TRI-STATE

August 21, 2024

Ms. Hunter Ridley
Environmental Protection Specialist
Colorado Division of Reclamation, Mining & Safety
Department of Natural Resources
1313 Sherman Street, Room 215
Denver, CO 80203

RE: Colowyo Coal Company L.P.
Permit No. C-1981-019
Minor Revision No. 259
Permanent Structure Request

Dear Ms. Ridley,

Tri-State Generation and Transmission Association Inc. (Tri-State), is the parent company to Axial Basin Coal Company, which is the general partner to Colowyo Coal Company L.P. (Colowyo). Therefore, Tri-State on behalf of Colowyo is submitting minor revision 259 (MR-259) to Permit No. C-1981-019. MR-259 provides a request by the surface landowner to retain the Streeter Pond as a permanent impoundment.

Also included in this minor revision is a change of index sheet to ease incorporation of this minor 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 at your convenience.

Sincerely,

DocuSigned by:
Chris Gilbreath
4BE980BE59E442F...

Chris Gilbreath
Senior Manager,
Remediation and Reclamation

CG:TT

Enclosure

cc: Brad Stock (BLM)
Tony Tennyson (via email)
File: C. F. 1.1.1.242 - G471-11.3(21)d

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

Mine Company Name: **Colowyo Coal Company**
Permit Number: **C-1981-019**
Date: **August 21, 2024**
Revision Description: **MR-259 Permanent Structure**

Volume Number	Page, Map or other Permit Entry to be REMOVED		Page, Map or other Permit Entry to be ADDED		Description of Change
1	Table of Contents page iii (1 page)		Table of Contents page iii (1 page)		Table of Contents has been updated.
1	Page 4-14 through 4-29(16 pages)		Page 4-14 through 4-29(16 pages)		Section 4.05.9 has been updated with Streeter Pond narrative.
2A	Exhibit 1B Page 1 (1 page)		Exhibit 1B Page 1 (1 page)		Exhibit 1B Table of Contents has been udpated.
2A			Exhibit 1B Page 5 (1 page)		Exhibit 1B has been updated with landowner letter.
2B					No Change
2C					No Change
2D					No Change
2E					No Change
3					No Change
4					No Change
5A					No Change
5B					No Change
6					No Change
7					No Change
8					No Change
8					No Change
9					No Change
10					No Change
12					No Change
13					No Change
14					No Change
15					No Change
16					No Change
15					No Change
17					No Change

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

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Revision Description: **MR-259 Permanent Structure**

Volume Number	Page, Map or other Permit Entry to be REMOVED		Page, Map or other Permit Entry to be ADDED		Description of Change
18A					No Change
18B					No Change
18C					No Change
18D					No Change
19					No Change
20					No Change
20					No Change
21					No Change
22					No Change

constructed and/or maintained as designed, and in accordance with the approved plan and the applicable regulations. As per Rule 4.05.9(15), certified inspection reports shall include discussion of:

1) Any appearance of erosion, instability, structural weakness or other hazardous conditions;
2) Existing and required monitoring procedures and instrumentation;
3) The depth and elevation of any impounded waters at the time of the certified report;
4) Existing storage capacity of the impoundment; and
5) Any other aspects of the structure affecting stability, or requiring maintenance.

Colowyo will maintain a copy of each certified report at the mine site.

Colowyo successfully demonstrated that failure of small impoundments would not create a threat to public health and safety or threaten significant environmental harm. A written safety demonstration completed by a professional engineer is located in Exhibit 7, Item 11, Volume 2B, in accordance with rule 4.05.9(18)(b). None of the small post-mining impoundments act as primary sediment control structure for a particular area; they are all constructed in reclaimed areas of the mine to enhance the approved postmining land use; they are all under two-acre feet.

All impoundments will be maintained according to the specifications set forth in this part. Maintenance for impoundments may include (if necessary) mowing and cutting of excess vegetative growth for the purpose of facilitating inspections and repairs including keeping ditches, culverts, spillways, and other outflow structures free of debris. All combustible material, other than mulch or other material needed for erosion control and surface stability (vegetative growth) will be removed.

Plans for any modification of any sedimentation impoundments or dams will be submitted to the Division, and no modification will begin until approval of the plans have been granted unless such modification is necessary on an emergency basis for public health, safety or the environment would be endangered.

Colowyo will inspect the condition of each pond quarterly (until a waiver for annual inspection is granted) with the reports submitted quarterly as well. None of Colowyo's post-mining impoundments will meet the size criteria of 30 CFR 77.216(a)(1989).

Streeter Pond has been requested by the surface landowner to remain permanently. Please see Volume 2B, Exhibit 1B for documentation of the request by the surface landowner. As a permanent impoundment the Streeter Pond is required to meet the requirements of Rules 4.09.5(13)(a-e). The water quality being discharged from the Streeter Pond does not degrade the quality of the receiving waters [Rule 4.09.5(13)(a)], and the Colorado Department of Public Health and Environment, Water Quality Control Division, released Colowyo of monitoring the discharge from the Streeter Pond in 2017. The Streeter Pond water level stays at constant level unless influenced by precipitation [Rule 4.09.5(13)(b)]. Adequacy safe access to the Streeter Pond is provided through a locked gate on State Highway 13, which includes a road up to and around the pond embankment [Rule 4.05.9(13)(c)]. The surface landowner holds water rights downgradient

of the Streeter Pond [Rule 4.05.9(13)(d)]. The post-mine land use for Colowyo is Rangeland and Wildlife habitat. Given this, the Streeter Pond provides an exceptional water source for livestock and wildlife which will support both of those post-mine land uses for the Streeter Pond [Rule 4.05.9(13)(e)].

