

Mr. Daniel Murray, AICP
Senior Planner
La Plata County
1060 E. 2nd Ave.
Durango, CO 81301
daniel.murray@co.laplata.co.us

By email and United States Mail

December 15, 2015

GCC - King II Coal Mine Class II permit #2012- 0089

Dear Daniel:

I wanted to transmit to you the attached report of Eldon Strid, who is an experienced and deeply knowledgeable engineer who has worked for years in the evaluation of options for coal transport.

He has looked at the part of the Road Runner study that looks at coal transport alternatives, and believes that *"the level of detail shown ... is not adequate to make a decision considering cost of capital to GCC Energy, operating costs and different impacts to both GCC Energy and local citizens."*

He also states that *"Available information concerning comparison of haulage routes is not adequate for determining the best option as described above."*

Another observation worth noting is that:

"In the situation of GCC Energy, the number of truck trips across the existing public road is significant because of the small volume of coal (25 to 30 tons) that can be carried by individual over-the-road trucks. This negatively impacts the public road and other users as most county roads are usually not designed and constructed for this level of use considering air quality,

turning radius, grades, line-of-sight, traffic controls and other considerations. The highest annual production reported from King II Mine was in 2014 at 970,780 tons. Even though this is a high number of over-the-road truck trips, this is a relatively low annual production for a coal mine.

If off-highway trucks are used over a private single-use road, the total number of trips would be reduced as compared with over-the-road trucks. Off-highway trucks individual capacity is from 50 to 250 tons depending on type of units available. Typical capacity would be about 100 tons."

We very much hope that the County will take this information on board and consider it seriously in your decision process. We would request that this formally be made part of the record in this land use proceeding.

Sincerely,

A handwritten signature in black ink, appearing to read 'Luke J. Danielson', written in a cursive style.

Luke J. Danielson

cc: Ms. Victoria Schmitt
Mr. Trent Peterson
Crosscreek Ranch, LLC
SW CO Advocates
Ms. Robin A. Reilley, GISP



MINE ENGINEERS, INC.

3901 S. Industrial Road • Cheyenne, WY 82007 USA

Phone: 307-638-8833 • Facsimile: 307-638-0578

December 15, 2015

Mr. Luke Danielson
Law Offices of Luke J. Danielson, P.C.
219 N. Iowa Street
Gunnison, CO 81230

Re: Report on GCC Energy Coal Transport Options

Dear Luke:

In response to our discussions and site visit of November 5, 2015, I have prepared the following summary report to address the following work scope items:

1. Sharing any observations on the general economics of this project (GCC King II Mine), and the role transportation costs play in those overall economics including estimating remaining resources to be mined and remaining mine life;
2. Identifying any options for meeting the transportation needs of this mine that might get traffic off County Road 120;
3. Sharing any observations on the relative operating and other costs of the existing “Northern” haul route and the possible “Southern” haul route;
4. What observations do you have on the Road Runner report of July 31, 2015? Is there any reason to question the cost estimates for transportation alternatives?
5. Are you able to state whether the available information is adequate to allow a reasoned choice among transportation alternatives and if not, what information is needed to make that choice? What analysis do you think needs to be done to make a sound choice of transportation systems?
6. How likely is it that there is an option that might be acceptable to all sides? What is the most promising candidate for that role?
7. Providing suggestions on how to participate in the approval (EA, etc.) process to reach a solution acceptable to all parties.

The following documents have been provided or down-loaded from various sources concerning the King II Mine and its operating status:

