



January 31, 2024

Mr. Clayton Wein
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. 108 (TR-108)
Incidental Permit Boundary Revision & Post Mine Topography**

Dear Mr. Wein:

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 the 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-108 to Permit No. C-1981-008.

TR-108 proposes to reduce the permit boundary for the SP2 stock pond and C15 Ditch. Both were recently approved for Phase III bond release under SL-26. TR-108 also proposes to revise the post-mine topography to flatten out small tributary drainages to Pond 013 due to an excess of topsoil onsite for reclamation.

Also included with this technical revision are a public notice for your review, and a change sheet to ease incorporation of these materials in the permit application. If you have any questions regarding this technical revision, please contact Tony Tennyson at (970) 824-1232 or ttennyson@tristategt.org.

Sincerely,

DocuSigned by:

4BE980BE59E442F...

Chris Gilbreath
Senior Manager,
Remediation and Reclamation

CG:TT

Enclosures

cc: 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: **January 31, 2024**

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

Revision Description: **TR-108 Incidental
Permit Boundary and PMT Revision**

Volume Number	Page, Map or other Permit Entry to be	Page, Map or other Permit Entry to be	Description of Change
	REMOVED	ADDED	
1	Section 2.03 Pages 11 (1 page)	Section 2.03 Pages 11 (1 page)	Sections 2.03.8 has been updated.
1	Attachment 2.03.8-1 Pages 1 through 5 (5 pages)	Attachment 2.03.8-1 Pages 1 through 5 (5 pages)	Attachment 2.03.8-1, Parcel 2 has been updated.
1	Map 2.03.4-1	Map 2.03.4-1	Map 2.03.4-1 has been updated.
1	Map 2.03.4-2	Map 2.03.4-2	Map 2.03.4-2 has been updated
1	Map 2.04.6-7	Map 2.04.6-7	Map 2.04.6-7 has been updated.
2	Map 2.04.7-1A	Map 2.04.7-1A	Map 2.04.7-1A has been updated.
3			No Change
4	Map 2.04.10	Map 2.04.10	Map 2.04.10 has been updated.
5	Map 2.04.11-1	Map 2.04.11-1	Map 2.04.11-1 has been updated.
6	Map 2.05.3(3)-1	Map 2.05.3(3)-1	Map 2.05.3(3)-1 has been updated.
6	Map 2.05.3(3)-3	Map 2.05.3(3)-3	Map 2.05.3(3)-3 has been updated.
7			No Change
8	Section 2.05.4(2)(c) Pages 4 and 5 (2 pages)	Section 2.05.4(2)(c) Pages 4 and 5 (2 pages)	The post-mining topography section has been updated.
8	Section 2.05.4(2)(d) Page 8 (1 page)	Section 2.05.4(2)(d) Page 8 (1 page)	Topsoil stockpile inventory has been updated.
8	Map 2.05.4-1	Map 2.05.4-1	Map 2.05.4-1 has been updated.
8	Map 2.05.4-4	Map 2.05.4-4	Map 2.05.4-4 has been updated.
8	Map 2.05.4-5	Map 2.05.4-5	Map 2.05.4-5 has been updated.
9			No change
10	Map 4.05.18-1	Map 4.05.18-1	Map 4.05.18-1 has been updated.

2.03.7 Relationship to Areas Designated Unsuitable for Mining

2.03.7(1) Unsuitable Designation Status

A determination was made under the criteria set forth in Section 7.05 that no lands be designated unsuitable for mining at the New Horizon Mine. Furthermore, the Office of Mined Land Reclamation, in the "The Nucla Mine (C-1981-0081) Proposed Decision and Findings of Compliance", January 1983, found that "no Alluvial Valley Floors existed in either the mine area or the potentially affected area associated with New Horizon Mine." New Horizon Mine is unaware of the availability of any information which indicates that any portion of the New Horizon Mine property has been or is under consideration or study for designation as land unsuitable for mining.

2.03.7(2) Legal and Financial Commitments.

