J. E. STOVER & ASSOCIATES, INC.

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MINE ENGINEERING
MINE RECLAMATION

CIVIL ENGINEERING
CONST. MANAGEMENT

Via Electronic Transmittal

May 14, 2020

Rob Zuber
Division of Reclamation, Mining & Safety
1313 Sherman St., Room 215
Denver, CO 80203

Re: Bowie Resources, LLC, Bowie No. 2 Mine
Coal Mine Waste Banks & Instrumentation Monitoring
Pond Quarterly Inspections
Annual Pond Certification
Permit C-1996-083

Dear Mr. Zuber:

Enclosed please find the referenced reports for the 1st quarter of 2020. The instrumentation and monitoring report for the quarter was sent under separate cover. Due to the COVID-19 pandemic and the stay at home order issued by Governor Polis, the field inspection of the coal mine waste piles as well and the ponds was delayed until such time as the order was lifted. Although the first quarter inspection occurred during the second quarter, a separate second quarter inspection will be still conducted at a later time.

Please call if you have any questions.

Sincerely,

Tamme Bishop

Tamme Bishop, P.E.
Project Engineer

cc: Basil Bear

BOWIE RESOURCES, LLC
Bowie No. 2 Mine
Coal Mine Waste Bank Nos. 1, 2, & 3 Inspections –1st Quarter 2020

On May 7th, 2020, a visual inspection of the Bowie No. 2 Mine coal mine waste banks was performed by the undersigned in accordance with Rule 4.10.2. This inspection includes Gob Pile Nos. 1, 2, and 3. Pile No. 1 is considered inactive. Pile no. 2 is located north of Bowie Road and is currently idle. Pile no. 3 is located south of Bowie Road.

I, Tamme Bishop, P.E., have a wide variety of experience in the design and construction of earth fill embankments. Nothing was observed during the inspection that would indicate the piles have a potential for failure. The slips discussed in the 4Q 2016 and 1Q 2017 report had been regraded to the design contours and show no evidence that would be cause for concern of slipping again. A fair cover of volunteer vegetation has been established.

Gob Pile #2: A small area of seepage discussed in past reports at the toe of gob pile #2 and west of the haul road is still seeping, although it appeared to be less than during the 4Q inspection. There is still no movement associated with the seep and nothing seen during the inspection that would indicate the pile has a potential for failure. The aforementioned seep was first documented in 2Q of 2016. Since that time, the seep has not increased noticeably in flow and has not caused any instability in the pile. This area will continue to be monitored and discussed as needed in quarterly reports.

There are no windrows remaining on top of gob pile #2. All organic material and topsoil has been removed ahead of the waste bank founding. The upper diversion ditches were cleaned out during June, 2017 and were in good repair.

At gob pile #2, the first bench east of the haul road is covered with soil. The second bench east of the haul road is mostly covered with a subsoil pile. Most of the third and forth benches east of the road are covered with soil. Soil has been placed on most of the second, third, fourth and fifth benches west of the haul road and east of gob pile #4.

The top of gob pile #2 can serve as a drying area for end dumped gob, however, no gob is currently stockpiled on top of the pile. Gob is to be stacked to a maximum height of 20 feet, with a slope angle up to 1.5h:1v. A 25-foot buffer zone on the face of the gob pile will be maintained at all times. Gob will be spread and compacted to the currently approved slope configuration as soon as gob and weather conditions allow.

Gob Pile #3: The upper diversion and lower ditches at gob pile #3 were inspected, and were in good condition. The lower diversion ditch (J3) and culvert J1 were cleaned out in September 2019. Culvert J8 was cleaned out during December 2019. The seep that is north of the east drying area had begun to flow again since water is back in the Fire Mountain Canal. The Operator has been capturing the flow and diverting it in the upper diversion ditch and away from the pile. Bowie has been closely monitoring the flow and has made the Fire Mountain Canal aware of the loss of water from the canal. Because there is no gob currently being placed in the area of the seep, it will not impact the long-term stability of the gob pile. However, before final placement and compaction of gob in the footprint of the east drying area, an underdrain will be installed. Approval of the underdrain design was

incorporated into the permit under Technical Revision No. 105.