- A. Supplemental Narrative for GCC Energy, LLC Class II King II Coal Mine, 12 August 2015, Brian Kimmel, Southwest Land Services, Inc.
- B. Argus Coal Daily, 16 January 2015
- C. Colorado Division of Reclamation Mining & Safety – GCC Energy, LLC King Coal Mine Permit number C1981035 from <http://mining.state.co.us/Reports/MiningData/SearchByMine.aspx> showing various documents including the following from July 14, 2015 (TR-24 AR#1):
 - a. GCC Energy, LLC Section 2.03.4 pages 4, 5, 6 (surface & coal ownership, lands contiguous)
 - b. GCC Energy, LLC Section 2.03.10 page 1 (Other Licenses & permits)
 - c. GCC Energy, LLC Section 2.05.3 pages 6, 6a, 8
 - d. GCC Energy, LLC Section 2.05.6 pages 1, 1a, 1b, 2
 - e. GCC Energy, LLC Maps Map King II-001, Permit & Adjacent Areas, Map King I Mine Permit & Adjacent Areas, Map King II-002 Surface Ownership, Map King II-OSM Surface Ownership, Map King II-004, Geology-Hydrology, Map King II-005 Mine Plan Map, King II-006 Soils, Vegetation & Land Use, King II-007 Operation Plan & Surface Features Map, King II-OSM-007 Surface Features Map
- D. Map from OSMRE provided by Carl Mount titled GCC Energy King II Mine – Lease Map dated 10/10/15? Showing mine workings and projected mining areas
- E. Extraction from GCC Energy LLC, King II TIA (7/31/15) titled “Haul Road Option Assessment” pages 5 through 7
- F. Environmental Assessment, EA Number CO-SJFO-00-102EA, National King Coal, LLC, Coal Lease Application, East Alkali Tract, COC 62920, Prepared by U.S. Department of the Interior, Colorado State Office, Montrose District, San Juan Field Office, Durango, Colorado, Cooperating Agency Office of Surface Mining, Reclamation and Enforcement, Western Regional Coordinating Center, June 16, 2001
- G. Three page summary titled “GCC Proposed Coal Lease Modification, COC-62920, Description of Operations, describing modification of the existing coal lease for addition of 952.21 acres to “...reduce the possibility of bypassing extraction...”
- H. Two page letter from U.S.Department of the Interior, Bureau of Land Management of notice to “Interested Party” for comments on a coal exploration application by Grupo Cementos de Chihuahua Energy, LLC (GCC) October 10, 2014;
- I. MSHA Mine Overview of GCC Energy LLC King II Mine of 11/12/15 downloaded from <http://www.msha.gov/drs/ASP/MineAction.asp> showing Injuries, Hours Worked, and Production, Totals since 2/27/2007 through second quarter 2015;

- J. Comment letter from LaPlata County Planning Department to Colorado Division of Reclamation, Mining and Safety as of June 10, 2015 concerning King Coal Mine (C-1981-035) Mid-Term Review No. 7 (MT-07) and Technical Revision No. 24 (TR-24);
- K. Preliminary Adequacy Review letter from Colorado Division of Reclamation, Mining and Safety to Tom Bird of GCC Energy, LLC as of 14 June, 2015
- L. Response letter from GCC Energy to Division of Reclamation, Mining & Safety of July 14, 2015 Re: Technical Revision #24 – Midterm Permit Review No. 7(MT-07) Adequacy Review #1 Response;

General Economics of the King II Mine and Available Coal Resources

Information which you provided and from documents above as well as the site visit of November 11, 2015 show the following:

- a. Local citizens describe that approximately 80% of coal transported from the King II Mine is hauled to Gallup, New Mexico for subsequent transfer by railroad to customers but this has not been verified by GCC or by Mine Engineers, Inc.; LSC Transportation Consultants, Inc. counted truck traffic at the intersection of SH 140 and CR 120N on December 9 and 10, 2015 with 24% to/from the north and 76% to/from the south on SH 140; Destinations of these trucks is unknown but may include Pueblo, Colorado (north bound) and Gallup, New Mexico (south bound) or other locations;
- b. Haul distance from the King II Mine to Gallup, NM is approximately 155 miles one-way;
- c. Transport is by over-the-road trucks with a capacity of approximately 30 tons each;
- d. Coal is mined by underground room and pillar methods;
- e. Based on information from Supplemental Narrative for GCC Energy, LLC mine employment is approximately 150 people who are paid approximately \$12 million annually in salary and benefits with 282,402 man-hours reported to MSHA for 2014;
- f. Life of mine from remaining resources within the State of Colorado lease and the adjacent federal coal lease COC62920 is unknown and may be as low as 2 years at the current annual production rate of 970,780 tons for 2014.

The truck transport to Gallup, NM adds significant cost to the coal and is estimated to be approximately \$4.50 per loaded mile or \$700 per 30 ton load or a unit cost of \$23.33 per ton. Based on the above labor cost, which is assumed to include payroll taxes and benefits, the direct labor cost component of coal produced and loaded at the King II Mine is approximately \$12.36 per ton. Typically, operating supplies cost is approximately equal to labor cost, which means that cash cost for production of coal loaded into the truck for transport would be approximately \$24.72 per ton. Considering that most coal is delivered to Gallup, NM for transfer on to the railroad and delivery from there to the customer, which is unknown, the cost of coal to this point would be more than \$48.05 per ton. This cost also does not include depreciation, depletion, amortization, production taxes and royalties, profit or corporate overhead.