4.05.10 Underground Mine Entry and Access Discharges

Colowyo currently conducts surface coal mining exclusively.

4.05.11 Ground Water Protection

There are no aquifers or continuous sources of ground water within the stratigraphic section from which the Colowyo Mine mines coal using surface mining techniques. This is also noted in Section 2.04.7. In addition, there are no continuous aquifers of regional extent within the entire Williams Fork Formation in the location of the Colowyo Mine. Occasionally, a minimal amount of water is found under perched conditions in noncontiguous lenticular sandstones and in fractured coal under the sandstones. No toxic concentrations of acid forming materials have been found in the overburden, reclaimed slopes or surface and ground water system associated with the Colowyo Mine. No adverse effects on groundwater quality are expected to occur due to mine excavations or backfilling.

4.05.12 Protection of Groundwater Recharge Capacity

The reclamation plan as described in 2.05.4 will return the disturbed lands to approximately the pre-mining condition; therefore, ground water recharge capacity is expected to approximate the premining condition. Also, because of the minimal existence of ground water in the mining area, the mining operation and subsequent reclamation should have no adverse effect on the existing ground water recharge capacities.

The ground water monitoring plan is further documented in 4.05.13. The mine has established Point of Compliance locations for alluvial and valley fill aquifers. Please refer to Volume 2C, Exhibit 7, Item 19 for a description of the alluvial aquifer investigation report and the points of compliance wells for Goodspring, Taylor, and Wilson Creeks. There are not established points of compliance for any regional aquifers because of a lack of ground water. The following is provided to document this:

> The aspect of monitoring ground water is dependent on whether or not there is a continuous, non-perched ground water layer/zone to monitor. Since active mining at Colowyo Mine began 30 years ago, the mining zone in both the East and West Pits have not encountered any significant ground water, except for perched ground water. Therefore, the following is presented to clarify the ground water conditions at the Colowyo Mine.
>
> <u>Geology/Topography</u>
>
> The Colowyo Mine is located in the Williams Fork Formation of the Cretaceous Mesaverde Group. The Williams Fork Formation is comprised of discordant beds/units of sandstone,

siltstone and mudstone and coal seams, with an approximate thickness of 1,200 to 1,300 feet in the mine area. Deposited in a deltaic environment, the beds vary in thickness and lateral extent throughout the Colowyo Mine. The numerous coal seams also vary in thickness and lateral extent. The sandstones tend to be very fine grained to fine grained and poorly sorted, with various amounts of silt and clay. For the siltstones and mudstones, theses units contain various amounts of finer and coarser materials. The total mined sequence in both pits is up to 450 feet thick and is comprised principally of mudstones, siltstones and coals, with sandstone layers being least prevalent.

The Williams Fork Formation conformably overlies the Iles Formation. At the top of the Iles Formation is the Trout Creek Sandstone (TCSS). The TCSS is a massive, white to light gray, very fine to fine grained, moderately well sorted sandstone with a thickness of between 50 and 70 feet and is approximately 1,200 to 1,300 feet below the Colowyo Mine. This is the only mapped continuous unit in the area of the Colowyo Mine and has been noted as being an excellent marker bed for correlation work of the coal seams. Beneath the TCSS, the Iles Formation is comprised of sandstones, siltstones and marine shales.

Two major features, the Collom Syncline and the Danforth Hills Anticline/Wilson Dome, control the geologic structure in the area of Colowyo Mine. The axis of the Collom Syncline, located approximately 0.5 miles north of the north edge of the reclaimed East Pit, trends west-northwest (approximately N60°W) with a slight dip in the axis to the west-northwest. The Collom Syncline is sub-parallel to the Axial Anticline on the north and the Danforth Hills Anticline on the south. The Collom Syncline is asymmetrical, with the north flank of the syncline steeply dipping (20°-40°) to the south-southwest. The south flank dips to the north-northeast at around 10°±5°. The Colowyo Mine is located on the south flank of the Collom Syncline. Therefore, based on the geologic structure of the area, the coal seams and non-coal beds of the Colowyo Mine dip to the north-northeast at approximately 10°. The southern portion of the Colowyo Mine is located on a structural high, an unnamed anticline, which is an offshoot of the Danforth Hills anticline.

Topographically, the mine is located on a topographic high, bordered on the east and west by deeply incised valleys. These valleys are Good Spring Creek and Wilson Creek, on the east and west respectively. The valleys slope from south to north, similar to the topographic slope at Colowyo Mine. The topography in the area of the Colowyo Mine ranges from 8000 feet on the south to 7150 feet on the north. The valleys have elevation ranges from approximately 7100 feet on the south to 6550 feet on the north. On the south, south of the Section 16 mine area, the topography drops off into the West Fork Good Spring Creek, a small tributary to Good Spring Creek.

Hydrology

Based on the above, the Colowyo Mine is located on both a topographic and structural high. Thus, these highs cause the mined units of the Colowyo Mine to be above any significant recharge source, e.g., surface water. This is because the bottoms of the pits are at an elevation higher than the elevation of the surface water in the creeks. Only when the units are at an elevation lower than the valleys does any significant recharge occur. Thus,

the only source of recharge for the mined units in the pit areas of the Colowyo Mine is precipitation.

