This Draft Environmental Impact Statement (DEIS) has been prepared to analyze the environmental consequences of the development of the Red Cliff Mine project as proposed by CAM–Colorado, LLC (CAM). The Red Cliff Mine would be a new underground coal mine located in northwestern Colorado. The right-of-way (ROW) and use of public lands are necessary to support expansion of the CAM mining operation. This DEIS is a site-specific analysis of potential impacts that could result from the implementation of a Proposed Action or alternatives to the Proposed Action. Impacts on private as well as federal lands are disclosed and analyzed.

The need to prepare an Environmental Impact Statement (EIS) in accordance with the National Environmental Policy Act (NEPA) was triggered when CAM submitted an Application for Transmission and Utility Systems and Facilities on Federal Lands on September 27, 2005 for railroad facilities. Two additional connected actions will also be analyzed in the EIS. CAM submitted a Lease by Application (LBA) to the U.S. Bureau of Land Management (BLM) to lease federal coal on approximately 11,660 acres adjacent to CAM's existing leases. The LBA (COC 70538) is for underground mining. Through a tract delineation process BLM proposes to modify the LBA to include approximately 14,466 acres. BLM determined that, if this coal were to be leased, it would be via a competitive bid process. Grand Valley Power (GVP) submitted a separate Application for Transmission and Utility Systems and Facilities on Federal Lands to BLM, dated June 8, 2007, to construct an electric transmission line for the Red Cliff Mine power requirements.

BLM is required to respond to these applications in accordance with 43 *Code of Federal Regulations* (CFR) 2802.4. BLM must approve, approve with conditions, or deny the ROW grant for the mine and aboveground facilities on federal lands and the ROW grant for the transmission line on federal lands.

Other agencies and government entities have been invited to participate in the NEPA process as cooperating agencies. These include:

- U.S. Army Corps of Engineers (USACE)
- Office of Surface Mining, Reclamation, and Enforcement (OSM)
- Colorado Department of Natural Resources - Division of Reclamation, Mining, and Safety (DRMS), and Division of Wildlife (CDOW)
- Mesa County
- Garfield County

This EIS analyzes the proposed 30 year life of the Red Cliff Mine; however, of necessity, it does so using currently available information. Several additional mine permit applications would be required during the life of the mine, and each would be subjected to the environmental review and approval process, as required by law.

This EIS only contains detailed information from the mine permit application for CAM's existing coal lease. Therefore, the environmental impacts of mining within the existing lease area are addressed with more certainty than is possible for the proposed LBA and future lease areas, for which mine permit applications have not yet been prepared. If CAM is successful in acquiring the LBA, they would need to submit a mine permit application to DRMS and OSM.

OSM would determine if they would prepare a supplemental NEPA document (either an environmental assessment or an EIS) to accompany their recommendation to the Assistant Secretary for Lands and Minerals for approval or disapproval of the mine permit. Concurrently with OSM's mine permit application review, the DRMS would also conduct their review and approval process.

PROJECT DESCRIPTION

The proposed Red Cliff Mine project area is located approximately 11 miles north of the towns of Mack and Loma, Colorado, and 1.5 miles east of Colorado State Highway (SH) 139. CAM currently mines approximately 280,000 tons of coal per year from the underground McClane Canyon Mine (MCM), located 3 miles north of the proposed Red Cliff Mine. The MCM coal provides resources for Xcel Energy's Cameo Power plant east of Grand Junction. CAM plans to continue to deliver coal to the power plant by truck as long as the plant continues operation and CAM has the supply contract, averaging 230 truckloads per week. CAM plans to operate MCM as long as the Cameo Power plant is operational and/or until the economic recovery of coal is no longer feasible. If the Cameo Power plant is shut down while economically recoverable coal is still available at the MCM, CAM may truck coal from MCM to the Red Cliff Mine loadout. When the MCM is shut down, trucks would originate from the Red Cliff Mine. With increased production and the railroad connection, coal produced from the Red Cliff Mine could be transported (sold) to power plants in the eastern and western portions of the country. The clean (washed) coal is high-quality, low-sulfur coal with a heating value of 11,000 to 11,500 British thermal units (Btu).

