




COLORADO
Division of Reclamation,
Mining and Safety
Department of Natural Resources

1313 Sherman Street, Room 215, Denver, CO 80203 P 303.866.3567 F 303.832.8106 <http://mining.state.co.us>

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: M. McFarland, Tom Bird
Operator Representative Signature: (Field Issuance Only) 	

INSPECTION INFORMATION

Inspection Start Date: October 24, 2017 Inspection Start Time: 14:15 Inspection End Date: October 25, 2017 Inspection End Time: 14:30		Inspection Type: Coal Complete 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: 10/27/2017		

Inspection Topic Summary

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

Y - Air Resource Protection

R - Roads

Y - Availability of Records

R - Reclamation Success

Y - Backfill & Grading

Y - Revegetation

R - Excess Spoil and Dev. Waste

R - Subsidence

NA - Explosives

Y - Slides and Other Damage

Y - Fish & Wildlife

R - Support Facilities On-site

R - Hydrologic Balance

R - Signs and Markers

R - Gen. Compliance With Mine Plan

NA - Support Facilities Not On-site

N - Other

NA - Special Categories Of Mining

NA - Processing Waste

R - Topsoil

COMMENTS

A complete inspection was conducted by Rob Zuber of DRMS on October 24 and 25, 2017. Michael McFarland of GCC accompanied Rob in the field at King I on October 24th. Tom Bird accompanied Rob on the 25th, mostly at King II. 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). During the inspection, a truck dumped refuse at King I, near the toe of the Refuse Pile.

EXCESS SPOIL and DEVELOPMENT WASTE – Rule 4.09

Placement; Drainage Control; Surface Stabilization:

The un-reclaimed portion of the Refuse Pile (upper portion) needs to be graded to spread the large piles of waste rock and to repair rills. This is not yet an urgent matter but should be done as soon as practical. Very little trash was seen in the recently graded area, and almost no large rocks (bigger than 18 inches in length) were seen. No puddles were seen on the surface of the Refuse Pile.

The channel below the rock underdrain has been better defined. Water was seen in the channel below the rock underdrain, but no stains were present on the soil. 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.

No water was discharging from the pipe underdrain. No evidence, such as staining or debris, indicates any past flow from this underdrain.

It appeared that in recent months no material has been added to the lower portion of the Refuse Pile. Round rock for the extension of the underdrain was staged on site. It is uncertain if this quantity will suffice or if more rock will have to be brought to the site. At this point, the lower portion of the Refuse Pile appears stable, despite the

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steep grade and lack of vegetation.

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:

At the King I Mine, the West and East Ponds were dry. Elevation differences from primary spillway inlets to sediment was measured with a laser instrument (True Pulse) and estimated to be approximately five feet in the West Pond and seven to eight feet in the East Pond. No problems were seen with the West Pond's structures (e.g., no rills on the embankment, no obstruction of the spillways). Per Tom Bird, work on the East Pond will continue, and this will include adding more material to the bottom of the pond and constructing a new primary spillway.

Additional comments on drainage structures at King I:

- *At the lower end of Reach 3, additional repairs have been performed on the exposed pipe, although GCC staff suggested that pipe replacement may be performed.
- * Reach 10 (near the southwest corner of the Refuse Pile) has eroded, and riprap improvements are recommended. Related to this, the Division suggests that runoff from the active portion of the Refuse Pile be diverted (with a swale) into this ditch, rather than letting it drain into the roadside ditch, where erosion has occurred.
- * The culvert in Reach 10 (across the road on the Refuse Pile) was clear, and the hillside below the culvert appeared stable.

Only a small amount of water was in the King II pond, and no problems were seen with the structures.

At King II, the road drainage appeared to be functioning as designed, including the area above the SAE where the road drains to the pond rather than to the clear water ditch. The silt fence by the entrance road appeared to be functioning well.

The East Clearwater Ditch at King II (CWD-2) was found to be generally in good shape. The West Clearwater Ditch at King II (CWD-1) was also found to be generally in good shape. The BMPs below this ditch (sumps at the King II entrance) appear to be functioning well.

Additional comments on drainage structures at King II:

- * Culvert C5 needs to be cleaned.
- * Culverts C3 and C6 were clear of sediment.
- * Below the concrete washout area, there was no sign that concrete was draining down the ditch.

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GENERAL MINE PLAN COMPLIANCE:

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

ROADS – Rule 4.03

Construction 4.03.1(3)/4.03.2(3)

Drainage 4.03.1(4)/4.03.2(4)

Surfacing and Maintenance 4.03.1(5) and (6)/4.03.2(5) and (6)

Reclamation 4.03.1(7)/4.03.2(7):

A GCC employee (Ty Tan) was removing large rocks from the drainage ditch along the road to the top of the Refuse Pile. He was placing smaller rocks in the ditch (riprap lining).