Precipitation is less than 22 inches (on average) per year. Evaporation rates approach 30 inches per year, with recharge rates in the Goodspring Creek and Taylor Creek basins being less than 0.35 inches per year. In addition, any surface water/precipitation on this topographic high has to percolate through the clayey soils, prevalent in the area of the Colowyo Mine, into the underlying bedrock. Any water that recharges the bedrock units tends to accumulate along unit contacts since these tend to be areas of least flow resistance. This is exhibited in the highwall of both pits of the Colowyo Mine, where any discharge is easily seen as issuing primarily from these contacts and has been the case since 1981.

Any ground water that has been discharged from the mine highwall has been found to evaporate from the pit floor or be consumed by pit highwall. Past hydrological studies also reveal the mined units tend to have low permeabilities (even the sandstones) and do not allow for large water movement, even if the ground water is present. This is also the case where the ground water is under confined or unconfined conditions (i.e. below the elevation of the valley bottoms).

If any ground water does percolate vertically through the discordant geologic units, it encounters a tonstein bed near the base of the Williams Fork Formation. This bed is approximately 150 feet above the top of the Trout Creek Sandstone and is approximately 400 feet below the bottom of the active pits. The tonstein bed has an approximate thickness of 2.5 feet. Permeability tests of this material show it has permeabilities greater than 1x10-10 centimeters per second. Thus, this bed is an effective aquiclude and prevents downward movement of any ground water to the underlying Trout Creek Sandstone.

Water Quality

The quality of the water in the area of the Colowyo Mine has been rated as poor by the USGS and designated for limited agricultural use. Since USGS testing in 1978, no water quality analysis performed at monitoring points at the Colowyo Mine have shown any significant difference in water quality compared with what the initial USGS work. The water is slightly saline, alkaline and definitely classified as 'hard' water. This can be seen in the water quality measurements for total dissolved solids (TDS) and electrical conductivity (eC). Both TDS and eC exceed the EPA secondary drinking water standards.

Since the water is alkaline, the pH is above 7, but rarely exceeding 8.4. Concentrations of heavy metals rarely exceed health limits, as stated in the USGS report. This has also been backed up by the shallow ground water monitoring performed since the Colowyo Mine began operation.

Conclusions

The Colowyo Mine has no single or multiple continuous geologic units in the mine that contains ground water under unconfined or confined conditions. The only ground water

encountered is the discontinuous perched pockets of ground water. This lack of ground water, except for discontinuous perched ground water pockets, encountered during mining precludes the necessity to monitor ground water on a ridge top.

4.05.13 Surface and Groundwater Monitoring

The current monitoring program can be found in Section 4.05.13 in Volume 15.

4.05.14 Transfer of Wells

Colowyo does not plan to transfer any monitoring wells to water wells.

4.05.15 Water Rights and Replacement

Colowyo, if necessary, will replace the water supply of any owner of interest in real estate who obtains all or part of a supply of water for domestic, agricultural, industrial or other legitimate use from an underground or surface source where the water supply has been affected by the mining operation.

Colowyo does not anticipate that any water supply or water right of any owner of interest will be affected by the mining operation.

4.05.16 Discharge of Water into an Underground Mine

No surface water will be diverted into any underground mine workings.

4.05.17 Post-mining and Rehabilitation of Sedimentation Ponds, Diversions, Impoundments, and Treatment Facilities

No treatment facilities are planned. Approved permanent sedimentation ponds, stock ponds, and permanent diversions will be left in place. These structures will be maintained in an appropriate condition before the Permit area is abandoned by repairing any necessary portions, cleaning sediment and debris out, establishing appropriate vegetation and providing soil stabilization.

4.05.18 Stream Buffer Zones

In accordance with Rule 4.05.18, no land within 100 feet, or greater if required by the Division, of a perennial stream, an intermittent stream, or an ephemeral stream with a drainage area greater than one square mile, shall be disturbed by surface and underground coal mining operations unless the Division specifically authorizes surface or underground mining operations closer to, or through such a stream. Additionally, the area not to be disturbed shall be designated a stream buffer zone and marked as specified in Section 4.02.5.

The locations of the disturbances that have occurred within 100’ of a stream buffer zone are described below and are depicted on Map 10C.

Good Springs Creek

Streeter Pond was constructed within 100 feet of Good Springs Creek. During construction (sometime during the late 1970's) and to date this pond has not created any adverse impacts to Good Springs Creek. This structure is not anticipated to have any long-term impacts to Good Springs Creek.

Other structures have been constructed or previously existed within 100 feet of Goodsprings Creek and they include Colowyo's access road off of Highway 13 where it crossing Goodsprings Creek and Colowyo's guard shack. Colowyo constructed the access road to the mine and the guard shack at the beginning of the Colowyo Mine. To date the access road and guard shack have not created any adverse impacts to Good Springs Creek, and these long term structures are not anticipated to have any long term impacts to Good Springs Creek.

West Fork of Good Springs Creek

The access road to Section 28 Pond off of Highway 13 was not a new disturbance when Colowyo began using it to construct and access the Section 28 Pond. Rather it was premining, pre-existing "ranch" road, that accessed an old ranch home and surrounding valley area. Colowyo made minor upgrades to the road when the Section 28 Pond was constructed. The majority of these upgrades were to allow proper draining through swales across the road. To date the pre-mining ranch road and upgrades have not created any adverse impacts to the West Fork of Good Springs Creek, and it is not anticipated that this road will have any long term impacts either to the West Fork of Good Springs Creek.

