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November 19, 2015

La Plata County  
Planning Department  
1060 East 2<sup>nd</sup> Avenue  
Durango, CO 81301  
Attn: Daniel Murray

Re: GCC King Coal II Mine Class II permit application, Project #2012-0089

Dear Mr. Murray,

Roadrunner Engineering, LLC is working on behalf of GCC Energy / King II mine in the preparation and response to the County Public Works memorandum dated August 20, 2015. This letter addresses comments made by County Public Works regarding the project Traffic Impact Assessment (July 31, 2015) and Conceptual Roadway Plans (July 31, 2015).

For ease of review, comments or conditions stated within the August 20, 2015 memo have been restated in *italics* immediately followed by the corresponding response.

#### Agency Comments – Conceptual Plans

*Comment (page 2) 1. An item requested by the County in the July 8, 2015 letter, and not included in the conceptual plans, is right-of-way information. “presumed prescriptive easements, and identification of known platted Right-of-Way.” While not requested, the addition of parcel boundaries adjacent to the road and ownership information would be helpful in evaluating initial impacts. Conceptual plans shall show presumed prescriptive easements, and known platted Right-of-Way.*

RESPONSE – GCC Energy contracted with Gibbons Survey – NBQ to complete an ownership map and assessment of recorded documents focusing on identification of CR 120 right-of-way. The assessment and mapping of recorded documents reflected a very short section of CR 120 right-of-way (approximately 570ft adjacent to McCue parcel), with the balance either called to the CR 120 right-of-way or no statement made. There is existing fences abutting the majority of asphalt paved roadway. Prescriptive easement for roadway is assumed to be from fenceline to fenceline. A distance of 60-ft is typical between fencelines in which CR 120 is located. A property ownership map along with conceptual level roadway plans (dated 11/17/15) reflecting fencelines have been submitted to the County.

*Comment (page 2) 2. Cover Sheet: Maximum Grade (noted to match existing) should show actual maximum grade of 8.73% as identified on P&P sheet 11.*

RESPONSE – On September 2, 2015, GCC Energy received approval for a roadway grade variance up to 1% greater than the 8% grade allowed by La Plata County Code, for a short segment of approximately 2500ft. This is for a section of existing CR 120 that is aligned from the mesa top down into the gulch. It is the intent of GCC Energy to maintain relatively the same alignment of the existing CR 120 roadway, and improve roadway geometry through partnership with La Plata County.

*Comment (page 2) 3. Cover Sheet: Design Data, Full Depth Reclamation, widening Sta 00+00 to Sta 132+00. Note, the suitability of full depth reclamation (FDR) for this section of county road needs to be confirmed and specifications for the FDR process developed by a licensed engineer based on actual geotechnical borings taken at intervals suitable to establish subsurface conditions for the length of the project. May be addressed with a note on conceptual plans, that will be included as part of the final design.*

RESPONSE – Conceptual level roadway design plans dated 11/17/15 include on each of the typical section details (sheets 3-5) a statement requiring a geotechnical report to assess and define pavement structure.

*Comment (page 2) 4. Cover Sheet: Minimum Radius of Curve, maximum super elevation rate for 35 to 45 mph urban roads should be limited to 6%, not 8%, which sets minimum radius at 340 feet instead of 314 feet. The county may consider a higher super, but only for extenuating circumstances.*

RESPONSE – The design criteria used for the development of the conceptual level plans is Rural Minor Collector/Local Road System. AASHTO’s green book states in exhibit 6-4, Maximum Grades for Rural Collectors reflect maximum 10% in

Mountainous terrain. La Plata County limits the grade to 8%. AASHTO Exhibit 3-15 provides maximum super based on design speed.

*Comment (page 2) 5. Cover Sheet: Sign and Striping plan will be required with final plan set.*

RESPONSE – Final Plan set will include signing and striping plans

*Comment (page 2) 6. Typical Sections: For the final plan submittal, a geotechnical recommendation based on actual field conditions should be included that supports road structural sections necessary to insure at least a 20 year pavement based on the anticipated EASL loading. May be addressed with a note on conceptual plans.*

RESPONSE – Typical section details note the requirement of a license geotech report in establishing the final pavement structure. Pavement structure will be based on a 20-yr ESAL loading.

