permit.

The request for a TR is not considered “filed for review” until the appropriate fee is received by the Division (as listed below by permit type). Please submit the appropriate fee with your request to expedite the review process. After the TR is submitted with the appropriate fee, the Division will determine if it is approvable within 30 days. If the Division requires additional information to approve a TR, you will be notified of specific deficiencies that will need to be addressed. If at the end of the 30 day review period there are still outstanding deficiencies, the Division must deny the TR unless the permittee requests additional time, in writing, to provide the required information.

There is no pre-defined format for the submittal of a TR; however, it is up to the permittee to provide sufficient information to the Division to approve the TR request, including updated mining and reclamation plan maps that accurately depict the changes proposed in the requested TR.

Required Fees for Technical Revision by Permit Type - Please mark the correct fee and submit it with your request for a Technical Revision.

<u>Permit Type</u>	<u>Required TR Fee</u>	<u>Submitted</u> (mark only one)
110c, 111, 112 construction materials, and 112 quarries	\$216	<input type="checkbox"/>
112 hard rock (not DMO)	\$175	<input type="checkbox"/>
110d, 112d(1, 2 or 3)	\$1006	<input type="checkbox"/>



This Technical Revision is presented by Grand Island Resources, LLC (GIR) to request the removal of certain Water Quality Testing Parameters associated with the DRMS Approved Technical Revision #10 (TR-10) as required by the NOV/C&D Order and the Preliminary Adequacy letter by DRMS. The specific revision pertains to the removal of those water quality parameters, currently included in TR10 compliance, which have frequently reported as Non-Detect (ND) by independent testing laboratories analyzing water samples collected on-site monthly from October of 2022 to December 2023, and once per quarter for 2024 to date. The Data consists of 17 monthly samples for each of the 5 designated Groundwater and Effluent; and 6 samples for Surface Water Station ID: Sta. 2022-01, and 8 samples for Surface Water Station ID: Sta. 2202-02. It must be noted that 17 monthly sampling campaigns were conducted at all 7 DRMS designated sampling locations; however, due to lack of surface water flow at the time of sampling, the Surface Water Stations data is less than 17 data points.

Table 1 provides a summary of the parameters being requested for testing removal from the Groundwater and Effluent and, Table 2 provides a summary of parameters being requested for testing removal from the Surface Water Stations; the associated frequency ND (as percentage of number of samples) is also provided on Tables 1 and 2. The criteria used is ***ND greater than 70% of total samples*** for the specific parameter and water source and, ***detected concentrations below Standard Value***. Tables 3, 4, 5, 6, 7, 8 and 9 provide the monthly breakdown of ND for the Cross Well, Caribou Well, Cabin Well (compliance), Cross Portal (effluent) and Caribou Portal (effluent), Surface Water Station 2022-01 and Surface Water Station 2022-02, respectively. The sampling locations are shown on Figure 2 TR10 Sampling Stations Location Map.



Table 1 – Summary of Parameters to be Removed from Groundwater and Effluent Testing

17 Months of Data Oct 2022 - June 2024		Cross Well	Caribou Well	Cabin Well (Compliance)	Cross Portal	Caribou Portal
Parameter	Standard	percent NA	percent NA	percent NA	percent NA	percent NA
Beryllium (Be)	0.004	100%	100%	100%	100%	100%
Chromium (Cr)	0.1	100%	100%	100%	100%	100%
Cobalt (Co)	0.05	94%	94%	94%	94%	100%
Cyanide [Free] (Cn)	0.2	100%	94%	100%	100%	100%
Fluoride (F)	2	94%	100%	100%	100%	100%
Lithium (Li)	2.5	100%	88%	94%	100%	100%
Mercury (inorganic) (Hg)	0.002	94%	100%	100%	94%	94%
Nickel (Ni)	0.1	100%	100%	94%	94%	100%
Nitrite(NO2)	1	94%	88%	88%	82%	94%
Selenium (Se)	0.02	94%	100%	100%	94%	100%
Silver (Ag)	0.05	71%	88%	100%	82%	88%
Thallium (Tl)	0.002	100%	100%	100%	100%	100%
Vanadium (V)	0.1	94%	88%	94%	88%	88%

Table 2 – Summary of Parameters to be Removed from Surface Water Testing

	Sta 2202-01	Sta 2202-02
Parameter	percent ND	percent ND
Arsenic Potentially Dissolved	100%	100%
Arsenic Total Recoverable	100%	100%
Cadmium Potentially Dissolved	83%	88%
Chromium Potentially Dissolved	100%	75%
Chromium Total Recoverable	100%	88%
Chromium, hexavalent Dissolved	100%	100%
Chromium, hexavalent Total	83%	100%
Chromium, trivalent Potentially Dissolved	100%	100%
Chromium, trivalent Total Recoverable	100%	100%
Mercury Total	100%	100%
Selenium Potentially Dissolved	100%	100%
Sulfide Total	83%	88%
Sulfide Total	100%	100%
Un-ionized Hydrogen Sulfide Total	100%	100%