Not applicable.

2.03.7(3) Ownership Waivers

There are three occupied dwellings within 300 feet of the mining and reclamation disturbances at the New Horizon Mine permit area. Copies of waivers from the owners of these dwellings consenting to mining operations are included as Attachment 2.03.7-1.

2.03.8 Permit Term Information

The total area within the New Horizon Mine permit boundary is 335.5 acres. A legal description of the New Horizon Mine permit boundary can be found in Attachment 2.03.8-1. The current 5-year permit term is November 27, 2022 to November 27, 2027.

2.03.9 Personal Injury & Property Damage Insurance Information

This information is presented in Attachment 2.03.9-1.

2.03.10 Identification of Other Licenses and Permit Pertinent to Surface Coal Mining

FEDERAL

Mine Safety and Health Administration (MSHA)

2nd Street, Building 25, E-18

Denver, CO 80225

Mine I.D. Number: 05-00299

The New Horizon permit area consists of five separate parcels as summarized below in Table 1. Each is described with a bearing and distance description following Table 1.

Table 1: New Horizon 2 Permit Area

Area	Township	Range	Section	Partial Description	Acres
Parcel 1	T46N	R15W	Section 6	a portion of the S/2	26.2
Parcel 2	T46N	R15W	Section 6	a portion of the N/2	3.2
Parcel 3	T47N	R16W	Section 36	a portion of the S/2	13.1
Parcel 4	T47N	R16W	Section 36	a portion of the S/2	179.0
Parcel 5	T46N	R16W	Section 1	a portion of the N/2	114.0
				Total	335.5

Parcel 1, lays in the S/2 of Section 6, Township 46 North, Range 15 West of the New Mexico Principal Meridian, Montrose County, CO, or described specifically as follows:

Commencing at the Northwest corner of said Section 6, said beginning point is S60°53'38" E, a distance of 6311.74 feet;

thence N 89°10'21" E a distance of 177.83';
thence N 01°53'35" W a distance of 34.20';
thence S 83°40'18" E a distance of 128.75';
thence N 02°04'11" E a distance of 240.10';
thence N 88°22'10" W a distance of 565.95';
thence N 88°26'06" W a distance of 505.60';
thence S 35°40'42" E a distance of 62.04';
thence S 49°23'16" E a distance of 45.90';
thence S 32°45'57" E a distance of 18.04';
thence S 18°15'40" E a distance of 18.14';
thence S 06°22'08" E a distance of 24.57';
thence S 11°17'24" E a distance of 18.68';
thence S 01°56'09" W a distance of 30.52';
thence S 11°48'35" E a distance of 46.60';
thence S 13°02'24" E a distance of 41.33';
thence S 08°06'56" W a distance of 35.17';
thence S 01°59'23" E a distance of 67.37';
thence S 02°13'54" W a distance of 59.29';
thence S 15°09'50" W a distance of 50.74';
thence S 21°45'24" W a distance of 30.64';
thence S 22°04'48" W a distance of 45.63';
thence S 28°41'33" W a distance of 34.71';
thence S 16°47'07" W a distance of 64.40';

thence S 12°02'50" W a distance of 51.75';
thence S 01°38'41" E a distance of 44.87';
thence S 07°49'56" E a distance of 59.81';
thence S 04°17'44" E a distance of 34.89';
thence S 01°25'37" E a distance of 49.51';
thence S 26°13'24" W a distance of 16.73';
thence S 08°22'30" E a distance of 22.70';
thence S 09°05'10" E a distance of 31.66';
thence S 00°05'58" W a distance of 32.24';
thence S 03°45'03" W a distance of 28.07';
thence S 17°44'23" W a distance of 40.91';
thence S 26°36'25" W a distance of 27.48';
thence S 41°33'07" W a distance of 10.85';
thence N 60°00'14" W a distance of 31.57';
thence S 48°42'38" W a distance of 30.06';
thence S 38°43'07" W a distance of 103.25';
thence S 54°21'22" E a distance of 570.97';
thence S 83°11'40" E a distance of 667.94';
thence N 03°01'47" E a distance of 149.28';
thence N 83°52'17" W a distance of 300.59';
thence N 01°57'25" E a distance of 1108.20';
which is the point of beginning, having an area of 26.2 acres more or less