*Comment (page 2) 7. Typical Sections: Minimum shoulder width should be shown as specified in Section 74-91, for the type/classification of road based on design ADT. If the shoulder needs to be reduced in limited areas do to environmental or topographical constraints, guard rail may be allowed on a limited basis.*

RESPONSE – Typical sections include note and station identifying shoulder width consistent with La Plata County code. A road classification of Collector (shoulder 4ft wide) has been assigned to the first approximate 1.5miles of roadway.

*Comment (page 2) 8. Sheet 7, aerial overlay shows relocated curve involving complete “take” of the Meador property. Has applicant communicated this with the property owner, and are they willing to sell?*

RESPONSE – No dialogues have been initiated with owners of the Meador property. It is anticipated that dialogues will be initiated as part of preliminary plan development.

*Comment (page 2) 9. The County will be required to vacate abandoned sections of the CR 120 right-of-way after new right-of-way is acquired and road re-construction is complete. No action required at this time, just an acknowledgement of a future action required by the County.*

RESPONSE – Understood

*Comment (page 3) 10. Are mitigation measures proposed for other property owners in close proximity to the road that will be significantly impacted by the proximity of the coal trucks and associated noise and dust?*

RESPONSE – It is planned that upon paving of CR 120, significant reduction in noise and dust should be experienced. In addition, GCC Energy has adopted policy stating the reduced speed of trucks (10mph) traveling adjacent to homes in close proximity to the road.

*Comment (page 3) 11. A number of curves at the following stations will result in significant hill side cuts; 128+00, 159+00, 231+00, 242+00, 254+00, 283+00, 293+00, 307+00, 327+00. As shown, the alignment does not appear feasible without significant cuts or potentially large retaining walls to minimize cut slopes. Include cross sections at these locations to show this alignment is technically feasible or adjust alignment.*

RESPONSE – An updated set of conceptual roadway plans (dated 11/17/15) have been submitted. The revised alignment addresses areas of significant hill side cuts. In addition, cross section sheets have been developed and are incorporated into the plan sheets. It is assumed that areas where steep side slopes are encountered, a side slope system allowing a minimum of 1 (rise) to 1.5 (run) be implemented.

*Comment (page 3) 12. Major curve re-alignment (204+00) proposed across Wiltse parcel. Has applicant discussed acquisition needs with property owner and are they willing to sell the necessary right-of-way? This will also impact, lengthen driveway to Bird/Swift parcel 565729300019. Have they been notified? Proposed change will increase the length of their driveway and associated maintenance cost.*

RESPONSE – Revised plans (11/17/15) have realigned this section of road to minimize impacts to adjacent parcels. The realignment addresses past accident causal factors (sight distance) and improvements to roadway geometry that meet accepted design policies.

*Comment (page 3) 13. Major curve re-alignments (248+00, 265+00, 275+00) proposed across Ute Mountain Tribe parcel. Has applicant discussed acquisition needs with property owner and are they willing to sell the necessary right-of-way*

RESPONSE – Revised conceptual design roadway plans (11/17/15) have placed roadway alignment close to existing CR 120 alignment.

*Comment (page 3) 14. Areas of significant re-alignment will be required for the irrigation ditch. Has applicant discussed projects impacts with ditch rider or representative?*

RESPONSE – Revised conceptual design roadway plans (11/17/15) assign alignment close to existing CR 120 alignment, though there will be requirements to address existing irrigation ditches. It is anticipated that discussions with irrigation representatives will be performed consistent with development of preliminary plan set.

#### Agency Comments – TIA

*Comment (page 4) 1. Executive Summary: Hours of operation (coal hauling) from 7:00 AM to 6:00 PM for 60% of the daily haul trips with the remainder (40%) occurring between 6:01 PM and Midnight. It is our understanding the applicant has committed to halt operations during periods of extreme weather, including winter storms as well as high winds that limit visibility. This should be confirmed and any anticipated exceptions noted.*

RESPONSE – It is confirmed by GCC Energy that at such time that trucking operations are suspended on CR 120 during extreme events such as high winds or winter storms.

*Comment (page 4) 2. Proposed Site Uses (Pg 28): The mine currently operates seven days a week, and table 5 outlines the shift operational hours. The applicant has proposed limiting hauling to six days per week (approximately 300 days per year). Based on comments presented to the Citizens Advisory Panel it is understood no coal hauling will occur on Sundays. This should be confirmed and any anticipated exceptions noted.*

RESPONSE – It is confirmed by GCC Energy that transport trucking operations, hauling, has been suspended on Sundays.