Colowyo also has two surface water monitoring and two groundwater monitoring structures (flumes and wells) installed within the stream buffer zone to the West Fork of Goodsprings Creek. This includes LWFGSC, UWFGSC, A-7 and A-8 as presented on Map 10C. All four monitoring structures have not and will not create any adverse impacts to the West Fork of Goodsprings Creek.

Taylor Creek

Colowyo constructed Haul Road A and B within the stream buffer zone which crosses Taylor Creek. During construction (late 1970's to early 1980's) and to date, the haul roads have not created any adverse impacts to Taylor Creek. These long term structures are also not anticipated to have any long term impacts to Taylor Creek.

In 2018, Haul Road A will be widened to facilitate equipment movement from the existing facilities and South Taylor Pit to the Collom area. Haul Road A will have mechanically stabilized earth (MSE) walls constructed in locations very near to Taylor Creek to limit disturbance and protect Taylor Creek within the stream buffer zone area that already contains the footprint of Haul Road A. Best management practices (BMPs) including silt fence, s-fence, wattles, or other items at the discretion of the field engineer will be installed and maintained during the widening of Haul Road A to protect Taylor Creek. Once Haul Road A outslope is stabilized the BMP's will be removed. Utilization of BMP's during construction and until the outslopes of the road are stabilize will minimize any potential impacts to Taylor Creek. It is anticipated that the Haul Road A footprint will not have any short or long-term impacts to Taylor Creek.

During the widening of Haul Road A, two light use roads will be constructed at the toe of the Haul Road A to provide access to the Taylor Pump Holding Pond and a water rights diversion structure on Taylor Creek. Both structures will have proper BMPs installed and maintained until construction and stabilization of the light use roads is complete. It is not expected that the light use road will have any short or long term impacts to Taylor Creek.

Two sediment ponds were constructed within the stream buffer zone on Taylor Creek. The West Pit Pond embankment lies within 100' of Taylor Creek, and the West Taylor Pond was constructed at the base of the West Taylor Fill and makes up part of Taylor Creek. During construction and to date these structures have not created any adverse impacts to Taylor Creek, and both structures are also not anticipated to have any long term impacts to Taylor Creek.

Much of the upper reaches of Taylor Creek above the West Taylor Pond will be directly impacted by the South Taylor Pit, and the permeant West Taylor Fill (see Map 23A). The West Taylor Pond will protect the lower reaches of Taylor Creek that will not be disturbed during mining and reclamation. It is expected that during mining the South Taylor Pit will intercept and hold surface water runoff thus providing less discharge through the West Taylor Pond. Once mining is complete the entire South Taylor Pit will be backfilled and the pre-mine profile and function of the upper reaches of Taylor Creek will be restored.

One best management practice structure (sediment sump) lies within the stream buffer zone on Taylor Creek. This structure manages storm water runoff from the haul road and provides a benefit to Taylor Creek by capturing stormwater runoff from the haul road. This structure is not anticipated to have any impacts to Taylor Creek, and provides a benefit in protecting stormwater runoff to Taylor Creek.

The Taylor Pump Holding Pond was constructed within 100' of Taylor Creek. The Taylor Pump Holding Pond is utilized to manage water movement from Wilson Reservoir to the active operation; therefore, an underground water pipeline that transports water to and the from the Taylor Pump Holding Pond was also constructed at various locations within 100' of Taylor Creek as shown on Map 10C. Neither of these structures has impacted Taylor Creek, and neither structure is expected to have any long term impacts to Taylor Creek.

A water diversion structure is constructed in Taylor Creek that allows Colowyo to divert water from Taylor Creek to exercise a water right. This structure would be utilized even if mining was not occurring at Colowyo, as Colowyo is the private surface landowner utilizing a privately held water right structure.

A light use road that was a premine "ranch" road follows along Taylor Creek. This road is utilized to access the West Pit, East Taylor, and West Taylor sediment ponds. The road has been improved upon from its premine condition to allow equipment access for dredging activities and continued environmental monitoring. The lower reach of the road where it begins off of the paved haul road up to the East Taylor Pond, snakes in and out of the 100' stream buffer zone off of Taylor Creek. The upper reach from the East Taylor Pond to the West Taylor Pond is almost exclusively within the 100' stream buffer zone due to steep topography. To date this road has

not created any adverse impacts to Taylor Creek, and it is not anticipated to have any long term impacts to Taylor Creek.

A light use road along the west side of Taylor Creek to access the 69 kV power line follows along Taylor Creek from the Taylor Pump Holding Pond up to the crossing of Taylor Creek just below the West Pit Pond. This road has been slight improved to access the power line. This road comes into the 100' stream buffer zone in several locations; however, due to the small extent of the road and minor surface runoff from the road, it is not anticipated to have any long-term impacts to the Taylor Creek.

The raw water pipeline to the Collom operation will be routed across Taylor Creek through an elevated structure. An elevated structure minimizes impacts within the stream buffer zone versus other routing options such as boring the pipeline under Taylor Creek, which requires large trenches and greater ground disturbances for equipment to bore under both sides of Taylor Creek. With the elevated structure small disturbances will occur within the stream buffer zone of Taylor Creek. Prior to ground disturbing activities proper best management practices (silt fence or other suitable sediment control measures) will be installed. Topsoil will be windowed and concrete footers will be poured which will provide the base for the structural stability needed to support the pipe over Taylor Creek. Once the pipe and structure steel is installed the limited disturbance areas have the topsoil windrows spread back out and the areas will be seeded. Sediment will be controlled during the construction of these structures and will negate any impacts to Taylor Creek while the ground is disturbed. The sediment control structures will be left in place after reclamation until a suitable vegetative cover has been achieved. The water pipe line and associated infrastructure will not create any long term impacts to Taylor Creek.