There was no coal mine waste was generated from the preparation plant during the quarter. Coal mine waste is to be placed in the piles in approximately horizontal lifts no more than 24-inches thick. The coal mine waste is dried and then spread and compacted by self propelled sheepsfoot compactors. There were twenty-five compaction tests were taken at gob pile #3 during the quarter. There were no compaction tests taken at gob pile #2 during the quarter.

The westernmost and easternmost sections of gob pile #3 serve as drying areas for end dumped material. The purpose of the gob drying area is to provide an area for temporary storage of gob for drying purposes. End-dumped gob in the gob drying areas is worked with dozers and track hoes to assist in the drying process. There was no work at gob pile #3 during the inspection and no placement and compaction efforts have occurred during the quarter.

During active mining conditions, it is necessary to stockpile gob material at gob pile #3 during the winter months, then place and compact the stockpiled gob when weather allows. Stockpiling of gob can commence November 15 and end April 15. Winter stockpiled material will be re-handled and compacted by September 30. Beginning on October 1, the Operator should be compacting all material concurrently, until conditions again require stockpiling. The stockpiling dates listed above should be considered flexible and may change slightly from year to year based on weather conditions. The gob material will be stockpiled in rows generally running from northwest to southeast. The rows of gob will be placed in a controlled manner and overlap will be minimized so there is space between rows to allow for drainage to the southeast. Windrows were located on top of the pile and contained gob that had been hauled out of the west drying area.

The available volume of coverfill material is sufficient to meet the requirements of Rule 4.10.4(5). No coverfill was used for blending or other uses during the quarter. A new coverfill survey was conducted in November of 2019. This survey was compared to surveys conducted in 2015 as well as evaluated estimations of material placed on gob pile #2. During years 2015 and 2016, cover was placed on gob pile #2 on benches 2, 3, 4 & 5 between the haul road and gob pile #4. Estimated placement depths vary between 1.5' and 3.5 feet and the cover placed on those benches was approximately 50,000 CY. The coverfill was generated from the "West" Coverfill stockpile, which is now depleted, and from the "East" coverfill stockpile. No coverfill has been removed from the coverfill stockpile at gob pile #3, and no coverfill has been placed at gob pile #3.

A failure of the gob pile no. 1 would probably not be a hazard to human life. The pile is located above a large flat bench. The bench is approximately 80 to 150-feet wide directly below the pile. Additionally, the gob pile sediment pond is located below the pile. If the coal mine waste bank failed, the material would very likely be contained on the bench below the pile and or within the gob pile sediment pond.

A failure of gob pile no. 2 would probably not be a hazard to human life. A residential dwelling is located over 300-feet below pile no. 2. The piles are located above Bowie Road. A failure of the piles might damage Bowie Road and the Fire Mountain Canal but would not likely impact the residential dwelling.

A failure of gob pile no. 3 would not be a hazard to human life. A failure of the pile might damage the rail track below the pile. A small slip/slide occurred in February on the southern edge of the pile, no offsite damage occurred. The road at the toe of the pile was covered with gob making it inaccessible to vehicles.

I certify that to the best of my knowledge and belief, that the fill and other aspects of the coal mine waste banks have been constructed as permitted in the design approved by the DRMS.

Tammy Bishop 5-14-20

Tammy Bishop Date
Colorado Professional Engineer
Registration No. 43402

QUARTERLY POND INSPECTION REPORT

Operator:	Bowie Resources LLC	Quarter:	First 2020
Mine:	Bowie No. 2 Mine - C-1996-083	Inspection Date:	07-May-20

Pond Identification	B	C	D - Gob Pile	F - New Gob	J UTL East	K UTL West
Type of Pond	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment
Status During Inspection:						
Approximate Water Level	Dry	Puddle	Dry	Puddle	5848	Dry
Sediment (% remaining)	90%	90%	85%	90%	90%	80%
Outflow (cfs)	0	0	0	0	0	0
Features	Problem Yes/No	Problem Yes/No	Problem Yes/No	Problem Yes/No	Problem Yes/No	Problem Yes/No
Erosional						
Rills & Gulleys	No	No	No	No	No	No
Inadequate Vegetation	No	No	No	No	No	No
Outlet Channel Erosion	No	No	No	No	No	No
Burrows	No	No	No	No	No	No
Other	No	No	No	No	No	No
Structural						
Differential Settling	No	No	No	No	No	No
Cracks or Slides	No	No	No	No	No	No
Seepage	No	No	No	No	No	No
Other	No	No	No	No	No	No
Appurtenant Structures						
Defective Spillways	No	No	No	No	No	No
Dewatering Devices Clogged	No	No	No	No	No	No
Faulty Gates, Etc.	No	No	No	No	No	No
Other	No	No	No	No	No	No

