

**TRI-STATE**

March 10, 2021

Mrs. Janet Binns
Environmental Protection Specialist
Colorado Division of Reclamation, Mining and Safety
1313 Sherman Street, Room 215
Denver, CO 80203

**RE: New Horizon Mine (Permit No. C-1981-008)
Technical Revision No. 103 (TR-103)
Water Monitoring Plan**

Dear Mrs. Binns:

Tri-State Generation and Transmission Association Inc. (Tri-State), is the parent company to Elk Ridge Mining and Reclamation, LCC (ERMR), which owns and operates New Horizon Mine. The New Horizon Mine operates under the Division of Reclamation, Mining and Safety (DRMS) Permit No. C-1981-008. Therefore, Tri-State on behalf of ERMR is submitting TR-103, which proposes modifications to the water monitoring program for the New Horizon Mine.

The remaining disturbance areas above Calamity Draw are the New Horizon Mine Facilities area, and a reclamation area which is a reclaimed haul road. On the reclaimed haul road, sediment control is managed through an approved grass filter. Surface water runoff from the New Horizon Mine facilities area is managed through a non-discharging sediment pond (Pond 018). There is one reclamation area above Pond 018, that once approved for Phase III release will allow Pond 018 to be reclaimed, as all the New Horizon Mine facilities are approved to remain post mine for the surface landowner. Should the Division need to evaluate data for the locations proposed to be released, the Division can refer to the most recent Annual Hydrology Report which was submitted on December 21, 2020.

Tri-State is proposing to relinquish monitoring requirements for two alluvial wells on Calamity Draw. Access to the down gradient alluvial well has been comprised by flooding and long-term access to the location is also uncertain; therefore, Tri-State is proposing to release monitoring on the down gradient location, which in turn makes it appropriate to discontinue monitoring on the up gradient location also.

Tri-State is also proposing to release monitoring of two surface water sites on Calamity Draw. As described above surface water from the remaining disturbed areas will not impact Calamity Draw. The other reclaimed and disturbed areas within the permit boundary, surface water is flowing towards Tuttle Draw and not Calamity Draw. Further, the City of Nucla sewage lagoons discharge above the down gradient surface water monitoring location, so data obtain from that location may be influenced by the sewage lagoon discharges also. Give the extensive amount of Phase III bond release and permit area terminated from the Division jurisdiction up gradient of Calamity Draw it is appropriate to discontinue monitoring for both surface water locations on Calamity Draw at this time.

Also included with this technical revision is a proposed public notice and a change sheet to ease incorporation of the revised technical revision materials into the permit document. If you have any



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questions about the enclosed technical revision or require additional information on this proposal, please contact Tony Tennyson at (970) 326-3560 or ttennyson@tristategt.org.

Sincerely,

DocuSigned by:

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Daniel J. Casiraro
Senior Manager
Environmental Services

DJC:TT:der

Enclosures

cc: Frank Ferris (via email)
Chris Gilbreath (via email)
Tony Tennyson (via email)
File: G474-11.3(21)b-4

CHANGE SHEET FOR PERMIT REVISIONS, TECHNICAL REVISION, AND MINOR REVISIONS

Mine Company Name: New Horizon Mine

Date: **March 10, 2021**

Permit Number: **C-1981-008**

Revision Description: **TR-103 Water
Monitoring Plan**

Volume Number	Page, Map or other Permit Entry to be REMOVED	Page, Map or other Permit Entry to be ADDED	Description of Change
1			No changes
2	Section 2.04.7, Pages 2.04.7-28 and 2.04.7-29 (2 pages)	Section 2.04.7, Pages 2.04.7-28 and 2.04.7-29 (2 pages)	Water monitoring plan has been updated.
2	Map 2.04.7-1A	Map 2.04.7-1A	Map 2.04.7-1A has been updated.
3			No changes
4			No changes
5			No changes
6			No changes
7			No changes
8			No changes
9			No changes
10			No changes

September of the following year will be submitted to the Division by December 31 of each year.

New Horizon monitors the following sites:

Sedimentation Ponds – Discharges associated with the sediment ponds will be monitored as required under New Horizon's CDPS Permit which is issued by the Colorado Department of Public Health and Environment. New Horizon will measure the quantity and quality of discharges from the permit area in compliance with the CDPS permit requirements. A copy of New Horizon's CDPS permit is available onsite for review as necessary.

