

6473 County Road 120
Hesperus, CO 81326

970-385-4528 ext. 6531
jmccourt@gcc.com



December 12, 2022

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

Attn: Janet Binns, Environmental Protection Specialist III

Re: GCC Energy, LLC, King II Mine
CDRMS Permit # C-1981-035
Stoner Engineering: Quarterly Inspection: Water Quality
Improvements 4th Quarter 2022

Ms. Binns:

Please find enclosed a copy of Stoner Engineering's Quarterly Inspection report of the King I mine water quality improvements for the 4th quarter of 2022.

Please contact me at 970.385.4528 or jmccourt@gcc.com if you have any questions or require any additional information.

Sincerely,

A handwritten signature in black ink that reads "Jordan McCourt". The signature is written in a cursive, flowing style.

Jordan McCourt
Project Manager
GCC Energy, LLC

Stoner Engineering & Surveying

Engineering, Testing & Surveying

Date: December 8, 2022

To: Jordan McCourt
Project Coordinator
GCC Energy, LLC
6473 County Road 120
Hesperus, CO 81326
(970) 385-4528



From: Ryan Griglak, P.E.
Project Manager
Stoner Engineering & Surveying

Re: King Coal I – Quarterly Water Quality Improvements Inspection

On December 7, 2022, Ryan Griglak, P.E. visited the GCC Energy, LLC King I Mine site to conduct the quarterly inspection of the water quality features installed to prevent contaminated storm water runoff from escaping the site in events smaller than the 100-year storm event.

Both ponds held water at the time of the inspection due to recent storms. While the east pond water level had dropped since the previous inspection and was minimal (see Pic. 1), the west pond held roughly the same amount of water (see Pic. 2). The ponds should continue to be monitored after storm events to ensure that excess sediment does not reduce the required storage capacity available for storm water runoff. When conditions permit, the removal of the excess sediment in the west pond should be completed. The sedimentation traps at the entrance to the site are generally in good condition.

Waste material has been placed on the lower waste pile since the previous inspection while placement on the upper pile does not appear to have occurred. Due to the placement of the waste material on the lower waste pile, the grading of the lower waste pile is mounded at the center of the pile. As a result, some runoff is directed towards the face of the waste pile. There is berming in place as required at the face of the pile as required to direct any surface runoff to the west side of the waste pile. The grading along the north side of the embankment pile should be improved to direct surface flows to the west verses towards the berming along the face of the waste pile.

There has been some erosion of the channel for the treated water flows along the west side of the lower pile. This has also resulted in some sedimentation of the inlet basin for the culvert running under the haul road into the west detention pond (see Pic. 3). The sedimentation should be cleaned from the basin and the channel section repaired to prevent additional erosion.

There has been some localized erosion at the inlet for the culvert located under the haul road at the base of Reach 10. The haul road itself has experienced some erosion at this location due to runoff conveyed down the road itself. The localized erosion is the result of runoff bypassing the road swale/berm located just above the north switchback. The swale/berm has filled in at this location and no longer directs road runoff into the adjoining drainage ditch. Pictures of this condition are not available due to a downloading error.

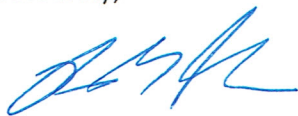
The sedimentation of the clear water ditch (Reach 5) at the outlet of the south clear water ditch (Reach 3 & 4) where it was rerouted to account for the construction of the lower waste embankment pile has not been cleaned (see Pic. 4). This sediment should be cleared to prevent the culvert from backing up and/or reducing the capacity of the north clear water ditch. Reduced outflow of the culvert (Reach 3 & 4) could result in south clear water flows entering the west detention pond during a large storm event. All the culverts located on the site should be checked and any excess sediment cleared/cleaned after seasonal storm events.

The cracking along the side of the grouted channel along the upper portion of the north clear water ditch (Reach 1) is has not worsened since the previous inspection. This channel section should be monitored after storm events to minimize the potential of excessive erosion and loss of channel section during future storm events.

The clear water and the treated water ditches appeared to be in generally good condition. The drainage for the overall site appears to be functioning as designed. The drainage features have been constructed and will continue to function as stated in the drainage plan submitted to the Division of Reclamation, Mining & Safety once the ongoing maintenance work resulting from the significant snow accumulation has been completed.

Please let me know if you have any additional questions or concerns in regards to the issues that are discussed above.

Sincerely,



Ryan M. Griglak, P.E.
Project Manager



Pic. 1 – Water level lower, East pond.



Pic. 2 – Sediment/water levels appear unchanged, West pond.



Pic. 3 – Inlet basin, treated water ditch at base of lower waste pile.



Pic. 4 – South clear water ditch (Reach 3& 4) outlet at tie to north clear water ditch (Reach 5).