Considering the state of the coal industry, this is a very expensive product to the customer and there must be significant benefit to the customer for using this coal. Other coal available in the market, such as Powder River Basin Wyoming production, is much less costly to produce. As an example, spot coal pricing shown in Argus as of early 2015 for CO, UT, WY and Powder River Basin was \$29.00/ton and \$12.76/ton, respectively. The heat value of King II Mine coal is about 13,200 to 13,500 Btu/lb. as compared with 11,300 Btu/lb. for CO, UT, WY and 8,800 Btu/lb. for Powder River Basin coal. Spot prices are fob rail car at the mine site.

A projection of recoverable coal resources remaining for mining by King II Mine is shown below:

Existing State of Colorado lease – 0.4 million tons (estimate)

Existing federal lease COC62920 – 7.05 million tons (as leased prior to mining)

By-pass lease modification of COC62920 – 10.52 million tons

Total under lease or in process of leasing – 17.97 million tons

Less mined to date by King II Mine – 4.78 million tons

Available for mining – 13.19 million tons – 13 years of operation

Exploration area – 26 million tons – estimate subject to results of drilling, geology, mapping, etc.

Possible remaining coal resources could support continued underground mining for about 25 years but this is speculative given the information that is available. The mine plan layout provided to OSMRE by GCC Energy is the basis of available coal resources which have been or are being permitted for mining. The issue that GCC Energy has is that they do not have permission to mine coal in the lease modification or the exploration area. This would leave them about 2.67 million tons to mine. This situation is a time problem given the schedule for permit modification assuming the lease modification can be issued within the next year. This is critical for GCC Energy and most likely influences their decisions on commitments to capital expenditures for mitigating impacts associated with use of CR120.

Transportation Options to Avoid CR120

Generally, transport methods used for moving coal and other bulk commodities include over-the-road trucks, off-road trucks, conveyor belts, aerial trams/conveyor and pipelines. Each of the methods has advantages and disadvantages. These methods can be described as discontinuous (mobile equipment) or continuous with relative attributes as summarized in the following table.

Method	Relative Capital Cost	Relative Operating Cost	Level of Production	Environmental Considerations
Over-the-road trucks	Low to GCC – use contractors	High	Low – Small units (30 t)	Noise, dust, many trips
Off-road trucks	Low to GCC – use contractor	Medium/high	Medium – large units (+100 t)	Private road, less trips
Conveyor belt	Medium	Low	Medium to high; best for 24/7 operation	Quiet; fixed position; away from public
Aerial tram/conveyor	Very High	Low	Medium; best for 24/7 operation & rugged terrain	Overhead; quiet; limited footprint
Pipeline	Very High	Medium/low	Medium/high	Requires water and dewatering sys; quiet; limited footprint

Discontinuous (mobile equipment) methods, such as over-the-road or off-road trucks allow the mine operator to limit capital investment by using the maximum available time for transport while matching number of units with production. Depending on required improvements and maintenance, over-the-road trucks using public road may reduce capital investment to GCC through contracting with operators who have their own equipment. Use of off-road trucks may increase capital investment as compared to over-the-road truck because a single use roadway would be required. In addition, there are fewer operators who would have their own equipment willing to contract with GCC.

In the situation of GCC Energy, the number of truck trips across the existing public road is significant because of the small volume of coal (25 to 30 tons) that can be carried by individual over-the-road trucks. This negatively impacts the public road and other users as most county roads are usually not designed and constructed for this level of use considering air quality, turning radius, grades, line-of-sight, traffic controls and other considerations. The highest annual production reported from King II Mine was in 2014 at 970, 780 tons. Even though this is a high number of over-the-road truck trips, this is a relatively low annual production for a coal mine.

If off-highway trucks are used over a private single-use road, the total number of trips would be reduced as compared with over-the-road trucks. Off-highway trucks individual capacity is from 50 to 250 tons depending on type of units available. Typical capacity would be about 100 tons.