Surface Water - Surface water sites will be monitored for the New Horizon mine at locations along Calamity Draw and Tuttle Draw.

Monitoring Type	Monitoring Location	Monitoring Frequency	<u>Quarterly Field Parameters</u>	<u>Quarterly Laboratory Parameters</u>
Surface Water	SW-N1	Quarterly	See List Below	See List Below.
Surface Water	SW-N3	Quarterly	See List Below	See List Below.

1. SW-N1 is located on Tuttle Draw and represents the upstream condition above mining.
2. SW-N3 is located on Tuttle Draw and represents the downstream condition below mining.

Quarterly Surface Water Field Parameters

Temperature	Flow	pH	Conductivity
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Quarterly Surface Water Laboratory Parameters

pH	Conductivity @ 25°C	Total Dissolved Solids	Total Suspended Solids
Calcium (Ca ⁺²) ^D	Magnesium (Mg ⁺²) ^D	Ammonia (NH ₃)	Nitrate-Nitrite ^D
Sodium (Na ⁺) ^D	Sulfate (SO ₄ ⁻) ^D	Arsenic (As) ^{TR}	Iron (Fe) ^{TR}
Mercury (Hg) ^T	Manganese (Mn) ^D	Selenium (Se) ^D	Zinc (Zn) ^{TR}
Phosphorus (PO ₄ as P) ^T	Lead (Pb) ^{TR}	Bicarbonate (HCO ₃)	Sodium Absorption Ratio (SAR)
Chloride (Cl ⁻) ^D	Aluminum (Al) ^{TR}	Cadmium (Cd) ^{TR}	Copper (Cu) ^D
D = Dissolved T = Total TR = Total Recoverable			

Groundwater –Groundwater sites will be monitored which include locations to evaluate the coal, underburden, and overburden aquifers adjacent to the mine.

<u>Monitoring Type</u>	<u>Monitoring Location</u>	<u>Monitoring Frequency</u>	<u>Quarterly Field Parameters</u>	<u>Quarterly Laboratory Parameters</u>
Groundwater	GW-N36	Quarterly	Water level, Temperature, pH, Conductivity	See Below
Groundwater	GW-N37	Quarterly	Water level, Temperature, pH, Conductivity	See Below
Groundwater	GW-N38	Quarterly	Water level, Temperature, pH, Conductivity	See Below
Groundwater	GW-N44	Quarterly	Water level, Temperature, pH, Conductivity	See Below
Groundwater	GW-N45	Quarterly	Water level, Temperature, pH, Conductivity	See Below
Groundwater	GW-N46	Quarterly	Water level, Temperature, pH, Conductivity	See Below

1. GW-N36 monitors the overburden aquifer and represents the up gradient condition.
2. GW-N37 monitors the Dakota coal aquifer and represents the up gradient condition.
3. GW-N38 monitors the underburden aquifer and represents the up gradient condition.
4. GW-N44 monitors the overburden aquifer and represents the down gradient condition.
5. GW-N45 monitors the Dakota coal aquifer and represents the down gradient condition.
6. GW-N46 monitors the underburden aquifer and represents the down gradient condition.

For the groundwater sites, water levels, field parameters, and laboratory analyses will be collected quarterly with the parameters listed below.

Quarterly Groundwater Laboratory Parameters

pH	Conductivity at 25°C	Total Dissolved Solids	Bicarbonate (HCO_3^-) ^D	Calcium (Ca^{+2}) ^D
Magnesium (Mg^{+2}) ^D	Ammonia (NH_3) ^D	Nitrate ^D	Phosphate (PO_4^{-3} as P) ^D	Sodium (Na^+) ^D
Sulfate (SO_4^{-2}) ^D	Arsenic (As) ^D	Iron (Fe) ^D	Lead (Pb) ^D	Manganese (Mn) ^D
Mercury (Hg) ^D	Selenium (Se) ^D	Zinc (Zn) ^D	Alkalinity	Alumium ^D
Carbonate ^D	Chloride ^D	Nitrogen as Nitrate ^D	Nitrogen as Nitrite ^D	Iron ^D
Lead ^D	Molybdenum ^D	Potassium	Sodium	Cation/Anion Balance
D = Dissolved				