For a discussion on stream buffer zones from Wilson Creek, Jubb Creek, and Little Collom Gulch please see Volume 15, Section 4.05.18.

4.06 TOPSOIL

4.06.1 General Requirements

Before the disturbance of any area, topsoil is removed and segregated from other material. Upon removal, this material is either immediately redistributed on regraded areas or stockpiled in locations shown on the Topsoil Handling Maps 28 and 28A.

4.06.2 Removal

All topsoil, as classified in section 2.04.9, is removed from areas to be affected by the surface coal mining operations. The graphical representation of the topsoil removal is shown on the Topsoil Handling Map (Map 28 and 28A). This map has been greatly simplified from that of the original application to reflect actual on-the-ground operations. The techniques for removal of woody plant materials that otherwise would interfere with the usefulness of the topsoil is discussed in Section 2.05.3

Removal techniques for topsoil are described in Section 2.05.3.

A variance from topsoil removal was requested and approved by the Colorado Division of Reclamation, Mining and Safety for the following areas; construction of small structures such as power poles, signs or fence lines, areas of light traffic that do not destroy existing vegetation or cause erosion and areas where removal would result in needless damage to soil characteristics such as sediment control ditches and small water diversions. In most cases, especially on steep slopes, removal of topsoil prior to ditch construction needlessly damages large areas of topsoil, along with the adjacent natural vegetation. Implementation of the technique of cutting the ditches directly into the hillside without topsoil removal will limit needless topsoil disturbance, reduce unnecessary destruction of adjacent vegetation and will facilitate reclamation of the ditches at a future date.

It should also be clarified that consistent with Map 6, Soils – South and Exhibit 9, Volume 19, there will be small areas of rock outcrop, rocky steep slopes, etc. where the topsoil depth is 0 inches. Where this occurs there will not be an attempt to recover topsoil or otherwise disturb the area before disturbance by mining.

Colowyo does not plan to use overburden material for topsoil substitutes or as a supplement to topsoil. Colowyo will remove topsoil before any mining operations commence and always maintain a buffer zone between the area stripped of topsoil and the overburden drilling and blasting operations.. As depicted on the Topsoil Handling Map (Map 28 & 28C), the topsoil handling program will result in an orderly sequence for the continuous removal, storage or reapplication of topsoil. The redistribution of topsoil will be done at a time when the physical and chemical properties of the topsoil can be protected from alteration while minimizing the potential for erosion.

Topsoil and vegetation matter is typically windrowed, sloped and seeded during initial sediment pond construction and saved for reapplication when the pond is reclaimed at at future date.

The pond embankments are constructed utilizing in-place materials directly below the upper topsoil zone. This colluvial material is “topsoil” in nature and will be utilized at a future date for pond reclamation. Since the nature of the embankment material functions readily as a topsoil material, it is not anticpated that additional topsoil will be required for final reclamation of the site. However, if necessary, Colowyo will apply an appropriate amount of topsoil to pond embankments that do not readily revegetate post construction.

4.06.3 Storage

The estimated quantity of topsoil in stockpile is found in Table 2.05-1, Topsoil Balance As Of October, 2005, and in Section 11 of the Annual Reclamation Report. Topsoil stockpiles exist for support facilities and the mining area. All of the existing or proposed stockpiles result where immediate redistribution will not be practical, either because redistribution areas are not available at the time of topsoil removal, or because more topsoil is being removed than what will be necessary for immediate redistribution. Any additional stockpiles may be placed on flat spoil backfill areas or stable portions of the permit area where stockpiles will be protected from external effects of both wind and water erosion. Stockpiles have also been placed to avoid disturbances other than those incidental to their deposition and removal.

Colowyo utilizes a variety of methods to protect topsoil stockpiles from erosion. Colowyo will utilize one or more of the following techniques to protect topsoil from erosion. Small catchment berms and ditches may be employed to route surface runoff away from stockpile areas. Small sumps or dozer basins may be employed to collect runoff. Adjacent disturbance areas may be ripped or otherwise roughened to reduce runoff. Topsoil stockpiles may be strategically placed and constructed to allow runoff to be routed around stockpile locations rather than pond against a stockpile.

Topsoil marker signs will be placed on each stockpile to prevent inadvertent disturbance, unnecessary compaction or contamination.

At the locations where topsoil piles are located on undisturbed land, in place topsoil and vegetation will not be removed prior to stockpiling topsoil. The topsoil stockpiles will be seeded with the following perennial seed mixture to control erosion.

Western wheatgrass	-	4 Lbs PLS/Acre
Thickspike wheatgrass*	-	4 Lbs PLS/Acre
Yarrow**	-	.15 Lbs PLS/Acre

*option to replace Thickspike wheatgrass with Beardless bluebunch wheatgrass or Sheep fescue
**option to replace Yarrow with Cicer milkvetch

Topsoil stockpiles will be drill seeded to the greatest extent possible. The remaining areas will be broadcast seeded.

In those areas where topsoil is stripped and hauled directly back to contoured backfill, some of the established native species can be expected to occur in the revegetated area.

Stockpiled topsoil will not be moved when required for redistribution on disturbed areas prior to seeding. An exception to this can occur to facilitate mining, construction of sediment control ditches, ponds, etc. Approval from the Division will occur prior to moving stockpiled topsoil for purposes other than seedbed preparation.

All topsoil stockpiles should be protected with a ditch and berm around their perimeter to conserve the resource.