For the Red Cliff Mine, CAM is proposing to construct new mine entries (portals) and associated facilities to extract low-sulfur coal from existing Federal Coal Leases C 0125515, C 0125516, and C 0125439 (defined collectively as logical mining unit COC-57198); potential new federal coal leases; and a small amount of private coal. In addition to locating facilities on the existing and potential new coal leases, CAM would locate surface facilities on BLM lands within the boundaries of the proposed ROW and Land Use Application area (approximately 1,140 acres). These facilities would include a waste rock disposal area, railroad loop, unit train loadout, and a conveyor system to move the coal and waste rock. County Road (CR) X (Mitchell Road or Power Line Road) would be upgraded to serve as the mine access road from SH 139. Other facility components are listed in the following text.

The railroad would be located on BLM and private lands, with the railroad connecting to the existing Union Pacific Railroad (UPRR) near Mack, Colorado. The proposed railroad would traverse approximately 9.5 miles of BLM land, including one crossing of SH 139 and approximately 5 miles of private land. The proposed railroad would also cross CR M.8, CR T, and CR 10.

Electric power is needed at the mine to run the underground mining machinery, the conveyor system, and the other mine support facilities. CAM would contract with GVP, the local utility, to supply the necessary electric power. GVP would need to construct a new 69 kilovolt (kV) transmission line from the Uintah Substation near Fruita to the mine to supply this power. The transmission line would be approximately 14 miles long, with approximately 7 miles on federally managed lands and 7 miles on private land.

Underground mining would be conducted 24 hours per day, 7 days per week, and 365 days per year by room and pillar and longwall mining techniques. The production from the Red Cliff Mine would be up to 8,000,000 tons per year (tpy) of clean coal, with an estimated life of mine of 30 years. CAM is proposing to load the coal onto rail cars at the mine site and ship it to coal consumers via the railroad. The production rate at the mine would be controlled by market conditions. Construction of the facilities associated with the Red Cliff Mine would take approximately two years to construct and would cost approximately $160 million (2006 dollars). Proposed facilities associated with the mine include:

- Portal conveyor transfer buildings
- Fuel oil storage/fueling stations
- Bathhouse/office building
- Equipment shop
- Warehouse
- Washbay
- Covered storage
- Sewage treatment plant
- Water tank
- Water treatment building
- Mine vent fan
- Transmission line
- Non-coal waste storage
- Rock dust storage
- Pump house
- Railroad
- Maintenance road
- Water pipeline and diversion
- Coal storage piles
- Unit train loadout
- Coal preparation plant
- Mine access roads

PURPOSE AND NEED

The basic purpose of this project is to mine, transport, and offer coal for sale at competitive prices to help supply the energy needs of the U.S. The purpose of the proposed Red Cliff Mine project is to provide better access to CAM's existing coal leases and provide access to the adjacent potential federal coal leases. CAM proposes to utilize public and private lands to effectively and efficiently mine the coal and transport it to market. Current facilities at the MCM are not adequate for this purpose.

The BLM recognizes the development of coal reserves as important to both the local economy and the nation. This project would be consistent with the goals of the Grand Junction Resource Area (now Field Office) Resource Management Plan (RMP) (BLM 1987) as well as the 2001 National Energy Policy and the Energy Policy Act of 2005.

The project would encourage and facilitate meeting the country's energy needs from a domestic source; and it would help meet the current and future domestic market demand for low-sulfur coal, thereby supporting clean coal initiatives. Integral to the development of the coal reserves is the need to transport the coal to market. Currently in the western U.S., the vast majority of coal is transported by rail.

ALTERNATIVES

Alternatives are developed based on the applicant's Proposed Action. The objective is to determine if there are reasonable alternatives that meet the purpose and need for the project and that could implement the Proposed Action in a less environmentally damaging manner. Alternatives are also developed in response to input received from public and agency scoping.

Alternatives that have no obvious advantages, are not practicable, or are unreasonable from a development or cost basis are not carried through the EIS for detailed study.

The Proposed Action includes a number of components/facilities (Section 1.2, Background) required to meet the purpose of mining and selling coal. Alternatives to individual project components were developed to determine if they could be used to meet the purpose and need, were practical and feasible, and reduced environmental impacts and/or addressed public and agency concerns. Some of the component alternatives examined were suggested during public scoping for the project (BLM 2006). A wide range and variety of alternatives were examined, with a focus on the following issues:

- Means of transporting the coal
- Coal transportation routes and delivery locations
- Means and routes for delivering the required electrical power to the mine facilities
- Sources and routes for delivering the water to the mine facilities
- Means or locations for disposing of waste rock
- Methods of venting methane gas
- Future coal lease area

Numerous alternatives for each of these issues were initially examined. Most were rejected as they did not meet purpose and need, had no obvious advantages, had greater environmental impacts, or were not practicable from a developmental or cost basis. All alternatives initially considered are included in Table 2-2, Alternatives Considered Summary. Some alternatives were considered in greater detail and are included in Table 2-1, Alternatives – Secondary Screening. Additionally, the Proposed Action as originally submitted to the BLM was modified during the data collection and analysis, in response to public and agency comments and to reduce environmental impacts. These changes are included in the Proposed Action; the original alternatives are not being considered further. NEPA also requires examination of the No Action Alternative, even though it would not meet the project's purpose and need. The following alternatives are considered in this DEIS. The DEIS does not identify a preferred alternative at this time.

