



March 27, 2023

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 Mine
Permit No. C-1981-019
Valley Fill Monitoring Certifications
First Quarter 2023

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 the West Taylor, East Taylor, and Little Collom Gulch Fill Construction Certifications for the first quarter of 2023.

If you should have any additional questions regarding the South Taylor Fill certifications, please feel free to contact Tony Tennyson at (970) 824-1232.

Sincerely,

DocuSigned by:
A handwritten signature in blue ink that reads "Chris Gilbreath".
D250C711D0BF450...

Chris Gilbreath
Senior Manager
Remediation and Reclamation

CG:TT:der

Enclosure

cc: Tony Tennyson (via email)
File: CF 24.20.03
G471-11.3(21)h-4

South Taylor Fill Inspection Certification

On March 14, 2023, I inspected the South Taylor Fill areas, which includes the East Taylor Fill and the West Taylor Fill, identified on Map 23 and Map 45 of the approved permit. The purpose of this inspection was to observe the status of the fill placement. This inspection is necessary to satisfy the requirements of CDRMS Rule 4.09.1(1)(c) and Rule 4.09.1(11). Weather conditions at the time of inspection were approximately 30°F and overcast.

West Taylor Fill with A-A' and B-B' Underdrain Area The East Tributary of the West Taylor fill has rip-rap installed up to the 7840' elevation. The West Tributary of the West Taylor fill has rip-rap installed up to the 7820' elevation.

Six survey monuments were established and a baseline location survey on each one was performed on May 21st 2021. A quarterly comparison survey was performed on March 21st 2023. The survey showed no significant change from baseline; but there was a small movement noticed in the northing coordinate of many of the monuments. This aligns more or less with the slope of the fill. The surveyor noted extreme snow drifts which may be exerting a force on the monument poles and causing the small movement noticed. This will be re-evaluated in summer months to see if the monuments return to baseline. Tables of the survey results are attached below.

The West Taylor Fill underdrain was flowing at the time of inspection.

No structural weakness, signs of instability, or other hazards were noted at the time of inspection.

East Taylor Fill with C-C' Underdrain Area: Reclamation activity including truck/excavator removal of material from the top of the fill area as well as dozer's cleaning various benches as the top surface is lowered has taken place within the East Taylor fill during this quarter.

No structural weakness, signs of instability, or other hazards were noted at the time of inspection.

Design requirements for the spoil pile are addressed in Volume 13, Exhibit 21, Item 1, Introductory Letter. Inspection requirements during construction are further detailed in Volume 12, Section 4.09.

I am a Registered Professional Engineer in the State of Colorado. Being familiar with the Colowyo operation, and relying on the information provided to me by Colowyo Personnel, the construction activities related to the West and East Taylor Fill are in conformance, to the best of my knowledge and experience, as specified in the Introductory pages and the associated report found in Volume 13, Exhibit 21, Item 1, and other applicable requirements of the approved permit documents, a portion of CDRMS Permit C-1981-019.



INSPECTION REPORT ~ SOUTH TAYLOR FILL
(Including Both the East Taylor and West Taylor Fill Segments)

INDICATE QUARTER → 1ST ☒ 2ND ☐ 3RD ☐ 4TH ☒ 2023
YEAR

* ALL QUARTERS NEED TO BE CERTIFIED *

THE FOLLOWING ITEMS ARE TO BE INSPECTED AND REPORTED AS NOTED:

- 1) Has any significant change been noted in the survey monuments on the fill?
No ☒ Yes ☐
If yes, explain: _____
Date of Survey: 3/21/23
Reviewed By: Trevor Ragsdale

- 2) Has any significant change been noted in the water level found in the fill monitoring well?
No NA Yes ☐ Measured Level NA If yes, explain: _____
Date of Measurement: NA
Measured By: NA

- 3) Has there been any evidence of surficial slope failure on the face of the fill?
No ☒ Yes ☐
If yes, explain: _____
Date of P.E. Inspection: 3/14/23
Inspected By: Trevor Ragsdale, Thomas Fry

- 4) Has there been any formation of springs or seeps on the face of the fill?
No ☒ Yes ☐
If yes, explain: _____
Date of Inspection: 3/14/23
Inspected By: Trevor Ragsdale, Thomas Fry



I am a Registered Professional Engineer in the State of Colorado. Being familiar with the Colowyo operation and relying on the information provided to me by Colowyo Personnel, the West and East Taylor Fill are observed to be stable, at the time of inspection. Construction activities related to the West and East Taylor Fill are in conformance, to the best of my knowledge and experience, as specified in the Introductory pages and the associated report found in Volume 13, Exhibit 21, Item 1, and other applicable requirements of the approved permit documents, a portion of CDRMS Permit C-1981-019.

West Taylor FILL - 7590 Mid MONUMENT

	DATE	ELEV.	NORTHING	EASTING	DeltaH
BASLINE SURVEY	05/21/21	7591.73	337028.63	1344201.88	
Difference	06/15/21	-0.007	-0.005	0.035	0.035
Difference	09/20/21	0.006	-0.002	-0.006	0.006
Difference	10/07/21	0.004	0.006	-0.012	0.013
Difference	03/25/22	0.005	0.006	0.017	0.018
Difference	06/10/22	0.006	0.005	0.018	0.019
Difference	08/10/22	0.002	0.004	0.004	0.006
Difference	10/19/22	0.000	0.004	-0.009	0.010
Difference	03/21/23	-0.006	0.246	0.027	0.247