Parcel 2, lays in the N/2 of Section 6, Township 46 North, Range 15 West of the New Mexico Principal Meridian, Montrose County, CO, or described specifically as follows:

Commencing at the Northwest corner of said Section 6, said beginning point is S 86°59'18" E a distance of 1842.19';
thence S 88°15'49" E a distance of 378.73';
thence S 01°48'41" W a distance of 31.48';
thence S 62°14'33" E a distance of 43.06';
thence S 78°45'36" E a distance of 57.13';
thence S 81°53'40" E a distance of 53.36';
thence S 59°51'26" E a distance of 48.06';
thence S 34°39'12" E a distance of 21.96';
thence S 00°22'27" E a distance of 24.96';
thence S 87°58'30" E a distance of 75.92';
thence N 82°31'39" E a distance of 39.15';
thence S 82°09'40" E a distance of 83.52';
thence N 87°18'01" E a distance of 75.05';
thence N 88°21'21" E a distance of 90.55';
thence S 86°45'56" E a distance of 61.15';
thence N 88°54'56" E a distance of 41.37';

thence S 85°45'59" E a distance of 78.17';
thence S 86°19'10" E a distance of 90.63';
thence N 86°23'28" E a distance of 82.99';
thence N 78°46'38" E a distance of 56.90';
thence S 81°02'01" E a distance of 16.41';
thence S 02°35'08" W a distance of 102.12';
thence N 83°16'08" W a distance of 17.10' ;
thence S 88°19'18" W a distance of 16.29';
thence N 83°05'00" W a distance of 17.11' ;
thence N 83°05'00" W a distance of 69.83' ;
thence N 83°05'00" W a distance of 142.96';
thence N 83°10'13" W a distance of 97.24';
thence S 88°32'50" W a distance of 18.44';
thence S 88°32'50" W a distance of 30.94';
thence S 88°32'50" W a distance of 59.25';
thence S 88°32'50" W a distance of 362.38';
thence S 68°12'18" W a distance of 44.95';
thence S 67°13'23" W a distance of 93.63';
thence S 85°06'08" W a distance of 60.65';
thence N 68°33'26" W a distance of 51.94';
thence N 25°28'09" W a distance of 80.30';
thence N 16°33'40" W a distance of 66.63';
thence N 47°49'23" W a distance of 74.56';
thence N 85°31'00" W a distance of 69.22';
thence N 85°31'00" W a distance of 19.10';
thence N 83°17'25" W a distance of 64.70';
thence N 87°22'41" W a distance of 38.73';
thence N 02°37'19" E a distance of 61.88';
which is the point of beginning, having an area 3.22 acres more or less

Parcel 3, lays in the S/2 of Section 36, Township 47 North, Range 16 West of the New Mexico Principal Meridian, Montrose County, CO, or described specifically as follows.

Commencing at the Southeast corner of Section 36, said beginning point is N 27°42'48" W, a distance of 1714.7';
thence N 85°45'15" E a distance of 632.76';
thence S 04°34'45" E a distance of 912.17';
thence S 84°46'42" W a distance of 613.92';
thence N 05°45'03" W a distance of 922.93';
which is the point of beginning, having an area of 13.128 acres more or less

Parcel 4, lays in the S/2 of Section 36, Township 47 North, Range 16 West of the New Mexico Principal Meridian, Montrose County, CO, or described specifically as follows.

