

COLORADO GEOLOGICAL SURVEY

1801 19th Street
Golden, Colorado 80401
303.384.2655



Karen Berry
State Geologist

August 21, 2015

Daniel Murray, AICP
La Plata County Planning Department
1060 E. Second Ave.
Durango, CO 81301

Location:
W $\frac{1}{2}$ of Section 36,
T35N, R12W of the N.M.P.M.
37.2469, -108.1318

**Subject: Revised GCC Energy Class II Land Use Permit – King II Coal Mine
La Plata County, CO; CGS Unique No. LL-16-0001**

Dear Mr. Murray:

CGS has reviewed the supplemental information forwarded by your office pertaining to the land use permit application (Project # 2012-0089) originally referred to CGS in 2012 (CGS Unique No. LL-13-0001) after it was determined that the King II Coal Mine was required to have a land use permit. The revised materials were intended to update aspects of the project and respond to public comment. Included in the referral were the narrative update (7/31/15), compatibility assessment and mitigation document (undated), and site plan (GCC, 7/29/15). Additional information was obtained from the La Plata County Planning website.

The four areas addressed in the revised application stemming from public comments were vibrations, sound, changes in neighborhood wells (water quality), and potential for loss of water production (hydrological impacts). Additional information pertaining to potential geologic hazards as outlined in the CGS review letter dated August 8, 2012 was not included.

The King II Coal Mine encompasses approximately 25.5 acres of surface area and 565 acres of underground mining operations. The mined coal seam ("A" Seam) is within the Menefee Formation and is 6-10 feet thick with approximately 300 feet of overburden (varying with topography) including the Cliff House Sandstone and interbedded sandstones, mudstones, and silty shales. No water was reported with the subsurface operations. Mining methods are using room and pillar methods. The surface operations are located in the valley floor on alluvial and colluvial deposits. A sedimentation pond is located on the down-stream side of the mine and discharges to Hay Gulch Ditch.

There are a number of geologic hazards that could potentially impact the surface development, including potentially unstable slopes, flooding, debris flows, and expansive/collapsible soils. Future surface development should include appropriate geologic hazard assessment to avoid or mitigate geologic hazards that may adversely impact development. Since the mine currently has surface structures already located, the mine Operator should be aware that these buildings could be impacted by geologic hazards such as unstable slopes, debris flows, flooding, etc.

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During mining activities, the mine Operator should monitor subsidence and water runoff to ensure they are not impacting off-site development areas. Following mine operations and reclamation, site zoning over the areas undermined should restrict surface development that could be adversely impacted by future subsidence that may occur as a result of mining activities.

Thank you for the opportunity to review and comment on this project. If you have questions or require further review, please call me at 303-384-2655, or e-mail CGS_LUR@mines.edu.

Sincerely,

TC Wait

TC Wait
Engineering Geologist