ALTERNATIVES EXAMINED IN DETAIL

Project Components	Alternatives Examined in Detail
Means of transporting coal	Proposed Action

Coal transportation routes and delivery locations	• Proposed Action with modifications
	  • CR M.8 grade separation*
	  • Noiseless crossings*

Electrical power transmission	• Proposed Action
	  • Alternative A
	  • Alternative B
	  • Alternative C

Sources and routes of water supply	Proposed Action
Means/locations of waste rock (gob) disposal	Proposed Action with modifications

ALTERNATIVES EXAMINED IN DETAIL

Project Components	Alternatives Examined in Detail
Methane venting	Proposed Action (including adaptive management strategy)
Coal lease area	Proposed BLM Action (modification of lease area from 11,660 acres to 14,466 acres)

Note: * = Alternatives that do not affect BLM-managed lands.

Means of Transporting Coal

Rail

Moving the coal by rail is the most efficient means of transporting coal due to the extensive volume and capacity of rail cars. Approximately 8,000,000 tons would be moved from the Red Cliff Mine annually. Significant mining of the coal reserves in the area has not occurred because of the remote location and difficulties in getting the coal to market. A railroad spur would be able to carry the 8,000,000 tpy. There would be an average of four trains per day, two full and two empty. Each rail car would carry approximately 100 to 110 tons of coal, and each train would consist of between 100 and 120 rail cars with three, four, or five locomotives.

Coal Transportation Routes and Delivery Locations

Proposed Action with Modifications

A railroad spur is proposed to connect the Red Cliff Mine to the railroad main line near Mack, Colorado, to cost-effectively transport coal into the market. The proposed railroad spur would traverse approximately 9.5 miles of BLM land and approximately 5 miles of private land. The railroad would cross the U.S. Bureau of Reclamation- (BOR) and BLM-administered lands, which are outside of the proposed coal lease area and therefore require ROW approval on these federal lands.

It is proposed to load the coal onto rail cars at the mine site and transport the coal via the railroad spur to the main rail line connection. The loadout would be comprised of a coal stockpile, reclaim tunnel, conveyor belt(s), and loadout tower. Ethylene glycol would be applied to the coal and coal cars to minimize freezing during winter months. These products are stored in tanks located near the loadout structure. There would be an average of four trains per day (two full and two empty) at a maximum production rate of 8,000,000 tpy, traveling at a speed of approximately 20 miles per hour (mph) full and 25 mph empty. Trains would typically be 6,500 to 7,700 feet in length.

The trains would cross public roads in four locations. Proposed crossings include a grade-separated crossing for SH 139 and at-grade crossings for CR 10, CR T, and CR M.8. The train would cross through these intersections a maximum of four times per day and would not stop on the track as they cross the county roads. The amount of time that the trains would block the county roads would vary according to speed, number of cars in the train, and whether the southbound loaded trains would need to stop between CR 10 and CR M.8 for mainline access. Estimates are that the trains would block CR M.8 for 5.5 to 6.5 minutes and would block CR 10 for 6.5 to 7.0 minutes.

The at-grade crossings have been designed to provide the maximum sight distance possible. The average vehicle volume on these highways is low, and sight distance is generally good. Proposed installation of crossing warning devices and two-quadrant gate systems with pavement markings at the CR 10 and CR M.8 crossings would provide additional safety measures. Figure 2-9, Grade Crossing Safety Devices, depicts typical grade crossing safety devices to be installed. Active warning devices that would give advanced warning of "train on track" would be installed along the county roads before the crossings. A "wye" would be constructed to link the railroad spur with the main line at Mack to allow uninterrupted train flow in all directions.

To improve the sight distance at the CR 10 crossing, CAM has worked with Mesa County to realign CR 10 (Figure 2-3, County Road 10 Realignment). This realignment would provide a longer time for vehicular traffic to see the crossing and allow CR 10 to cross the tracks at an angle closer to 90 degrees.

