TRI-STATE

April 3, 2024

Ms. Clayton Wein
Environmental Protection Specialist
Colorado Division of Reclamation, Mining and Safety
1313 Sherman Street, Room 215
Denver, CO 80203

RE: New Horizon North Mine
Permit No. C-2010-089
Technical Revision No. 25
Garvy and Company Pond 1 As-Built

Dear Mr. Wein:

Tri-State Generation and Transmission Association (Tri-State), is the parent company to Elk Ridge Mining and Reclamation, LLC (ERMR) New Horizon North Mine. Therefore, Tri-State on the behalf of the ERMR is submitting technical revision 25 (TR-25) to Permit No. C-2010-089. TR-25 provides the as-built of Garvey and Company Pond 1 (stock pond) which was partially constructed when the now reclaimed Pond 001 was still in service. ERMR reclaimed Pond 001 in early 2023 and finalized construction of Garvey and Company Pond 1 at that time.

Included in this technical revision are a revision application, a proposed public notice, and a change of index sheet to ease incorporation of this technical revision into the permit document. If you should have any additional questions or concerns, please feel free to contact Tony Tennyson at (970) 824-1232 or ttennyson@tristategt.org.

Sincerely,

DocuSigned by:
Chris Gilbreath
4BE980BE59E442F...

Chris Gilbreath
Senior Manager
Remediation and Reclamation

CG:TT

Enclosures

cc: Tony Tennyson (via email)
File:G474-11.3(21)c-4

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

Mine Company Name: **New Horizon North Mine**

Permit Number: **C-2010-089**

Date: **April 3, 2021**

Revision Description: **TR-24 Water Monitoring Program**

Volume Number	Page, Map or other Permit Entry to be REMOVED		Page, Map or other Permit Entry to be ADDED		Description of Change
1					
2					
3	Section 2.05.3(4) pages I (1 page), pages 1 through 4 (4 pages)		Section 2.05.3(4) pages I (1 page), pages 1 through 4 (4 pages)		Section 2.05.3(4) Introduction has been updated, which caused a pagination shift throughout the rest of the section.
3	Map 2.05.3(4)-6		Map 2.05.3(4)-6		Pond 001 As-Built has been updated to Garvey and Company Pond 1 As-Built.
4					

SECTION 2.05.3(4)
PONDS, IMPOUNDMENTS, OTHER TREATMENT FACILITIES AND DIVERSIONS

Table of Contents

List of Maps

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Ponds, Impoundments, Other Treatment Facilities and Diversions

Introduction

This section contains historical information for the sediment ponds and ditches that were constructed within the permit area. These structures were all reclaimed in 2023, and a small stock pond (Garvey and Company Pond 1) is the only remaining structure within the permit area. This stock pond will remain post mine at the request of the landowner. Please refer to Attachment 2.05.5-1 for documentation from the landowner regarding this permanent stock pond. Map 2.05.3(4)-1, Surface Water Hydrology provides historical information and Map 2.05.3(4)-6 provides the as-built for the Garvey and Company Pond 1.

Sediment and Water Control Facilities Plan

NHN will use various types of structures to control the runoff from disturbed areas within the permit boundaries at the NHN Mine. In addition, surface mining activities will be planned and conducted to minimize disturbance of the prevailing hydrologic balance in both the mine plan and adjacent areas in order to prevent long-term adverse changes in the hydrologic balance.

Sediment control measures will include proper utilization of mining and reclamation methods and sediment control practices. Sediment control may include but not be limited to the following:

1. Disturbing the smallest practicable area at any one time during the mining and construction operation;
2. Stabilizing graded material to promote a reduction in the rate and volume of runoff;
3. Retaining sediment within disturbed areas;
4. Diverting runoff away from disturbed areas including stockpiles, back slopes, and material storage;
5. Diverting runoff through disturbed areas using stabilized earth channels, culverts or pipes so as to prevent, to the extent possible, additional contributions of sediment to stream flow or to runoff outside the permit area;
6. Using straw dikes, silt fences, small trapezoidal or V-ditches, riprap, mulches, check dams, vegetative sediment filters, temporary cover crops, sediment traps, and other measures that will reduce overland flow velocity, reduce runoff volume, or trap sediment;
7. Treating traffic areas with water or dust suppressant to reduce the potential for erosion.

In addition, NHN may utilize appropriate sediment control measures representing the best technology currently available which may include, but not be limited to the following:

1. Mechanical soil manipulation measures including contour furrowing, chisel plowing, etc.
2. Topographic manipulations that include re-contouring or reshaping of graded material in a manner that minimizes the potential for soil erosion;
3. Surface protection measures that include surface stabilizers such as temporary cover crop with permanent vegetation covers occurring as timely as practical,

4. Linear detention and filtering structures that include filter fence, straw bale barrier, brush barrier, and filter berms;
5. Measures used in conjunction with overland conveyances including check dams, sediment traps, straw wattles, and water level spreaders;

All surface mining operations will be conducted to achieve the effluent limitations of 4.05.2(7) for all mixed drainage when it leaves the permit. Sedimentation ponds or impoundments will be constructed before creating new disturbances, unless approved drainage diversions or other surface water control structures are installed. The current as-built for Pond NHN-001 is located in Appendix 2.05.3(4)-6 and the as-built for the Pond NHN-001 collection ditches is located in Appendix 2.05.3(4)-7. A revised design for Pond NHN-001 is located in Appendix 2.05.3(4)-8. Also, a revised design for Pond NHN-002 and its collection ditch is located in Appendix 2.05.3(4)-9 and the current as-built for Pond NHN-002 is located in in Appendix 2.05.3(4)-10. Finally, the design for the NHN-001 East Ditch Extension is located in Appendix 2.05.3(4)-11.