Table 3 – Cross Well – Parameters with ND greater than 70%

Parameter	Standard	27-Oct-2022	29-Nov-2022	20-Dec-2022	17-Jan-2023	27-Feb-2023	21-Mar-2023	18-Apr-2023	16-May-2023	14-Jun-2023	28-Jul-2023	31-Aug-2023	28-Sep-2023	31-Oct-2023	30-Nov-2023	21-Dec-2023	17-Jan-2024	18-Jun-2024	percent ND
Beryllium (Be)	0.004	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100%
Chromium (Cr)	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100%
Cobalt (Co)	0.05	0.0002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	94%
Cyanide [Free] (Cn)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100%
Fluoride (F)	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.3	ND	ND	ND	94%
Lithium (Li)	2.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100%
Mercury (inorganic) (Hg)	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.000071	ND	ND	ND	ND	94%
Nickel (Ni)	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100%
Nitrite(NO2)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.057	ND	ND	ND	94%
Selenium (Se)	0.02	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0185	ND	ND	ND	ND	ND	ND	ND	94%
Silver (Ag)	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.000055	ND	0.00013	0.000055	0.000092	0.000048	71%
Thallium (Tl)	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100%
Vanadium (V)	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0011	ND	ND	94%

Table 4 – Caribou Well – Parameters with ND greater than 70%

Parameter	Standard	2022-10-27	2022-11-29	2022-12-20	2023-01-17	2023-02-27	2023-03-21	2023-04-18	2023-05-16	2023-06-14	2023-07-28	2023-08-31	2023-09-28	2023-10-31	2023-11-30	2023-12-21	2024-01-17	2024-06-18	percent ND
Antimony (Sb)	0.006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00047	0.00058	ND	88%
Arsenic (As)	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00054	ND	94%
Beryllium (Be)	0.004	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100%
Cadmium (Cd)	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100%
Chromium (Cr)	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100%
Cobalt (Co)	0.05	0.0003	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	94%
Cyanide [Free] (Cn)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.019	ND	94%
Fluoride (F)	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100%
Lithium (Li)	2.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0098	0.013	ND	88%
Mercury (inorganic) (Hg)	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100%
Molybdenum (Mo)	0.21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.007	ND	94%
Nickel (Ni)	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100%
Nitrite(NO2)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.055	0.055	ND	ND	88%
Selenium (Se)	0.02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100%
Silver (Ag)	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.000069	ND	ND	0.000063	ND	ND	88%
Thallium (Tl)	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100%
Uranium (U)	0.0168 -0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0058	ND	94%
Vanadium (V)	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0017	ND	0.0017	88%

Table 5 – Cabin Well (compliance) – Parameters with ND greater than 70%

Parameter	Standard	27-Oct-2022	29-Nov-2022	20-Dec-2022	17-Jan-2023	27-Feb-2023	21-Mar-2023	18-Apr-2023	16-May-2023	14-Jun-2023	28-Jul-2023	31-Aug-2023	28-Sep-2023	31-Oct-2023	30-Nov-2023	21-Dec-2023	17-Jan-2024	18-Jun-2024	percent ND
Beryllium (Be)	0.004	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100%
Chromium (Cr)	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100%
Cobalt (Co)	0.05	0.0002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	94%
Cyanide [Free] (Cn)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100%
Fluoride (F)	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100%
Lithium (Li)	2.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.01	ND	ND	94%
Mercury (inorganic) (Hg)	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100%
Nickel (Ni)	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	94%
Nitrite(NO2)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.057	ND	ND	ND	88%
Selenium (Se)	0.02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100%
Silver (Ag)	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100%
Thallium (Tl)	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100%
Vanadium (V)	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0015	ND	ND	94%

Table 6 – Cross Portal (effluent) – Parameters with ND greater than 70%

Parameter	Standard	27-Oct-2022	29-Nov-2022	20-Dec-2022	17-Jan-2023	27-Feb-2023	21-Mar-2023	18-Apr-2023	16-May-2023	14-Jun-2023	28-Jul-2023	31-Aug-2023	28-Sep-2023	31-Oct-2023	30-Nov-2023	21-Dec-2023	17-Jan-2024	18-Jun-2024	percent ND
Beryllium (Be)	0.004	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100%
Chromium (Cr)	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100%
Cobalt (Co)	0.05	ND	ND	ND	ND	ND	0.0002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	94%
Cyanide [Free] (Cn)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100%
Fluoride (F)	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100%
Lithium (Li)	2.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100%
Mercury (inorganic) (Hg)	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.000066	ND	ND	ND	94%
Nickel (Ni)	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	94%
Nitrite(NO2)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.055	0.055	ND	ND	82%
Selenium (Se)	0.02	ND	ND	ND	ND	ND	ND	0.0014	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	94%
Silver (Ag)	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.000089	ND	ND	ND	82%
Thallium (Tl)	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100%
Vanadium (V)	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0016	ND	0.0015	88%