4.06.4 Redistribution

After the final grading is completed, the topsoil will be reapplied as shown on the disturbed land areas shown on the Topsoil Handling Map (Map 28 and 28A). Please see section 2.05.4 for topsoil redistribution depth replacement.

Where necessary, to prevent slippage surfaces and promote root penetration the spoil will be scarified by ripping and/or rough grading. This practice will assure a solid bond between the spoil and reapplied topsoil. To date, there is no evidence of topsoil slippage on reclaimed areas. A few

small tension cracks resulting from settling of fill and topsoil have occurred in a few areas within a year or two after reclamation, but soon stabilize and begin to fill in.

Since all available topsoil existing on areas to be disturbed will be removed and reapplied, it will be fully capable of supporting growth necessary for the proposed post-mining land use. Compaction will be alleviated through chisel plowing. The method of topsoil replacement most often used at Colowyo, which makes use of dozers, leaves the surface in a rough condition which minimizes wind and water erosion. The use of a chisel plow following topsoil replacement and the construction of contour furrows at the time of seeding or before will also aid in erosion control.

4.06.5 Reconditioning

Topsoil quality at Colowyo is excellent in terms of providing a suitable plant growth medium capable of supporting the approved post-mining land use and the revegetation requirements of Section 4.15. Soil testing has not indicated any deficiencies. Refer to Volume 3, Exhibit 10, Establishment of Native Shrubs on Disturbed Lands in the Mountain Shrub Vegetation Type. This study was conducted on the Colowyo Mine July 1975 through December 1979. Colowyo has the option to apply 50-70 pounds of phosphorus per acre to all safely accessible reclaimed mine areas prior to chiseling and seeding.

4.07 SEALING OF DRILLED HOLES AND UNDERGROUND OPENINGS

4.07.1 General Requirement

Each exploration hole, or other bore hole well or other exposed underground opening encountered during surface mining, will be cased, sealed,. plugged, or otherwise managed to meet the requirements of this Section and described more fully in Section 2.05.4.

Holes used for surface blasting will not be included under the requirements of this Section.

4.07.2 Temporary Sealing

Each exploration hole or other drill or bore hole described in this Section will be protected, inspected and maintained according to this Section. This performance is described more fully in Section 2.02 and 2.05.4 of this application.

4.07.3 Permanent Sealing

Drilled holes no longer needed for monitoring or other approved uses will be backfilled and sealed as described in this Section. This performance is described more fully in Sections 2.02 and 2.05.4 of this application.

4.07.4 Abandonment in Designated Groundwater Basins

This subsection is not applicable to the Colowyo mining plan.

Exploration taking place inside and outside of the permit area will be handled through the Notice of Intent (NOI) procedures. See the appropriate NOI for details for each program.

4.08 USE OF EXPLOSIVES

4.08.1 General Requirements

Colowyo will comply with all applicable State and Federal laws in the use of explosives.

Colowyo will conduct all blasts that use more than five pounds of explosives or blasting agent according to the schedule required by Section 4.08.3.

All surface blasting operations at the Colowyo operation will be conducted by experienced, certified, trained and competent persons who understand the hazards involved. Persons responsible for blasting operations at a blasting site shall be familiar with the blasting plan and any site-specific performance standards. The blaster and at least one other person must be present at the firing of a blast. Each person responsible for blasting operations will possess a valid certification in accordance with the appropriate federal and state law.

Colowyo will not conduct blasting within 1000 feet of any building used as dwelling, school, church, hospital, or nursing facility; and 500 feet of facilities, including but not limited to petroleum or gas storage facilities, fluid transmission pipelines, gas or oil collection lines or water and sewage lines. Distances to various structures of possible concern surrounding the mining area are shown on the Blasting Analysis Map (Map 26A).

By employing the design criteria to minimize air blast and ground vibration Colowyo will insure that flyrock, including blasting material traveling along the ground, will not be cast from the blasting vicinity, more than half the distance to a nearby dwelling or other occupied structure and in no case beyond the line of property owned or leased by the Company or beyond the area of regulated access required under Subsection 4.08.4(5). The minimization of flyrock is also important and routinely monitored in order to reduce damage to mining equipment.

4.08.2 Pre-Blasting Survey

Upon request to the Division by a resident or owner of a dwelling or structure located within one-half mile of any part of the permit area, Colowyo will promptly conduct a pre-blasting survey. A copy of correspondence advising our neighbors of this. opportunity is provided in Exhibit 14 - Seismograph Measurements, Item 2. A report of the survey will be submitted to the Division and to the person requesting the survey. The pre-blasting survey will assess the condition of the structure or dwelling and document any pre-blasting damage, including any physical factors which might be reasonably affected by blasting. Such a survey will determine only the surface condition of pipes, cables, transmission lines, wells and other water systems; however, special attention will be given to the pre-blasting conditions of wells and other water systems used for human, animal or agricultural purposes and to the quantity and quality of that water.

A written report of any pre-blasting survey will be prepared and signed by the person conducting the survey. This report will include any proposed adjustments to the blasting program which might be necessary to be incorporated or should be incorporated to prevent damage. A copy of the report will be provided to the person requesting the survey and to the Division. For properties owned by Colowyo, a pre-blast survey will not be necessary.

In a report dated February 19, 1991 Colowyo initiated and reported on a Building Condition Inspection of the Durham Ranch. Although the Durham ranch was located further than one-half mile from the Permit Boundary at that time (approximately 4200 feet) the inspection was nevertheless completed. The Durham Ranch residents were also presented with a copy of the report. On May 20, 1997 an additional copy of the report was presented to the Durhams and also a copy forwarded to the Division. A copy of the May 20, 1997 letter can be found in Exhibit 14 - Seismograph Measurements.

