NEW ELK MINE
Permit No. C-1981-012

QUARTERLY COAL WASTE BANK INSPECTION REPORT
March 5, 2020

The three coal waste banks at the New Elk Mine were inspected on March 5, 2020. The weather was clear with the temperature around 30°. Ground conditions were frozen. Vegetation is generally good throughout the mine site for the winter months. The slopes of DWDA #1 have excellent vegetation. The vegetation on the RDA exhibited very good vegetative growth with some shrubs established on the earliest reclamation areas (1989-1992).

Sediment Control Pond #4 is situated west of DWDA#1. This pond has never discharged and was dry at time of inspection. DWDA#2 run-off reports to Pond #7 via a series of ditches and culverts. Run-off from the RDA reports to Pond 8 located at the base of the waste bank just north of Highway 12.

Note that the NPDES permit for the New Elk Mine was renewed effective May 31, 2015. The most significant change was the sampling of discharge from Pond 4 is no longer required as the DWDA#1 has been reclaimed and vegetation is becoming well established. Continuous recording flow meters have been installed on both Ponds 7 and 8. Clean-out of pond 7 was completed in early 2017. Pond 8 was cleaned-out in the spring of 2018.

DEVELOPMENT WASTE DISPOSAL AREA No. 1

GENERAL DESCRIPTION OR REFERENCE TO SITE PLAN:

This Development Waste Disposal Area is located south of State Highway 12 and west of the main facility Access Road. It is adjacent to and north of the Middle Fork of the Purgatoire River. The area is permitted for disposal of waste rock from underground mining and disposal of sediment collected from ponds and ditches located within the mine permit area. Since mine closure in 1989, the area has been used for disposal of sediment removed from ponds and ditches lactated within the mine permit area. In 2004 the area was closed and reclaimed. The area received Phase I bond release in 2005.

Activity during Inspection:

___ Removal of Topsoil and Organic Matter
___ Placement of Under-drains
___ Installation of Surface Drainage System
___ Construction of Fill
___ Placement of Topsoil
___ Seeding
_X_ Other Facility in Final Reclamation- Phase I Bond Released

Drainage: (Discussing of springs, seeps, overland and channel flow, underdrain constructions and/or discharge, integrity of 100-year 24-hour drainage structures, and evidence of positive drainage)

Positive Drainage is maintained on the surface of the DWDA. No evidence of springs nor seeps were observed.

Observation of Fill Construction: (Description of material, compaction, left thickness, slopes, and construction methods)

Fill construction and reclamation of the surface has been completed. The site was seeded in 2005 and is eligible for both Phase II & III reclamation subject to a successful vegetation assessment.

Indications of Potential Failure or Instability:

Surface and out slopes of the pile were inspected for visible signs of potential failure or instability. None were observed.

Threat to Human Life or Property:

Failure could impact persons or equipment on or adjacent to the disposal area. No threat was observed and with final reclamation is unlikely to occur.

Potential Harm to Land, Air, and Resources:

Failure could impact the Purgatoire River or areas adjacent to the disposal area. No adverse conditions were observed.

DOCUMENTATION AND OTHER OBSERVATIONS

Overall the disposal area is in good condition.

DWDA #1 – West Facing Slope

Maintenance Required:

None at this time.

DEVELOPMENT WASTE DISPOSAL AREA No. 2

GENERAL DESCRIPTION OR REFERENCE TO SITE PLAN:

This Development Waste Disposal Area is located south of State Highway 12 and east of the main facility Access Road. It is adjacent to and north of the Middle Fork of the Purgatoire River. The area is permitted for disposal of waste rock from underground mining and disposal of sediment collected from ponds and ditches located within the mine permit area.

Activity during Inspection:

___ Removal of Topsoil and Organic Matter
___ Placement of Under-drains
___ Installation of Surface Drainage System
___ Construction of Fill
___ Placement of Topsoil
___ Seeding
_X_ Other Facility was idle at the time of inspection

Refuse placement has been completed and the operator has trucked excess waste to the RDA so that finished slopes can be brought to approved grade. The excess storage space on the west end of the pile is used as a sediment drying area. Dried waste has been trucked to the RDA for permanent disposal.

Drainage: (Discussing of springs, seeps, overland and channel flow, underdrain constructions and/or discharge, integrity of 100-year 24-hour drainage structures, and evidence of positive drainage)

Positive Drainage is maintained on the surface of the DWDA. Sump on East end of pile was recently cleaned and is in good working order. Rills on the disposal area are being monitored. No evidence of springs nor seeps were observed.