Table 7 – Caribou Portal (effluent) – Parameters with ND greater than 70%

Parameter	Standard	27-Oct-2022	29-Nov-2022	20-Dec-2022	17-Jan-2023	27-Feb-2023	21-Mar-2023	18-Apr-2023	16-May-2023	14-Jun-2023	28-Jul-2023	31-Aug-2023	28-Sep-2023	31-Oct-2023	30-Nov-2023	21-Dec-2023	17-Jan-2024	18-Jun-2024	percent ND
Beryllium (Be)	0.004	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100%
Chromium (Cr)	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100%
Cobalt (Co)	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100%
Cyanide [Free] (Cn)	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100%
Fluoride (F)	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100%
Lithium (Li)	2.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100%
Mercury (inorganic) (Hg)	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.000066	ND	ND	ND	94%
Nickel (Ni)	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100%
Nitrite(NO2)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.054	ND	ND	ND	94%
Selenium (Se)	0.02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100%
Silver (Ag)	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.000093	ND	ND	ND	88%
Thallium (Tl)	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100%
Vanadium (V)	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0018	ND	0.0016	88%

Table 8 – Surface Water Station 2022-01 – Parameters with ND greater than 70%

Parameter	8-Jul-2022	25-Aug-2022	15-May-2023	14-Jun-2023	28-Jul-2023	18-Jun-2024	percent ND
Arsenic Potentially Dissolved	ND	ND	ND	ND	ND	ND	100%
Arsenic Total Recoverable	ND	ND	ND	ND	ND	ND	100%
Cadmium Potentially Dissolved	ND	ND	ND	ND	ND	0.23	83%
Chromium Potentially Dissolved	ND	ND	ND	ND	ND	ND	100%
Chromium Total Recoverable	ND	ND	ND	ND	ND	ND	100%
Chromium, hexavalent Dissolved	ND	ND	ND	ND	ND	ND	100%
Chromium, hexavalent Total	ND	0.0058	ND	ND	ND	ND	83%
Chromium, trivalent Potentially Dissolved	ND	ND	ND	ND	ND	ND	100%
Chromium, trivalent Total Recoverable	ND	ND	ND	ND	ND	ND	100%
Mercury Total	ND	ND	ND	ND	ND	ND	100%
Selenium Potentially Dissolved	ND	ND	ND	ND	ND	ND	100%
Sulfide Total	ND	ND	0.17	ND	ND	ND	83%
Sulfide Total	ND	ND	ND	ND	ND	ND	100%
Un-ionized Hydrogen Sulfide Total	ND	ND	ND	ND	ND	ND	100%

Table 9 – Surface Water Station 2022-02 – Parameters with ND greater than 70%

Parameter	8-Jul-2022	25-Aug-2022	26-Sep-2022	15-May-2023	14-Jun-2023	28-Jul-2023	31-Aug-2023	18-Jun-2024	percent ND
Arsenic Potentially Dissolved	ND	ND	ND	ND	ND	ND	ND	ND	100%
Arsenic Total Recoverable	ND	ND	ND	ND	ND	ND	ND	ND	100%
Cadmium Potentially Dissolved	ND	ND	ND	0.19	ND	ND	ND	ND	88%
Chromium Potentially Dissolved	ND	ND	ND	ND	0.59	0.57	ND	ND	75%
Chromium Total Recoverable	ND	ND	ND	0.67	ND	ND	ND	ND	88%
Chromium, hexavalent Dissolved	ND	ND	ND	ND	ND	ND	ND	ND	100%
Chromium, hexavalent Total	ND	ND	ND	ND	ND	ND	ND	ND	100%
Chromium, trivalent Potentially Dissolved	ND	ND	ND	ND	ND	ND	ND	ND	100%
Chromium, trivalent Total Recoverable	ND	ND	ND	ND	ND	ND	ND	ND	100%
Mercury Total	ND	ND	ND	ND	ND	ND	ND	ND	100%
Selenium Potentially Dissolved	ND	ND	ND	ND	ND	ND	ND	ND	100%
Sulfide Total	ND	ND	ND	0.13	ND	ND	ND	ND	88%
Sulfide Total	ND	ND	ND	ND	ND	ND	ND	ND	100%
Un-ionized Hydrogen Sulfide Total	ND	ND	ND	ND	ND	ND	ND	ND	100%



Figure 2 – TR10 Sampling Stations Location Map