Culverts Design Parameters

Culvert designs utilizing SEDCAD software are provided in Appendix 2.05.3(3)-1. Sub-watershed areas were created for each of the areas flowing to the individual culverts. For disturbed areas, a curve number of 86 was used in SEDCAD for bare soils in hydrologic soil group B. All ditches were designed in accordance with applicable regulations in 4.05.3.

Ditch Designs

The main collection ditches in the permit area are the NHN-001 East and West Ditches and the NHN-002 South Ditch. These ditches are used to transport runoff into sedimentation Ponds NHN-001 and NHN-002 for treatment in accordance with the requirements of applicable regulations. The location and drainage area of these ditches can be found on Map 2.05.3(4)-1 and ditch designs are provided in various applicable appendices.

Sedimentation Ponds

In accordance with Rule 4.05.2, NHN will use Ponds NHN-001 and NHN-002 to prevent, to the extent possible, additional contributions of sediment to stream flow or runoff outside the permit area due to mining disturbance. In accordance with Rule 4.05.6(3) each sedimentation pond is designed, constructed, and maintained to:

a. Provide storage for runoff or inflow into the pond as a result of a 10-year, 24-hour precipitation event and to meet all applicable State and Federal regulations for effluent limitations before discharge from the permit. The characteristics of the mine site, reclamation procedures, and sediment control practices are also considered in the design.
b. Provide adequate sediment storage volume in compliance with the DRMS regulations.
c. Install a non-clogging dewatering device to maintain a 10-year, 24-hour storage volume.
d. Install appropriate combinations of principal and emergency spillways to safely discharge

the runoff from a 25-year, 24-hour or larger event, as required by the DRMS regulations.

In accordance with Rule 4.05.9(9), the faces of all embankments and surrounding areas will be vegetated to protect against erosion. Where water will be impounded, the upstream faces of all embankments will also be vegetated to protect against erosion from water or sudden drawdown. Vegetation will occur in accordance with one of the approved temporary seed mixtures. The sediment storage capacity of the sedimentation ponds will be periodically monitored to ensure that sediment storage is available beneath the principal spillway inlet. When adequate capacity is no longer available, corrective actions will be taken to restore adequate sediment storage capacity to the pond. Corrective action to restore adequate sediment storage capacity will include removal of accumulated sediment from the pond. The excavated material suitable for topsoil will be salvaged in a stockpile used for reclamation. The excavated material that is not suitable for a topsoil-like medium will be graded into the surrounding topography within the disturbance area, topsoiled and revegetated in accordance with the NHN approved reclamation plan. All sedimentation ponds will be inspected quarterly under the supervision of a registered professional engineer and reported to the DRMS.

Erosion Control Plan

New Horizon Mine will use various types of structures to control the runoff from disturbed areas within the permit boundaries. In addition, surface mining activities will be planned and conducted to minimize disturbance of the prevailing hydrologic balance in both the mine plan and adjacent areas in order to prevent long-term adverse changes in the hydrologic balance. If rills and/or gullies of limited areal extent form which disrupts the approved post mining land use or the reestablishment of the vegetative cover they will be mitigated as soon as practical. Repairs will also be performed in accordance with Rule 4.15.7(5)(a), which means they will be limited to no more than five percent of the acreage initially revegetated during any one year. If a rill or gully feature is identified, NHN will utilize appropriate manpower and equipment depending on the ground conditions and the extent of the erosion. This shall include but is not limited to small track dozers, blades and rubber tired farm tractors. Equipment will be utilized to repair the areas with a minimal footprint as possible.

Should an area need repaired that requires a more long term control method, NNH may employ additional measures including erosion control blankets, straw wattles, silt fences, silt fence like products, small riprap structures, mulches, small check dams, small rock structures including rock basket(s) to reduce runoff volume. If repairs are required, all areas that have been mitigated will be seeded with an appropriate approved seed mixture. If any of the above mentioned sediment control measures are employed, they will be used inside the primary sediment control systems or in conjunction with small area exemptions (SAE). These measures, if necessary, will also not be implemented on any designed structures (i.e. conveyance ditches or sediment ponds).

Special Features

Temporary Relocation for Colorado Cooperative Ditch Company - 2nd Park Lateral Ditch

The CC Ditch Company has utilized the 2nd Park Lateral Ditch to irrigate land in the area for decades. With the mining of the Garvey & Co. property, this ditch was been diverted. Since the temporary diversion route involved rises and dips, a pipeline was used. Map 2.04.7-9, 2nd Park Lateral Pipeline Location, shows the location of the pipeline's temporary and permanent locations. A high density polyethylene (HDPE) pipeline was installed for the temporary route and will also be used for the permanent route. The pipeline temporary diversion route began at the eastern mine permit boundary, followed County Road 2650 south, turned to the west around the permit boundary parallel to County Road AA, then turned north along County Road 2600 to tie into the existing ditch. Now that mining on the Garvey & Co. property has been completed, the temporary line can be moved to its permanent location. The permanent pipeline will tie into the existing ditch west of County Road 2600 on the adjacent Garvey Brothers property as shown on Map 2.04.7-9. To accommodate construction associated with tying the permanent pipeline into the existing ditch, Bench 1 material will be hauled to the Garvey Brothers property as needed during final relocation.