NWCC
NorthWest Colorado Consultants, Inc.
Geotechnical / Environmental Engineering • Materials Testing

April 11, 2022

Twentymile Coal Company
Miranda Kawcak
29515 RCR #27
Oak Creek, CO 80467

Job Number: 99-3983

Subject: Quarterly Observation Report, Refuse Pile, Foidel Creek Mine, Routt County, Colorado.

Miranda,

As requested, NWCC, Inc. (NWCC) has prepared this report outlining our observations made during the first quarter of 2022 at the Refuse Pile located at Twentymile Coal Company's (TCC) Foidel Creek Mine in Routt County, Colorado. During this quarter, Timothy Travis of NWCC visited the project site on March 31, 2022 to provide the quarterly inspection/observations of the Refuse Pile.

At the time of our site visit on March 31, 2022, NWCC completed a site inspection of the existing refuse pile. Based on our observations made during this visit, it appeared that the contractor was presently stockpiling, grading and compacting refuse coal in the new Expansion Area. At the time of our site visit, the refuse coal had been placed and compacted to an elevation above the third bench situated along the east side of the stockpile.

Compaction testing in the new Expansion Area of the refuse pile was also completed on March 31, 2022. Six compaction tests (#623 to #628) were taken in Expansion Area during this quarter. All of the tests taken during this quarter met the minimum compaction requirement of 90% of the maximum standard Proctor density. Copies of the compaction test results and the daily field reports are attached. It should be noted that the abbreviations given in the Nuclear Density Test Results (Proctor Data) are as follows: Maximum DD = Maximum Dry Density and OMC = Optimum Moisture Content. Both of these values have been determined in accordance with ASTM D698.

The internal roadways in the new expansion area of the pile are in good condition. The upper haul road to Areas 2, 3 and 4 of the refuse pile was not accessible at the time of our site visit, due to snow and mud.

A seepage area at the toe of the northeast end of the refuse pile expansion area, approximately 30 feet northwest of the outlet of the underdrain, developed in fall 2014. At the time of our observations, the seepage was surfacing at the toe of the slope and flowing into the drainage from the undrain outlet then into the existing pond east of the Refuse Pile Expansion Area. The discharge was clear, with no evidence of sediment. No signs of washout, slumps or slope instability were observed at this time. The seepage area

will be monitored during future inspections and noted in our inspection reports. Photographs of the seepage area taken at the time of our inspection on March 31, 2022 are attached.

Based on our observations, the surface drainage conditions, generally appeared to be adequate across the top and sides of the pile. Based on our observations, we did not observe any signs of instability, structural weakness or hazardous conditions at the refuse pile.

We were advised that the wash plant had produced approximately 68,420 tons of waste coal during the month of January 2022: approximately 54,418 tons during February 2022: and approximately 85,784 tons during March 2022. It is our understanding that the fines being produced at the wash plant, which consists of approximately 10 to 20 percent of the total materials being produced, are being pumped underground into the mine.

We were previously informed by Brian Watterson of TCC that all of the original monitor wells installed in the Refuse Pile were destroyed in July 2012. Two new monitor wells were constructed in Area 1 of the Refuse Pile in December 2013. NWCC was provided monthly monitor well readings for this quarter by Miller Water Monitor Service, Inc. The water level in the western monitor well (RW#1) was measured at 57.84 feet below the existing ground surface (bgs) on January 22nd at 57.72 feet bgs on February 12th and at 57.59 feet bgs on March 19th of 2022. The water level in the eastern monitor well (RW#2) was measured at 56.80 feet bgs on January 22nd, at 56.69 feet bgs on February 12th and at 56.64 feet bgs on March 19th of 2021. An additional monitor well (RW#3) was constructed at the southeast end of the 1st bench in new Expansion Area in June of 2014. The water level in the expansion area monitor well (RW#3) was dry when checked on January 22nd, February 12th and March 19th of 2022.

Based on our observations, it appears that the pile is currently being constructed and maintained in general accordance with the project specifications and plans submitted under 2.05.3(8) and that the potential hazard to human life and property at the site in its present condition is minimal. This report fulfills the quarterly inspection requirements as specified by Rules 4.09.1(11)(a), 4.09.1(11)(b), 4.10.2(2)(a) and 4.10.2(2)(b).

If you have any questions regarding this report or our observations, please contact this office.

Sincerely,
NWCC, INC.,

Timothy S. Travis, P.E.
Sr. Project Engineer

COLORADO LICENSED
BRIAN D. LEN
25750
PROFESSIONAL ENGINEER

Reviewed by: Brian D. Len, P.E.
Principal Engineer

cc: Tabetha Lynch - Environmental Protection Specialist - CDRM&S

NORTHWEST COLORADO CONSULTANTS, INC.

Project:	Refuse Pile	**Project No.:**	99-3983	**Date:**	3/31/22
				Time:	3.0
Location:	Foidel Creek Mine	**Report No.:**	103	**Mileage:**	45
Client:	Twentymile Coal Co.			**Engr. /Tech:**	TT

Work Performed:

As requested, we visited the project site on today's date and conducted compaction test No's 623 through 628 on the fill materials being placed within the Refuse Pile.

Twentymile Coal Company crews placed and compacted processed waste coal in the Refuse Pile.

We also obtained a sample of material and returned it to our laboratory in Steamboat Springs, CO for standard checkpoint Proctor testing. The sample matched previously determined Proctor 12P for this project.

Remarks:

The material tested today generally met project specifications for compaction.

Please refer to attached sheet for results of today's testing.

Verbal Discussions:

Nick Aramando of Twentymile Coal Co. was notified of today's test results.

NUCLEAR DENSITY TEST RESULTS

Project: Refuse Pile **Project No.:** 99-3983 **Date:** 3/31/2022
Report No.: 103

Test No.	Location Northing/Easting	Depth Elev.	Proctor No.	Dry Density (pcf)	Water Content (%)	Actual Compaction	Required Compaction
623	31019.46 / 16793.73	7021.119	12	101.9	6.3	93	90
624	30862.35 / 17330.17	7017.133	12	100.6	5.8	92	90
625	30792.22 / 16812.69	7018.630	12	100.9	6.8	92	90
626	30944.37 / 17663.81	7017.264	12	99.2	7.1	90	90
627	31143.89 / 17145.08	7020.708	12	98.9	6.3	90	90
628	31180.47 / 17469.17	7018.730	12	101.8	8.4	93	90

PROCTOR DATA

No.	Maximum Dry Density (pcf)	Optimum Moisture Content (%)	Relative Density Minimum Density (pcf)	Relative Density Maximum Density (pcf)	Soil Type
12	109.8	7.6			Processed Waste Coal
11	100.3	10.2			Processed Waste Coal
10	107.6	11.0			Processed Waste Coal

Comments:

BSG= Below Subgrade Grade
SG= Subgrade Grade
SBG= Subbase Grade
BSBG= Below Subbase Grade
BCG= Base Course Grade
BBF= Below Bottom of Footing
NWC= Northwest Corner
NEC= Northeast Corner
SWC= Southwest Corner
SEC= Southeast Corner
BFG= Below Footing Grade
FG= Footing Grade

March 31, 2022-Drain Outlet and Seepage Area

March 31, 2022-Seepage Area

March 31, 2022- Benches on East Side of Refuse Pile

March 31, 2022- Areas 2, 3 and 4