Commencing at the Southeast corner of Section 36, said beginning point is N 85°58'47" W, a distance of 962.4;

thence N 87°34'00" W a distance of 1677.24';
thence N 87°26'24" W a distance of 753.20';
thence N 36°52'38" W a distance of 566.93';
thence N 58°36'06" W a distance of 698.32';
thence S 69°18'22" W a distance of 689.74';
thence S 59°51'27" W a distance of 335.51';
thence N 02°15'28" E a distance of 1658.26';
thence S 88°13'16" E a distance of 1341.82';
thence S 02°06'28" W a distance of 50.01';
thence S 88°11'03" E a distance of 1294.81';
thence N 02°11'30" E a distance of 645.06';
thence S 87°21'24" E a distance of 1318.03';
thence S 87°21'24" E a distance of 658.87';
thence S 00°04'32" W a distance of 290.86';
thence S 88°55'02" W a distance of 25.51';
thence S 79°41'40" W a distance of 19.75';
thence S 77°04'39" W a distance of 21.60';
thence S 75°21'55" W a distance of 12.63';
thence S 71°30'27" W a distance of 18.64';
thence S 67°14'36" W a distance of 17.23';
thence S 60°01'08" W a distance of 31.36';
thence S 61°17'02" W a distance of 24.15';
thence S 60°53'16" W a distance of 37.67';
thence S 65°48'22" W a distance of 33.71';
thence S 76°04'49" W a distance of 27.57';
thence S 73°37'06" W a distance of 26.99';
thence S 82°29'42" W a distance of 43.59';
thence N 87°46'56" W a distance of 50.78';
thence N 87°25'00" W a distance of 48.50';
thence N 87°37'24" W a distance of 45.80';
thence N 89°27'49" W a distance of 39.01';
thence S 88°39'44" W a distance of 28.79';
thence S 81°35'00" W a distance of 28.52';
thence S 75°46'24" W a distance of 16.68';
thence S 71°10'49" W a distance of 30.04';
thence S 75°08'06" W a distance of 44.73';
thence S 89°33'57" W a distance of 36.39';
thence S 16°05'20" W a distance of 189.44';
thence S 50°37'02" W a distance of 70.80';
thence S 62°26'00" W a distance of 55.87';
thence S 62°39'07" W a distance of 50.72';
thence S 61°00'21" W a distance of 50.50';
thence S 59°30'25" W a distance of 50.39';
thence S 56°26'09" W a distance of 51.17';

thence S 56°29'12" W a distance of 56.81';
thence S 57°11'15" W a distance of 51.49';
thence S 55°43'32" W a distance of 51.64';
thence S 54°51'59" W a distance of 59.11';
thence S 65°26'34" W a distance of 63.63';
thence S 04°27'46" W a distance of 354.71';
thence S 89°56'40" E a distance of 477.58';
thence S 01°49'56" W a distance of 625.39';
thence N 90°00'00" E a distance of 428.35';
thence S 00°00'00" E a distance of 686.46';
which is the point of beginning, having an area of 178.972 acres more or less

Parcel 5, lays in the N/2 of Section 1, Township 46 North, Range 16 West of the New Mexico Principal Meridian, Montrose County, CO, or described specifically as follows.

Commencing at the Northeast corner of Section 1, said beginning point is S 61°20'06" W, a distance of 3595.49';
thence S 43°31'33" W a distance of 192.16';
thence N 61°35'11" W a distance of 182.25';
thence N 61°35'11" W a distance of 51.19';
thence N 04°44'27" E a distance of 137.29';
thence N 88°10'01" W a distance of 298.14';
thence with a curve turning to the right with an arc length of 363.55', with a radius of 230.00', with a chord bearing of N 42°53'07" W, with a chord length of 326.86';
thence N 02°23'39" E a distance of 1505.33';
thence S 87°26'19" E a distance of 1301.57';
thence S 87°26'20" E a distance of 1314.93';
thence S 87°24'14" E a distance of 1294.70';
thence S 01°59'04" W a distance of 734.80';
thence N 88°46'54" W a distance of 1441.96';
thence S 47°10'12" W a distance of 1246.34';
thence N 88°09'43" W a distance of 348.89';
thence S 01°50'17" W a distance of 128.86';
thence S 87°26'01" W a distance of 389.83';
which is the point of beginning, having an area of 114.01 acres, more or less.