4.08.3 Public Notice of Blasting Schedule

The blasting program at the Colowyo operation will involve the detonation of more than five pounds of explosives or blasting agent in all blasts. Colowyo will annually publish a blasting schedule in the local Craig newspaper. A typical blasting schedule published in the local newspaper is set forth in Section 2.05, Figure 2.05-1, Publication of Blasting Schedule.

Copies of the blasting schedule will be republished and redistributed every 12 months by mail to local governments and public utilities and by mail or delivered to each residence within one-half mile of the blasting site described in the schedule.

1. Destruction of damaged or deteriorating explosives or detonators; or
2. Disposal of misfires and/or undetonated explosives; or
3. Firing of charged holes as soon as practicable after cessation where electricity or stray current conditions where electric detonators are used; or
4. Firing of charged holes when weather conditions indicate the existence of a safety hazard is eminent

Colowyo gives warning and all-clear signals of different characters that are audible- within a range of one-half mile of the blast. Individuals within the permit area and individuals who reside or work within one-half mile of the mining area will be notified of the meaning of the signals through appropriate written instructions. Colowyo will periodically inform such individuals of the proposed blasting schedule and inform them of the meaning of the signals. Colowyo will also maintain signs in accordance with Section 4.02.

Colowyo will regulate access into the area possibly subject to flyrock from blasting to protect the public and livestock. Fences are in place to keep livestock out of the mining areas. The permit area will be identified by signs on the access road restricting entry to authorized personnel. Signs will also be posted identifying the area as a blasting area and describe the warning and all-clear signals. Immediate access to the area of blasting will be cleared and controlled by qualified mine personnel prior to any blast.

Colowyo will control air blast from its blasting operations within the permit area so it does not exceed the values specified by the chart set forth in Rule 4.08.4(6). The same design factors utilized to control the seismic effects of blasting (i.e.: the use of numerous surface delays to "spread" the shots out over time, particularly near residences) is also very effective in controlling airblast. Additionally, to keep airblast to a minimum Colowyo uses various other methods to ensure airblasts are kept in compliance.

Colowyo will not conduct blasting within 1000 feet of any building used

4.08.4 Surface Blasting Requirements

Colowyo will conduct all blasting operations during daylight hours between sunrise and sunset as set forth in the blasting schedule in Section 4.08.3.

Warnings and notices of unscheduled blasting between sunset and sunrise that cannot be delayed until the next day due to unavoidable hazardous conditions will be provided in accordance with the requirements of this Section.- oral notices will be provided to residents or owners of dwellings within one-half mile of the blasting site within 24 hours prior to any blasting which might be conducted between sunset and sunrise. A complete written report of the blasting at night describing in detail reasons for delay in blasting, including- why the blast could not be held over for the next day, when the blast was actually conducted, the warning notices given, and a copy of the blast report will be filed- by Colowyo with the Division, but not later than three days after the night blasting.

Colowyo will conduct blasting at times announced in the blasting schedule except in those unavoidable hazardous situations, previously approved by the Division in this application. Unavoidable hazardous situations can exist if safety requires:

1. Destruction of damaged or deteriorating explosives or detonators; or
2. Disposal of misfires and/or undetonated explosives; or
3. Firing of charged holes as soon as practicable after cessation where electricity or stray current conditions where electric detonators are used; or
4. Firing of charged holes when weather conditions indicate the existence of a safety hazard is eminent

Colowyo gives warning and all-clear signals of different characters that are audible- within a range of one-half mile of the blast. Individuals within the permit area and individuals who reside or work within one-half mile of the mining area will be notified of the meaning of the signals through appropriate written instructions. Colowyo will periodically inform such individuals of the proposed blasting schedule and inform them of the meaning of the signals. Colowyo will also maintain signs in accordance with Section 4.02.

A resident or owner of a dwelling or structure that is located within one-half mile of the location of the blast, as described in the annual blasting schedule, shall be notified no less than 24 hours prior to any surface blasting or less frequently as each resident occupant in such areas shall approve in writing to the Division.

Colowyo will regulate access into the area possibly subject to flyrock from blasting to protect the public and livestock. Fences are in place to keep livestock out of the mining areas. The permit area will be identified by signs on the access road restricting entry to authorized personnel. Signs will also be posted identifying the area as a blasting area and describe the warning and all-clear signals. Immediate access to the area of blasting will be cleared and controlled by qualified mine personnel prior to any blast.

Colowyo will control air blast from its blasting operations within the permit area so it does not exceed the values specified by the chart set forth in Rule 4.08.4(6). The same design factors utilized to control the seismic effects of blasting (i.e.: the use of numerous surface delays to "spread" the shots out over time, particularly near residences) is also very effective in controlling airblast. Additionally, to keep airblast to a minimum Colowyo also routinely 1) utilizes reduced weight (12 grain Zap) surface primer cord, 2) uses proper stemming material, 3) uses a proper stemming weight, 4) avoids overdigging the front row of holes and 5) avoids overloading the front row of holes.

Colowyo does perform event triggered monitoring. However, Colowyo will not commit to daily monitoring due to unforeseen circumstances where the seismograph monitoring unit may be getting repaired or calibrated. Colowyo employs an Instantel Inc. Minimate Plus seismograph/microphone with a low frequency limit of 2 Hz which corresponds to an airblast standard of 133 dB (peak). Records of airblast monitoring will contain the information required by Rule 4.08.5(17). This information will include either a recording of the calibration signal of the monitoring instrument's gain setting at the time of each blast, or certifications of the instrument's annual calibration.