RECLAMATION SUCCESS - Rule 4.15, Rule 3:

No plants that resemble yellow toadflax were seen near Coal Stack Tube #2 or the topsoil stockpile (where yellow plants were seen in the past).

SUBSIDENCE – Rule 4.20:

No signs of subsidence were seen around the Huntington water structures. An inspection of the pond and a portion of the ditch below the pond was conducted. Also, Dan Huntington was seen in the GCC office. He indicated that he has not seen any new subsidence features for many years on his ranch, and he also said that there are no related problems with his pond, ditch or pipeline.

SUPPORT FACILITIES - Rule 4.04:

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.

Construction of the new fan appears to be nearing completion. No problems were seen with erosion or sediment loading onto the hill below the fan. Under the conveyor, next to the new fan construction, wattle maintenance is needed.

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

SIGNS AND MARKERS – Rule 4.02:

Between the new fan and Stacker Tube #2, “Permit Boundary” markers should be removed.

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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.

At King I, no significant problems were identified with the Plant Growth Medium Storage Areas, although vegetation on the piles is lacking in places. No sign of erosion or sediment transport off the piles was seen.

ENFORCEMENT ACTIONS/COMPLIANCE

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

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PHOTOGRAPHS



Channel below Refuse Pile underdrain



King I: road to Refuse Pile, material from County road construction, and portal walls

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Erosion in Reach 10 near top of road to Refuse Pile



Exposed culvert pipe near top of road to Refuse Pile (was later covered by end of inspection)

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Upper end of Refuse Pile



Toe of Refuse Pile

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Road cut (former shop bench at King I)



King II road and West Clearwater Ditch, near office

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King II pond



Sediment sump at King II entrance

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East Clearwater Ditch near King II pond



Top of hill next to new fan

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Ditch on north side of Plant Growth Medium Storage Area (above Refuse Pile)



**Ditch on low end of Plant Growth Medium Storage Area
(vehicle on right is directly above Refuse Pile)**

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AVAILABILITY OF RECORDS**PERMIT RECORDS**

DRMS Permit	Exp. Aug. 2017 *Comment 1
Permit Application w/Revisions	Yes, Thru MR-46
Findings Document	MT07 (Feb 2015) RN06 (Mar 2013)
Insurance Certificate	Exp. Sept. 2018
Bond Document	*Comment 2
Phased Bond Release	NA
Documents/Findings	
Air Emission Permits	Yes (Sept. 2013)
County Special Use Permits	*Comment 3
UG Mining Landowner Notification	Yes
Subsidence Monitoring Reports	2017 Q3
Subsidence Monitoring Data	NA
Rill & Gully Survey	NA
Vegetation Monitoring Data	NA
Specific Variance Approvals	NA
Annual Reclamation Reports	2016
Midterm Review Documents	MT-07
DRMS/OSM Inspection Reports	Thru Octbr. 2017
Enforcement Actions	CV-2015-01
Transfers/Succession of Operator	Yes (2007/2008)
Temporary Cessation Notification	NA
Reclamation Cost Estimate (Appendix 12)	MT07 (Feb. 2015) TR26 (Apr. 2016)
CERTIFICATIONS	
Pond Certifications	*Comment 4
Annual Certifications for Impoundments	2017 Q3
Fill Certifications for Excess Spoil or Underground Development Waste	Yes
• Quarterly Inspections	2017 Q3
• Compaction Testing	May/June 2017
• Final Certification	NA
Coal Processing Waste Banks	NA
Haul Road Certifications	Yes 2009
Access Road Certifications	Yes 2012

HYDROLOGIC RECORDS

NPDES Permit	Exp. June 2013 (Admin extensn.)
NPDES Records	2017 Q2
Stormwater Management Plan	Sept 2017
SPCC Plan	Revised April 2016
MSHA Pond Inspections	NA
State Engineer's Pond Inspection	NA
Quarterly Pond Inspections	2017 Q3
Annual Hydrology Reports	2016
• Ground Water Monitoring	2017 Q3
• Surface Water Monitoring	2017 Q3
• Spring & Seep Monitoring	In progress
• Mine Water Discharge Monitoring	NA
• Mine Inflow Study	NA
• Water Consumption Records	Yes
Well Permits	Yes

BLASTING RECORDS

Blasting Publication	NA
Blasting Records (3 years)	NA
ATFE Explosives Permit	NA
Blasting Variances	NA
Pre-Blast Surveys	NA

**ADDITIONAL RECORDS
(specify)**

COMMENTS:

***1 RN-07 pending. GCC has right of successive renewal.**

***2 Total bond of \$908,672.76 (includes \$908,107 with Travelers and two small cash bonds).**

***3 Appendix 2(1) of PAP.**

***4 King I ponds in 1998. King II ponds in 2009.**

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