All excavated non-coal material from the mining areas will be used for backfilling the mined pits and blending mined areas into the existing topography to achieve the approximate original landform. Therefore, no excess spoil material will exist.

Postmining Topography

Since mining operations will be performed with shovel/truck and dozers instead of a dragline, the post-mining topography was estimated based upon a 15 percent swell factor. Previous experience has shown that the initial swell is reduced over time with settling, which results in a net 8% increase in volume.

In some areas, in order to return the land to topography that meets the landowners' needs, swell volume was placed elsewhere. This primarily affects the ERMR-Lloyd and ERMR-Benson West properties, which are now slightly higher than in pre-mine. Excess overburden volume from the Morgan property was moved to the Lloyd and Benson areas in order to meet the Morgan's requirements of returning the land to the same surface elevation.

Additional excess topsoil was available for the final reclamation parcels at the New Horizon Mine on the Johnson Property. This excess topsoil was placed into small tributary drainages that report to Pond 013, which flattened the overall grades of the tributaries, and made a flatter post-mine topography. The final surface on the Johnson Property will be more erosional stable and should the landowner want to bring the property into hay production post-mining it has a flatter grade to grow crops upon.

Map 2.05.4-1 shows the post-mining topography, which is in accordance with the post mine land use. Cross-sections through the mining areas and their locations are also shown on this map. These cross sections show original and post-mining ground.

Slides and Other Damage

Since the backfill is stable, slides are not anticipated during the term of mining and reclamation activities.

Morgan Property Grading

At the request of the landowner and in the interest of facilitating quality revegetation, the Morgan Property grading plan has been revised to reduce grades and improve the consistency of grades across the property. Map 2.05.4-1-3 provides a pre-mine to post-mine topo comparison. The chart below shows the overall improvement in grades on the Morgan Property.

Morgan Property Grades	Pre-Mine Topography	PR-08 Topography	MR-89 Topography
Average Land Slope	3.5%	3.2%	3.0%
Steepest Slope	15.6%	17.1%	14.7%

Establishing vegetative cover will aid in overall stabilization and erosion control of stockpiles. Vegetative cover will aid in reducing runoff and raindrop impact and will increase moisture infiltration by maintaining the upper soil surfaces in a friable, non-crust condition. Organic matter, soil nitrogen, and microorganism activity will be maintained or enhanced by the seeding of deep rooted species or species with fibrous root systems.

The topsoil storage breakdown can be seen in Table 2.05.4(2)(d)-2 below. The topsoil stockpile locations are shown on Map 2.05.4-4.

Table 2.05.4(2)(d)-2 Topsoil Stockpile Inventory¹

Topsoil Pile Name	Type of Topsoil	Volume (CY)
C	Lift B Topsoil	3,705
D	<i>Mixed Topsoil</i>	<i>3,242</i>
H	Lift A Topsoil	2,363
5	Mixed Topsoil	150
14	Mixed Topsoil	2,063
15	Mixed Topsoil	119
16	Mixed Topsoil	1,685
Sub Total		13,327
11A	Lift A Topsoil (Morgan)	5,550
11B	Lift B Topsoil (Morgan)	4,070
Sub Total		9,620
GRAND TOTAL		22,947

¹ The topsoil inventory above is a moment in time. This inventory is updated annually in the annual reclamation report.

² Please see Map 2.05.4-4 for topsoil stockpile locations.

Topsoil Storage Prime Farmland

An area near Pond 013 in the northwest corner of the ERMJ-Johnson property was determined to be Prime Farmland. The construction of the Pond 013 led to the disturbance of this area. The disturbance is a mix of Pond 013 itself, the prime farmland soil stockpile footprint, and related disturbance. The prime farmland soils that were removed are now in Stockpile 4 near Pond 013. This stockpile can be seen on Map 2.05.4-4 with the corresponding volume of material provided on Table 2.05.4(2)(d)-2.