Notes

Initial Baseline survey of prisms completed by Peter Epp

Surveyor noted extreme snow which may have pushed monument posts

West Taylor FILL - 7670 East MONUMENT

	DATE	ELEV.	NORTHING	EASTING	DeltaH
BASLINE SURVEY	05/21/21	7669.07	336769.27	1344339.66	
Difference	06/15/21	-0.015	0.008	0.042	0.043
Difference	09/20/21	-0.009	0.011	-0.015	0.019
Difference	10/07/21	-0.003	0.022	-0.031	0.038
Difference	03/25/22	0.007	0.028	0.003	0.028
Difference	06/10/22	-0.009	0.024	0.009	0.026
Difference	08/10/22	-0.011	0.031	-0.016	0.035
Difference	10/19/22	-0.019	0.026	-0.030	0.040
Difference	03/21/23	-0.055	0.531	-0.037	0.532

Notes

Initial survey of prisms completed by Peter Epp

Surveyor noted extreme snow which may have pushed monument posts

West Taylor FILL - 7670 West MONUMENT

	DATE	ELEV.	NORTHING	EASTING	DeltaH	Notes
BASLINE SURVEY	05/21/21	7671.33	336791.55	1344032.85		
Difference	06/15/21	-0.014	-0.012	0.038	0.040	Initial survey of prisms completed by Peter Epp
Difference	09/20/21	-0.005	-0.003	-0.002	0.004	
Difference	10/07/21	-0.004	0.009	-0.012	0.015	
Difference	03/25/22	0.000	0.013	0.018	0.022	
Difference	06/10/22	-0.007	0.009	0.013	0.016	
Difference	08/10/22	-0.011	0.013	0.009	0.016	
Difference	10/19/22	-0.021	0.006	-0.003	0.007	
Difference	03/21/23	-0.092	0.654	0.221	0.690	Surveyor noted extreme snow which may have pushed monument posts

West Taylor FILL - 7730 Mid MONUMENT

	DATE	ELEV.	NORTHING	EASTING	DeltaH
BASLINE SURVEY	05/21/21	7728.08	336570.24	1344181.69	
Difference	06/15/21	-0.020	0.001	0.055	0.055
Difference	09/20/21	-0.040	0.007	-0.001	0.007
Difference	10/07/21	-0.036	0.023	-0.013	0.026
Difference	03/25/22	-0.063	0.027	0.047	0.054
Difference	06/10/22	-0.080	0.031	0.059	0.067
Difference	08/10/22	-0.101	0.038	0.035	0.052
Difference	10/19/22	-0.115	0.035	0.026	0.044
Difference	03/21/23	-0.138	0.243	0.078	0.255

Notes

Initial survey of prisms completed by Peter Epp

Surveyor noted extreme snow which may have pushed monument posts

West Taylor FILL - 7800 EAST MONUMENT

	DATE	ELEV.	NORTHING	EASTING	DeltaH
BASLINE SURVEY	05/21/21	7803.62	336294.60	1344496.79	
Difference	06/15/21	-0.030	0.013	0.064	0.065
Difference	09/20/21	-0.059	0.005	-0.018	0.019
Difference	10/07/21	-0.046	0.023	-0.046	0.051
Difference	03/25/22	-0.062	0.044	-0.013	0.046
Difference	06/10/22	-0.118	0.037	0.005	0.037
Difference	08/10/22	-0.141	0.047	-0.019	0.051
Difference	10/19/22	-0.167	0.042	-0.046	0.062
Difference	03/21/23	-0.196	0.206	-0.050	0.212

Notes

Initial survey of prisms completed by Peter Epp

Surveyor noted extreme snow which may have pushed monument posts

West Taylor FILL - 7800 West MONUMENT

	DATE	ELEV.	NORTHING	EASTING	DeltaH
BASLINE SURVEY	05/21/21	7803.60	336342.73	1343942.01	
Difference	06/15/21	-0.020	-0.001	0.050	0.050
Difference	09/20/21	-0.031	0.018	-0.017	0.025
Difference	10/07/21	-0.019	0.038	-0.028	0.047
Difference	03/25/22	-0.032	0.035	0.042	0.055
Difference	06/10/22	-0.044	0.034	0.043	0.055
Difference	08/10/22	-0.059	0.050	0.024	0.055
Difference	10/19/22	-0.078	0.048	0.014	0.050
Difference	03/21/23	-0.128	0.353	0.159	0.387

Notes

Initial survey of prisms completed by Peter Epp

Surveyor noted extreme snow which may have pushed monument posts

Little Collom Valley Fill Inspection Certification

On March 14, 2023, I inspected the Little Collom Valley Fill, identified on Maps 23B and 29C of the approved permit. The purpose of this inspection was to observe the status of the fill placement. This inspection is necessary to satisfy the requirements of CDRMS Rule 4.09.1(1)(c) and Rule 4.09.1(11). Weather conditions at the time of inspection were approximately 30°F and overcast.

In my opinion, the Little Collom Valley fill is currently stable, with no structural weakness, signs of instability or other hazards noted. The Little Collom Valley fill has a subdrain system running the length of the fill. Design criteria for the subdrain can be found in Exhibit 23 of CDRMS Permit C-1981-019. Visible water was discharging from the toe, indicating the subdrain is working.

I am a Registered Professional Engineer in the State of Colorado. Being familiar with the Colowyo operation, and relying on the information provided to me by Colowyo Personnel, the construction activities related to the West and East Taylor Fill are in conformance, to the best of my knowledge and experience, as specified in the Introductory pages and the associated reports found in Exhibit 23, and other applicable requirements of the approved permit documents, a portion of CDRMS Permit C-1981-019.