Use of continuous haulage methods such as conveyors, provide low operating cost transport but high capital investment for this single use method. In the case of GCC Energy production, if the highest annual production volume is distributed over the available operating time, the average hourly rate would be approximately 125 tons. For bulk material transport, this is a relatively low value and thus, the advantage of low operating cost is adversely impacted by this low production

rate. Thus, this method is likely more expensive than discontinuous methods described above. Other continuous haulage methods require higher capital investment than a conveyor and are not considered feasible for this application. Any continuous method would require an elevated structure from the King II Mine loadout to cross public roads and the shortest route to a truck loadout adjacent to State Highway 140 for subsequent loading of over-the-road trucks.

It is unlikely that use of a conveyor would be lower cost as compared with over-the-road or off-highway trucks on a single use road. Use of off-road trucks on a single use road away from residences along CR120 to a site adjacent to State Highway 140 would be an alternative to current practice of over-the-road trucks using CR120 from the King II Mine loadout to State Highway 140. A cost comparison between these methods could show which has lower impact and may provide a solution to the truck traffic concerns of local citizens. Elements of a comparison of methods may include the following:

1. Life of use/mine
2. Description of each methods including environmental considerations, ie. noise, light, emissions/dust, etc.
3. Preliminary design – plan and profile
4. Property ownership and acquisition required
5. Roadway construction and maintenance cost
6. Haulage equipment cost
7. Haulage equipment operating cost
8. Reclamation cost
9. Net present value calculation
10. Impact comparison/assessment
11. Summary of findings

GCC Energy utilizes two stockpiles at the mine site. The estimated capacity of each is 7,500 tons and accommodates approximately 4 to 6 days of mine production based on the 2014 annual production rate. Low storage volume requires that coal be hauled from the mine site on a daily basis or production would stop.

Relative Cost of the Northern vs. Southern Routes

Distance measurements to a common point on State Highway 140 from the King II Mine loadout shows that the Northern route using CR120 and State Highway 140 is approximately 3.5 miles longer than the Southern Route. Assuming that the over-road-truck cost is \$4.50 per loaded mile, this additional distance equals approximately \$0.525/ton higher cost for the Northern route than the Southern route. This comparison does not consider elevation difference in the transport route as it is assumed this would be negligible given speed limits currently in place as well as possible increase of speed limit to 40 miles per hour with proposed upgrades to existing CR120.

Road Runner Report

Coal Product to Market Options, Table 1, is a summary of Opinion of Probable Cost (OPC). This approach is appropriate for comparing different haulage methods and routes. However, the level of detail shown in the table is not adequate to make a decision considering cost of capital to GCC Energy, operating costs and different impacts to both GCC Energy and local citizens. It is suggested that this table be modified to be an incremental analysis comparing all Options and then select the two lowest total cost Options for further analysis. The second tier analysis would expand the comparison of the two lowest cost Options by including more detailed costs and an assessment of impacts for each as listed above. Higher cost Options would be categorized as “considered but eliminated”. This information would be suitable for inclusion in an Environmental Assessment. This analysis may be the basis of joint collaboration between GCC Energy and local citizens.

As an example, column (a) shows Near Term Improvements (Year 2015) as being equal to all Options. This column can be eliminated in the incremental analysis as it is common to all Options. Secondly, it would be appropriate to provide both capital and operating costs on an annual basis by year for the 20 year life of the Mine that is assumed. Some schematic designs should be included to support the cost assumptions and the operating conditions so that impacts can be quantified. Sufficient detail should be provided with the schematic designs to be able to show approximate dimensions and locations, facility types and descriptions, environmental controls/mitigation measures, etc.

Impacts such as noise, dust, light, etc. are important to the citizens and will need to be determined as part of the analysis. Elements of the analysis important to GCC Energy would include capital/cost of capital, remaining life of the King II Mine, operating costs and controls which address citizen concerns. This type of analysis is critical input to the Environmental Assessment process which is ongoing. It is suggested that GCC Energy can provide operator committed mitigation that can be implemented with each of the two “best case” Options. These measures would then be part of the Environmental Assessment.