Observation of Fill Construction: (Description of material, compaction, left thickness, slopes, and construction methods)

Coarse to fine-grained development waste rock has been placed and compacted according to approved plans. Compaction testing was done by CTL-Thompson on May 28, 2012 demonstrating that refuse placement has been conducted in accordance with plan requirements. No refuse placement has occurred since the May 2012 compaction testing.

Indications of Potential Failure or Instability:

Surface and out slopes of the pile were inspected for visible signs of potential failure or instability. There was some surface erosion but not enough to make the area unstable. In all no signs of failure or instability were observed.

Threat to Human Life or Property:

Failure could impact persons or equipment on or adjacent to the disposal area. No threat was observed .

Potential Harm to Land, Air, and Resources:

Failure could impact the Purgatoire River or areas adjacent to the disposal area. No adverse conditions were observed.

DOCUMENTATION AND OTHER OBSERVATIONS

Overall the disposal area is in good condition.

DWDA #2 – South and West Facing Slopes

Maintenance Required:

The Rills are being monitored and have not gotten any bigger and there is no sediment loading. Operator is evaluating either reclamation of the area or permitting alternative uses of the land north of the Purgatoire River and south of Highway 12.

REUSE DISPOSAL AREA (RDA)

GENERAL DESCRIPTION OR REFERENCE TO SITE PLAN:

The Primary Refuse Disposal Area is located north of State Highway 12 and the Middle Fork of the Purgatoire River. Refuse is transported by conveyor belt to the RDA from the coal preparation plant located south of the river. The plant operated intermittently during 2012 with temporary cessation of

operations announced effective July 11, 2012. The mine briefly returned to production May-September, 2014; but returned to temporary cessation of mining in September 2014. Since then the mine has intermittently transported developing waste from temporary storage piles to the RDA.

Activity during Inspection:

___ Removal of Topsoil and Organic Matter
___ Placement of Under-drains
___ Installation of Surface Drainage System
___ Construction of Fill
___ Placement of Topsoil
___ Seeding
_X_ Other Facility is idle at this time

Drainage: (Discussing of springs, seeps, overland and channel flow, underdrain constructions and/or discharge, integrity of 100-year 24-hour drainage structures, and evidence of positive drainage)

Positive Drainage is maintained on the surface of the RDA. Sumps on top of the RDA have been recently cleaned. There is no ponding on the top of the pile. No evidence of springs nor seeps were observed.

Observation of Fill Construction: (Description of material, compaction, left thickness, slopes, and construction methods)

Refuse is placed in 1-2 foot lifts, allowed to dry and then compacted. Periodically CTL-Thompson, a geotechnical engineering firm, evaluates refuse compaction. The permit requires and testing has demonstrated that the operation has achieved in excess of the required 90% compaction.

Indications of Potential Failure or Instability:

None observed.

Threat to Human Life or Property:

None observed. Location and placement minimize potential impacts to life or property.

Potential Harm to Land, Air, and Resources:

None observed. Location of the waste bank minimizes potential impacts to land and water resources, but failure could impact State Highway 12 and the Purgatoire River.

DOCUMENTATION AND OTHER OBSERVATIONS

Overall the site is in good condition.

Depth to water in water level monitoring wells taken: 12/9/2019

Well	Depth	Elevation
TH-1	42.4 ft	7442.9
TH-2	70.5 ft	7460.7
TH-3	93.5 ft	7499.5

Refuse Disposal Area – Reclaimed Benches and Armored Drainage

Maintenance Required:

None required at this time.

CERTIFICATION

Inspection was conducted by Vince Massarotti, a qualified professional and MSHA certified inspector of earth and rock-fill embankments and impoundments, under the direction of Mr. Charles McGlothin, a Registered Professional Engineer Licensed in the State of Colorado.

This is to certify, to the best of my knowledge and belief, that Fill #9 construction and placement, as noted since the previous certification and as determined during this inspection and by discussions with mine personnel, is in accordance with designs as proposed by CTL Thompson in their report dated April 27 and amended July 27, 2001 and as approved by the Division of Minerals and Geology.

Vince Massarotti
Inspector

3-11-2020
Date

Charles W. McGlothlin
Professional Engineer

3/24/2020
Date

Inspections completed in compliance with Rule 4.09.1(11)(b) must be submitted to the Division within two weeks of Completion