*Comment (page 4) 3. Executive Summary: The impact analysis period is twenty-years and the ESAL Calculation, Table 7 estimated road impacts for twenty years – “Plant Operation Study Duration”. If the applicant anticipates mine operation lasting longer than twenty years, provide mitigation measures to address impacts beyond the current proposal for twenty years. See attached email, May 28, 2015 to Roadrunner with option to consider annualized future cost.*

RESPONSE – It is assumed that current obligations and operation events beyond 20-yr will be reflected in currently under negotiation roadway improvement agreement.

*Comment (page 4) 4. Table 11 – Projected cost addressing (interim) roadway maintenance: The proposed \$0.05/ton road maintenance fee is reasonable assuming it will be paid until all proposed road improvements have been completed. “It is anticipated that gravel roadway mitigation costs will be incurred until such time that the roadway is paved. After pavement, on-going maintenance costs will be reduced with scope consisting of snow-plowing and every 7-years, the roadway receiving a chip-seal application.” The “on-going maintenance costs” shall be defined*

RESPONSE – On-going maintenance costs are assumed to be consistent with current La Plata County practices. On-going maintenance should be a component to the La Plata County / GCC roadway improvement agreement.

*Comment (page 4) 5. Executive Summary: Accident records, “Modifications to the roadway at these locations could improve safety.” Provide a summary of all mitigation measures proposed to address public safety issues associated with the truck traffic on County Road 120.*

RESPONSE – Primary safety improvement would be the realignment of the roadway to improve sight distance and radius of curve.

*Comment (page 5) 6. Appendix 4, Pavement Design Worksheet, calculated the pavement thickness based on a 20 year design life, 983 ADT for County Road 120, and an 18K ESAL impact of 1,250,000. “323 Non-mine traffic (use 2014 baseline)” ESAL Calculation – Background Traffic County Road 120, Table 8, ESAL calculations based on 2014 traffic counts.*

*State Highway Access Code “(3)evaluation of current daily and peak hour traffic data and 20th year projections including movements at all intersections and any key year midpoints **assuming build out of the study area based on zoning, comprehensive plans and growth estimates”***

*The County does not have zoning for the study area and growth projections are not included in the comprehensive plan, however the State has growth estimates that should be applicable for this area. It is understood background will not significantly impact ESAL calculations or the 99% impact attributed to mine traffic, however per Section 74-91 of the Code, this may change the standards for designing roadways within the jurisdiction of the County.*

RESPONSE – The revised GCC Energy Traffic Impact Assessment (11/19/15) does address the background traffic on CR 120 to a 20-yr projection. Development of a 20-yr factor utilizes La Plata County 2030 Transportation Integrated Plan (Appendix 9 of report).

*Comment (page 5) 7. Appendix 4, Pavement Design Worksheet: The final plan submittal, shall include a geotechnical recommendation based on actual field conditions that supports road structural sections necessary to insure at least a 20 year pavement based on the anticipated EASL loading*

RESPONSE – The final roadway plan structural pavement design will be based on a geotechnical recommendation.

*Comment (page 5) 8. Mitigating Impacts – Haul Road Assessment: “This information has been previously presented to the Citizens Advisory Panel (CAP). The CAP is an advisory panel assisting GCC Energy in identifying concerns and possible associated mitigation measures.” If the CAP provided a written summary of concerns and possible mitigation measures, include as an appendix to the TIA.*

RESPONSE – The cover letter for the CAP outlines specific recommendations. The CAP cover letter has been included as Appendix 10 of the TIA.

*Comment (page 5) 9. State Highway Access Code: “(17) the sensitivity of the adjacent neighborhoods or other areas that may be perceived as impacted” If required, address mitigation measures proposed for residential structures adjacent to County Road 120.*

RESPONSE – Mitigation measures proposed for implementation are paving and roadway geometry improvements consistent with La Plata County code. In addition, GCC Energy has instituted policy for haul trucks that requires reduction of travel speeds (10mph adjacent to residential structure in close proximity to roadway, 25mph on gravel sections, 5mph less than posted on asphalt sections).

Respectfully Submitted,



Mike Olson P.E  
Roadrunner Engineering, LLC

Cc: Trent Peterson – GCC Energy LLC  
Brian Kimmel – Southwest Land Services