




PERMIT INFORMATION

Permit Number: C-1981-035 Mine Name: King Coal Mine Operator: GCC Energy, LLC Operator Address: Mr. Tom Bird 6473 County Road 120 Hesperus, CO 81326	County: La Plata Operation Type: Underground Permit Status: Active Ownership: Federal
	Operator Representative Present: Michael McFarland
Operator Representative Signature: (Field Issuance Only) 	

INSPECTION INFORMATION

Inspection Start Date: December 12, 2017 Inspection Start Time: 08:00 Inspection End Date: Inspection End Time:	Inspection Type: Coal Partial Inspection Inspection Reason: Normal I&E Program Weather: Clear
Joint Inspection Agency: None	Joint Inspection Contacts:
Post Inspection Agency: None	Post Inspection Contacts:
Inspector(s): Robert D. Zuber, P.E.	Inspector's Signature:  Signature Date: 12/18/2017

Inspection Topic Summary

NOTE: Y=Inspected N=Not Inspected R=Comments Noted V=Violation Issued NA=Not Applicable

Y - Air Resource Protection

N - Availability of Records

Y - Backfill & Grading

R - Excess Spoil and Dev. Waste

NA - Explosives

N - Fish & Wildlife

R - Hydrologic Balance

R - Gen. Compliance With Mine Plan

N - Other

NA - Processing Waste

Y - Roads

N - Reclamation Success

N - Revegetation

N - Subsidence

Y - Slides and Other Damage

R - Support Facilities On-site

N - Signs and Markers

NA - Support Facilities Not On-site

NA - Special Categories Of Mining

R - Topsoil

COMMENTS

A partial inspection was conducted by Rob Zuber of DRMS on December 12, 2017. Michael McFarland of GCC accompanied Rob in the field. The weather was clear and the ground was dry.

The King I entrance area is still being used as a staging area for the road improvement project (CR 120).

EXCESS SPOIL and DEVELOPMENT WASTE – Rule 4.09

Placement; Drainage Control; Surface Stabilization:

At the toe of the Refuse Pile, new material (waste rock) has been added for a new bench to make the lower portion of the pile less steep. It appears to be well compacted.

Water in the form of ice was seen in the channel below the rock underdrain of the Refuse Pile, but no stains were seen. It appears that the underdrain allows water from above the refuse to seep under the Refuse Pile, but there is no sign that water is infiltrating through the pile and causing dissolution of metals that end up in the discharge below the pile.

The un-reclaimed portion of the Refuse Pile (upper portion) has been graded, and the piles of waste rock (noted in past inspection reports) are no longer present. No rills or puddles were seen on the upper portion of the Refuse Pile.

HYDROLOGIC BALANCE - Rule 4.05

Drainage Control 4.05.1, 4.05.2, 4.05.3; Siltation Structures 4.05.5, 4.05.6; Discharge Structures 4.05.7, 4.05.10; Diversions 4.05.4; Effluent Limits 4.05.2; Ground Water Monitoring 4.05.13; Surface Water Monitoring 4.05.13; Drainage – Acid and Toxic Materials 4.05.8; Impoundments 4.05.6, 4.05.9; Stream Buffer Zones 4.05.18:

Near the King I entrance, activities by the road contractor (Four Corners) have created a source of sediment that could be transported off site. A representative of the contractor was on site, and he indicated that he would have

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his staff fix the problem in near future. The solution should entail a berm to direct runoff to the silt fence sumps that are shown on Map King I-007, and wattles and seed should be added to the slope from the road to the adjacent pasture.

At the King I Mine, the West and East Ponds were dry. A large amount of work has been done on these ponds to make them meet the design specifications in the Permit Application Package (PAP). The embankment of the East Pond was reconstructed, and primary spillways were replaced for both ponds. Some elevations for the new pond features were estimated with a range finder, and the following observations were made (comparison to PAP specifications are in parentheses):

- The East Pond dam elevation is approximately two feet above the emergency spillway elevation. (This indicates that the existing freeboard meets the one-foot requirement).
- Also for the East Pond, the low-level outlet of the primary spillway was estimated to be four to five feet below the emergency spillway elevation. (This matches the specification in the PAP, which says that the elevation difference should be five feet.)
- The West Pond dam elevation is approximately one foot above the emergency spillway elevation. (This indicates that the existing freeboard meets the one-foot requirement).
- Also for the West Pond, the low-level outlet of the primary spillway was estimated to be 5.5 feet below the emergency spillway elevation. (This matches the specification in the PAP, which says that the elevation difference should be 5.5 feet.)

In summary, it appears that the new pond dimensions that were measured match the PAP specifications very closely. Sediment control (e.g., erosion blankets, seed) is needed on the areas where loose soil is present from the work on the King I ponds.

The lower portion of Reach 5 has recently been improved, and a sump was added a few feet above the building east of the East Pond (owned by Jack Wiltse). No problems were identified.

The step portion of Reach 10 (near the toe of the Refuse Pile) appeared stable. The upper portion of this ditch (where the road ends on the un-reclaimed Refuse Pile) has been improved, and this riprap looks like it has been placed well and will keep the reach stable.

Only a small amount of water (ice) was in the King II pond. It was well below the spillway elevation. However, some ice was seen in the discharge pipes, on the outlet side. In one pipe the ice is more than 20 feet above the bottom end (the pipe was inspected with a strong light). It appears that there may be a minor leak in the spillway. This should be monitored and repaired if it gets worse. No problems were seen with the embankment.

At King II, both the sediment sump by the mine entrance and the silt fence between the road and the pond appeared to be functioning well.

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GENERAL MINE PLAN COMPLIANCE:

Per a conversation with GCC staff (Jordan McCourt) and review of the mine plan map, GCC is mining in areas in which they are approved to mine.

SUPPORT FACILITIES - Rule 4.04:

At King I, the stockpiled material appears to be sorted well. That is, the rock and soil from the road construction project have been kept in separate piles, and both of these are separate from the waste rock from the mine. GCC should confirm this and continue this process.

The primary cut slopes at the mine appear to be stable. This includes the King I facilities area (where portals were located) and the King II portal areas.

No major problems were seen with erosion or sediment loading onto the hill below the new King II fan. Under the conveyor near the culverts, however, a sump is recommended.

The coal at Stack Tube #2 was well contained, and no coal was spilling onto the undisturbed area.

TOPSOIL – Rule 4.06

Removal 4.06.2; Substitute Materials 4.06.4(4); Storage and Protection 4.06.3; Redistribution 4.06.4:

Vegetation cover is good on the topsoil stockpiles at King II.

ENFORCEMENT ACTIONS/COMPLIANCE

No enforcement actions were initiated as a result of this inspection, nor are any pending.

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PHOTOGRAPHS



Near King I entrance – area that needs erosion and sediment control



East Pond (King I) - embankment improvement

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East Pond (King I) – new primary spillway



East Pond (King I) – inlet pipe in foreground

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Bottom of Reach 5 where it enters field (King I)



Reach 5 beside Wiltse structure (King I)

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King I ponds – West Pond embankment in foreground and East Pond embankment in back (by truck)



King I West Pond – new primary spillway

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Recently added material



Refuse Pile



Underdrain below Refuse Pile

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Steep portion of Reach 10 (King I)



Facility area at King I

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Improved portion of Reach 10 near Refuse Pile (King I)



Refuse Pile

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Area near new fan where sump is needed (King II)

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