Colowyo will conduct blasting to prevent injury to persons and damage to public or private property outside the permit area. Colowyo will insure that the maximum peak particle velocity will not exceed the criteria as prescribed by utilizing the equation found in Rule 4.08.4(10) (b) (i) when conducting blasting operations that could affect any dwelling, public building, school, church, or commercial or institutional building. As shown in the Blasting Analysis Map (Map 26A) Colowyo has determined the maximum pounds of explosives per 8ms period of time for variable distance from any such structures.

The number of blast holes detonated per 8ms period will be calculated according to the equation in Rule 4.08.4(10)(c)(i) in order to determine the maximum weight of explosive that can be detonated within any eight ms period.

4.08.5 Records of Surface Blasting Activities

Colowyo will record all blasts including coal, overburden, and overburden pre-split blasts in a format as shown in Section 2.05, Figure 2.05-2, Blasting Report, which conforms to the requirements of 4.08.5. Conducting blasting operations in accordance with the equation in 4.08.4(10)(c)(i) deems peak particle velocities from blasting to be within the regulatory limits described in 4.08.4(10). Periodic airblast monitoring occurs at Colowyo. The monitor is located along Moffat County Highway 13 at the Durham/Ott Ranch. Records of airblast monitoring

described on page 2.05-30 will contain the information required by Rule 4.08.5(17). This information will include either a recording of the calibration signal of the monitoring instrument's gain setting at the time of each blast, or certifications of the instrument's annual calibration.

4.08.6 Seismographic Measurements

Colowyo will use the explosives equation found in Subsection 4.08.4 (10)(b)(i) to limit the number of blast holes per 8ms period of time such that the peak particle velocity limit of one inch per second will not be exceeded.

On June 19 and 20, 1979 initial seismic monitoring of shots at the Colowyo operation was conducted. The results of this seismographic work are set forth in Exhibit 14, Seismographic Measurements.

4.09 DISPOSAL OF EXCESS SPOIL AND UNDERGROUND DEVELOPMENT FILL WASTE

To develop the West Pit and Section 16 Pit, it was necessary to construct two excess spoil fills from material in the initial cuts. The designs detail for these fills is presented in Exhibit 19 – Geotechnical Investigations, West Pit Fill and Section 16 Fill.

The volumetric balance indicating excess spoil will be generated and disposal of excess spoil will be required is found in Section 2.05.3.

In 2006, monitoring and reporting requirements for the Section 16 Fill concluded. Since 2006, the Section 16 Fill and corresponding reclamation areas have been fully Phase III released.

In 2018, all monitoring and reporting requirements for the West Pit Fill concluded. This occurred as the requirments of Rule 4.09.1 and 4.09.2 had all been met for the West Pit Fill.

4.10 COAL PROCESSING WASTE BANKS

No coal processing waste banks are planned for the Colowyo mining operations. Therefore, this section is not applicable to this application.

4.11 COAL PROCESSING WASTE

Colowyo does not have a coal preparation facility, therefore the requirements of certain parts of this Section are not applicable to Colowyo.

4.11.1 Burning

(Not Applicable)

Introduction

Some mining related structures may be determined by Colowyo or requested by the surface landowner to be retained post mine to support the post mine land use of the property. If this should occur the structure will not be demolished and/or reclaimed and will remain as constructed post mine. Letters from the appropriate surface land owner providing their request or concurrence for a permanent structure are contained within this exhibit.

Other landowner specific letters that pertain to lands within the Colowyo permit boundary are also presented within this exhibit.

This exhibit contains the following letters:

Contents

Streeter Pond Retention Letter

TRI-STATE

August 7, 2024

Ms. Hunter Ridley
Environmental Protection Specialist
Colorado Division of Reclamation, Mining & Safety
Department of Natural Resources
1313 Sherman Street, Room 215
Denver, CO 80203

RE: Streeter Pond
Permanent Structure Request

Dear Ms. Ridley,

Tri-State Generation and Transmission Association Inc. ("Tri-State"), is the parent company to Axial Basin Coal Company, which is the general partner to Colowyo Coal Company L.P. ("Colowyo"). Colowyo is the surface landowner for the Streeter Pond that is being requested to remain as permanent features post-mine.

Rule 4.05.2(2) of the *Regulations of the Colorado Mined Land Reclamation Board for Coal Mining* require that all sedimentation ponds be removed, and the affected land be regraded and revegetated in accordance with Rules 4.13, 4.14, and 4.15.1 – 4.15.4, unless the pond has been approved by the Division to be retained and be compatible with the post-mine land use. A surface landowner can request in writing, under Rule 4.5.9(13), that an impoundment be retained as a permanent structure.

I, Chris E. Pink, as representative of Tri-State and the surface landowner Colowyo, hereby request that the Streeter Pond remain as a permanent feature and be released from the requirements under Rule 4.05.2(2). This structure is an integral part of Tri-State's land management activities on its property and will be extremely beneficial for livestock management and retention of this structure supports the post mining land use in the area.

If you have any further questions or concerns, please feel free to call me at (303) 254-3339. I appreciate your attention to this matter.

Sincerely,

DocuSigned by:
Chris E. Pink
A951AFF27DE8436...

Chris E. Pink
Senior Vice President Operations
Chief Operating Officer

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