Additional Comments

Design depth measured from pond bottom to invert of emergency spillway:
Pond B=10, C=10, D=10, J=10, K=3, F=10' TD
Pond Bottom Elevations B=5942, C=5990, D=5970, J=5846, F=5944, K=5819
Pond B was dry.
Pond C held just a small puddle.
Pond D was dry.
Pond J held between 1-2' of water.
Pond K was dry.
Pond F held a small puddle. Had been cleaned out in the 4Q 2019.

SWMP components evaluated as part of this inspection, site was dry. No corrections necessary at this time.
1Q inspection report conducted in 2Q due to State of Colorado stay at home order which expired on April 27th due to COVID-19.

COLORADO LICENSED
TAMMERIN KAE STOVER-BISHOP
43402
PROFESSIONAL ENGINEER

Name of Inspector: Tamme Bishop

Tamme Bishop 5.7.20
Tamme Bishop
Colorado P. E. 43402 Date

BOWIE RESOURCES, LLC
BOWIE NO. 2 MINE

2019 IMPOUNDMENT YEARLY INSPECTION

In accordance with Rule 4.05.9(14), all impoundments shall be inspected at least yearly to determine if the impoundment has been maintained as designed, and in accordance with the approved plan and the applicable regulations. This yearly inspection is for the impoundments located at the Bowie No. 2 Mine.

On May 7, 2020, I performed the required yearly inspection. I, Tamme Bishop, have a wide variety experience in the design and construction of earth fill embankments. Nothing was observed during the inspection that would indicate the ponds have a potential for failure. There was no appearance of erosion, instability, structural weakness or other hazardous conditions. There are no required monitoring procedures or instrumentation other than monthly and yearly inspections. There are no aspects which might affect stability. None of the ponds were discharging during the inspection. The spring of 2020 has been very dry so the ponds had little or no water during the annual inspection.

Pond B was dry. Estimate sediment build up about 10%.

Pond C had puddle of water. Pond C was cleaned out during 2017 and has about 90% of its sediment capacity remaining.

Pond D was dry. Estimate 15% sediment build up.

Pond F had a puddle at approximate elevation 5944. The pond was cleaned out during the 4Q of 2019.

Pond J held about 1-2' of water. Pond J has at least 90% sediment storage capacity.

Pond K was dry, with an estimated sediment build up of 20%.

There are no mud pits open.

The impoundments have the following estimated capacities:

IMPOUNDMENT CAPACITIES - ACRE FEET			
	Water	Sediment *	Total
Pond B	4.10	0.55 (90% 0.62)	4.65
Pond C	3.47	0.41 (90% 0.46)	3.88
Pond D	0.48	0.09 (85% 0.10)	0.57
Pond F	3.82	0.16 (90% 0.18)	3.98
Pond J (expanded)	3.93	0.52 (90% 0.58)	4.45
Pond K	0.49	0.18 (80% 0.22)	0.67

Notes:

1. The capacity of Ponds B and C are shown on Maps 22-B and 22-C respectively.
2. The capacity of Pond D was certified by Jim Stover on 12-30-97.
3. The capacity of Pond K was certified by Jim Stover on May 29, 2002.
4. The capacity of Pond J was certified by Tammerin K. Stover-Bishop on July 20, 2017.
5. The capacity of Pond F was certified by Tammerin K. Stover-Bishop on September 17, 2012.

*The percentage amount shown in parenthesis above indicates the percent of sediment storage currently available. The number on the outside of the parenthesis indicates the volume of sediment storage currently available. The number in the total column indicates the total water and sediment storage volume currently available.

To the best of my knowledge and belief, the impoundments have been maintained as designed and in accordance with the approved plan and applicable regulations. As noted above, spring maintenance is required in the form of dewatering and sediment removal.

COLORADO LICENSED TAMMERIN KAE STOVER-BISHOP PROFESSIONAL ENGINEER

43402

Tammie Bishop
Colorado Professional Engineer
Registration No. 43402

5-14-20
Date