



March 11, 2024

Mr. Zach Trujillo
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
Technical Revision 162 (TR-162)
Adequacy Response**

Dear Mr. Trujillo,

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 this adequacy response to Technical Revision 162 (TR-162) to Permit No. C-1981-019.

TR-State received the Division's adequacy letter dated March 8, 20024 and has the following responses to the Division's comments:

1. *The following comment was provided by Rob Zuber, P.E. of the Division who assisted in the technical review of the proposed TR-162:*

*Colowyo Coal Company needs to revise Page 1 of the text in Appendix Exh. 7-14G, Gossard Pond (current revision date is 2/1/2024). **The explanation for the starting pool elevation in Gossard Pond needs to be improved.** The text "the 100 gpm already being in the pond" is confusing and should be revised (since gpm is a flow unit, not a volume unit). More importantly, the text needs to clearly state how the initial pool elevation for the Gossard Pond was determined. It is sufficient to state that this pool is based on many observations by Colowyo Coal Company staff. Alternatively, a calculation of infiltration through the bottom and sides of the pond could be performed.*

If the need to reevaluate the amount of water in the initial pool leads to a change in the initial pool elevation, the SEDCAD model will need to be revised also.

Response: In Appendix Exh. 7-14G, the word "dropped" has been replaced with the SEDCAD™ term of "routed" to describe the 100 gpm being routed to the Gossard Pond for a simulated inflow. Further, language was added that initial pool elevation was determined by Colowyo staff experienced in managing the Gossard Pond.



March 11, 2023


Page 2

2. *The Division has performed a cost estimate to determine the reclamation liability associated with TR-162. This includes the reclamation of proposed ditch GD-3 and demolition of the associated culvert. The total amount of this estimate is **\$6,105.00** (see attached cost estimate). The Division's cost estimate is consistent with previous cost estimates approved by both the Division and Colowyo. The Division respectfully requests a response from Colowyo with any questions regarding the cost estimate or an acceptance of the Division's estimate.*

Response: Tri-State has reviewed the Division's reclamation cost estimate which will increase Colowyo's reclamation liability by \$6,105.00, and hereby provides concurrence with the Division's estimate.

If you should have any additional questions or concerns, please feel free to contact Tony Tennyson at (970) 824-1232 or at tennyson@tristategt.org.

Sincerely,

DocuSigned by:

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Chris Gilbreath
Senior Manager
Remediation and Reclamation

CG:TT

Enclosure

cc: Tony Tennyson (via email)
File: C. F. 1.1.2.150

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

Mine Company Name: Colowyo Coal Company L.P.

Permit Number: **C-1981-019**

Date: **March 11, 2024**

Revision Description: **TR-162 GD-3 Channel**

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 Change
2A			No Change
2B			No Change
2C			No Change
2D	Appendix Exh. 7-14G, Pages 1 and 2 (2 pages)	Appendix Exh. 7-14G, Pages 1 and 2 (2 pages)	Appendix Exh. 7-14G has been revised.
2E			No Change
3			No Change
4			No Change
5A			No Change
5B			No Change
6			No Change
7			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
17			No Change
18A			No Change
18B			No Change
18C			No Change
18D			No Change

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19					No Change
20					No Change
21					No Change
22					No Change

Appendix Exh. 7-14G

Gossard Pond

This sediment control plan addresses the watershed tributary to the Gossard Pond. The Gossard Pond receives water from the Gossard Loadout area, including several subwatersheds including the coal stockpiles and coal preparation areas, and some direct inflow from water used during wash down of the Gossard crushing facility, and from a ditch routing water from a small portion of Haul Road A. The Gossard Pond is a non-discharging structure that is designed to contain the 100-year, 24-hour storm event as demonstrated herein.

Please see Volume 2D, Exhibit 7 for the methodologies and assumptions utilized in the Gossard Pond SEDCAD™ model and the basis for utilization of the curve numbers in the models. A curve number of 74 was selected for the majority of the contributing subwatersheds. This is believe to be a more representative curve number than a disturbed curve number of 85 since the Gossard Loadout area subwatershed are broken up including ever changing loose unconsolidated coal stockpiles due to the shipping of coal. The subwatershed and corresponding acreages used in this SEDCAD™ model are presented on Figure 1, and Figure 2 provides the as-built configuration of the Gossard Pond.

Colowyo washes down the Gossard primary crusher on an as-needed basis. The water that is used during wash down is routed down to two concrete structures that capture the coal fines, and once full of water, discharge the water from the concrete structures directly into the pond. SEDCAD™ does not have the ability to model this additional inflow directly; therefore, the methodology suggested by SEDCAD™ primary author, Pam Schwab, is to model the impact of a constant inflow into the Gossard Pond through a dummy structure.

In the current version of SEDCAD™, a fixed flow can only be inputted by inserting a "dummy" upstream pond with a watershed large enough to produce a "tank" flow, and then setting the output of the dummy reservoir as a constant "User Defined" outflow curve, independent of pool elevation in the dummy pond. A flow of 0.223 cfs (100 gpm) was conservatively utilized, which is a volume of water well in excess of any wash down inflows that may be encountered in the Gossard Pond. The synthesized 100 gpm inflow was then routed directly into Gossard Pond in the SEDCAD™ model. Further, Colowyo does not wash down the Gossard primary crusher daily, so the 100 gpm is very conservative estimate compared to actual activities occurring.

SEDCAD™ also allows the user to override the customary starting pool. In this case for the 100-year storm event, the starting pool is assumed to be at 6,388, which was determined by Colowyo's staff experience managing the Gossard Pond, to account for the 100 gpm already being in the pond when the storm event would commence.

The volume of the pond was inputted into the SEDCAD™ model, along with its spillway details. The model watersheds were inputted as a series of sub-watersheds, each with its own acreage, its own flow response parameters (slope, distance, time of concentration), and the specific runoff curve numbers noted above. The 100-year, 24 hour storm was then applied to the composite watershed, and routed down to the sediment pond.

The results of the runoff calculations and synthesized constant inflow are presented in the attached SEDCADTM model outputs. As noted, the storm does not peak in the modeled storm event and the entire event is contained within the Gossard Pond. ,.

Temporary Channels

Three temporary channels assist in routing water to the Gossard Pond. The design criteria for these three channels are as follows:

<u>Channel</u>	<u>Station</u>	<u>Peak Flow (CFS)</u>	<u>Average Slope (%)</u>	<u>Channel Type</u>	<u>Side Slopes</u>	<u>Erosion Protection</u>
GD-1	Not applicable	7.3	6	Trapezoidal 7' bottom	2:1	None
GD-2	Not applicable	7.86	4.5	Trapezoidal 2' bottom	2:1	None
GD-3	0+00 to 24+92	18.1	1.5	Trapezoidal 5' bottom	2:1	None