Adequacy of Available Information

Available information concerning comparison of haulage routes is not adequate for determining the best option as described above. It would be helpful for GCC Energy to describe the mine life and how it affects their transport options. The information provided shows that GCC Energy has coal resources in their current federal and State of Colorado lease, resources they are attempting lease adjacent to the existing federal lease boundary and resources that they are planning to explore for. It is assumed that acquisition of these properties for future mining would provide a resource base which would support a life of mine transport plan that is suitable for all parties.

Likely Best Option

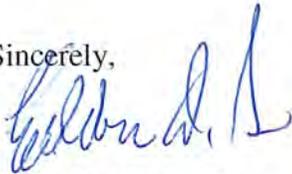
It is uncertain what the likely best option is given the information available. GCC Energy will tend to select an option that is lowest in capital investment and addresses safety but may commit to maintenance work that can be expensed and phased to match their planned use. This would lower their risk. Local citizens impacted by truck traffic will want the safest option which also mitigates impacts from noise, dust, light, etc. Safety of transport may be the common denominator that brings the parties together for the best solution.

Participation in the Process

The Environmental Assess process is designed for and requires input from agencies and the public to be successful for all parties. Participation within the system by citizens who think they are or will be impacted is important so that all alternatives can be evaluated and the most appropriate alternative(s) selected. It is likely that the EA document, which is forthcoming, will be changed to an EIS because there appear to be significant impacts resulting from the King II Mine and its proposed lease modifications. It is important that the local citizens communicate with GCC Energy and participate in the EA/EIS process so that issues can be mitigated and the lease modification issued to GCC Energy. Without the lease modification, GCC Energy King II Mine life is very limited.

Please let me know any questions that you may have concerning our response to the scope items above. The information presented above is subject to change and conclusions from this information may also be different as a result of any changes. In this regard, please advise me of any conditions or data which become available during the future that is different than described above. Thank you for the opportunity to provide your client mining engineering services.

Sincerely,

A handwritten signature in blue ink, appearing to read "Eldon D. Strid". The signature is fluid and cursive, with a large initial "E" and "S".

Eldon D. Strid, P. E.

ELDON D. STRID, P.E.

PRINCIPAL ENGINEER

SUMMARY

A registered professional mining engineer with over 35 years of experience in mining operations, design and engineering, planning, feasibility, and environmental aspects of the mining industry. Emphasis on practical application of mine plans, designs and permits through use of technical and management skills.

QUALIFICATIONS

PROFESSIONAL HISTORY

- Principal – Mine Engineers, Inc. – 1993 to present
- Consulting Mining Engineer – 1988 to 1993
- Director of Engineering – ACZ Inc. – 1980 to 1988
- Chief Mine Engineer, Assistant General Mine Superintendent, Senior Mine Engineer – Morrison Knudsen Corporation – 1977 to 1980
- Pit Foreman, Project Engineer, Manager Northern Appalachian Exploration – Consolidation Coal Company – 1973 to 1977

EDUCATION

Bachelor of Science in Mining Engineering ■ 1973
South Dakota School of Mines and Technology ■ Rapid City, South Dakota

LICENSES AND MEMBERSHIPS

LICENSED PROFESSIONAL ENGINEER

Arizona • Alaska • Colorado • Idaho • Montana • New Mexico • Oregon • Utah
• Washington • Wyoming

MEMBERSHIPS

- National Society of Professional Engineers
- Society for Mining, Metallurgy and Exploration
- Wyoming Society of Professional Engineers

OTHER

- Certified Surface Mine Foreman – Wyoming
- Certified Shot-Firer – Wyoming



EXPERIENCE

Consulting mining engineering experience covers a wide variety of clients and projects throughout the industry. This experience includes the following areas.

PROJECTS

- Exploration Drilling Management
- Reserve Evaluation
- Operating and Capital Cost Estimates
- Economic Analysis and Feasibility
- Mine and Reclamation Plans
- Equipment Application Studies
- Facilities and Materials Handling System Layout
- Project Management
- Permit Preparation and Renewal
- EIS/EA Technical Support
- LMU/R2P2 Revision
- Mine Evaluation and Optimization
- Construction Management

MINES

- Surface Coal and Clay Mines
- Open Pit Brown Coal Mines
- Underground Coal Mines
- Gravel Quarries
- Gold and Silver Mines

METHODS AND EQUIPMENT

- Dragline
- Truck and Shovel
- Bucket Wheel and Conveyor
- Underground Continuous and Conventional Systems
- Other Mobile Equipment