This alternative is the most practical from several standpoints. Topographically, it does not have more than a 2-percent grade and minimizes the necessity for cut and fill. This alternative has purposefully reduced impacts on wetlands by avoiding 3 acres of wetlands. Further description of this alignment and the revisions made to the originally proposed alignment are included in the Proposed Action (Section 2.11.1, Proponent Proposed Action) and shown on Figure 1-1, Proposed Action.

County Road M.8 Grade Separation

In response to concerns raised by the public and Mesa County, an alternative crossing of the rail alignment at CR M.8 will be examined. This alternative would include construction of a bridge over the rail route and a new bridge over Mack Wash (Figure 2-4, County Road M.8 Realignment). Crossing the rail line would require raising the grade of CR M.8 a maximum of 35 feet above the existing grade. Due to the short distance between the rail line crossing and Mack Wash (400 feet), the grade at the wash crossing would also have to be raised, requiring a new bridge or concrete box in this location as well. Approximately 175,000 cubic yards of fill would be required for this alternative, as well as a wider footprint to accommodate the raised grade.

Noiseless Grade Crossing Option

This alternative would consist of constructing special at-grade railroad crossings of CR M.8 and CR 10. Construction of these noiseless crossings means that the train would not be required to sound a horn in normal operating conditions. A noiseless crossing is actually a quiet zone established per 49 CFR Part 222, the Federal Railroad Administration (FRA) Train Horn Rule. There are two ways to establish a quiet zone with Supplemental Safety Measures (SSMs). FRA needs to be notified of these quiet zones; FRA will not re-visit the quiet zone to monitor compliance. The Colorado Public Utilities Commission (PUC) must grant the change to the crossings in a quiet zone. The quiet zone may have only one crossing (as in this case), but the crossing must be at least 0.5 mile in length. The crossing equipment must also include constant warning time (detects train speed and lowers the gate arms so that 20 seconds of gate down time exists before the train enters the crossing), power out indicator, and a lighted "X" sign to indicate to the train that the crossing is a quiet zone crossing. The noiseless crossing could include both CR 10 and CR M.8, or just CR 10 if the CR M.8 grade-separated crossing alternative is selected.

The two methods for SSMs are:

- Standard crossing gate system with a median barrier (at least 6-inch-high curbs) extending at least 100 feet on each side of the crossing.
- Four-quadrant gates with standard railroad gate system but with four gate arms. Two of the gate arms operate in the standard manner. The two additional gate arms are lowered a few seconds after the usual gate arm to prevent trapping a car between the gates.

The first method is preferred, as it has proved to be a safer alternative. With the four-quadrant gate configuration, motorists are still able to drive around the first gates in an attempt to beat the delayed second arm before it gets all the way down. The regulations also allow the train crew to sound the horn in a quiet zone in an emergency. The train crew is responsible for determining what constitutes an emergency. Problem drivers, trespassers, and animals are examples of emergency situations during which the horn may be sounded.

Electrical Power Transmission

Proposed Action

GVP is the local provider of electricity and electrical transmission services, and CAM asked GVP to provide electrical services. GVP determined that existing transmission lines in the area of the Red Cliff Mine are not adequate to meet the needs of the proposed Red Cliff Mine. With input from CAM, GVP evaluated electrical needs, substation capacities, and transmission line alignments for the proposed project and determined that the power could best be supplied from the Xcel Energy Uintah Substation at Fruita.

A 69kV transmission line would be required to supply the required power. Figure 2-11, Typical Transmission Pole Configuration, depicts typical pole and conductor facilities for a 69kV transmission line. To reach the Red Cliff Mine, a portion of the transmission line would cross BLM-managed lands. A ROW application for the transmission line has been submitted to BLM.

The GVP-preferred alignment is shown in Figure 1-1, Proposed Action. The transmission line would be dedicated to supplying power to the Red Cliff Mine; there would be no additional users along the line. The proposed line would be designed for an underbuild distribution circuit (12kV) from the Uintah substation to a point just south of the Highline Canal. This circuit would distribute electrical power to local businesses and residents. Figure 2-11 depicts a typical pole and conductor facility for the underbuild section. There would be no underbuild circuit north of the Highline Canal on BLM-managed lands.

The primary substation would be constructed at the end of the alignment shown in Figure 1-1. A substation contains electrical transformers to reduce the line power to a suitable voltage. High-voltage overhead transmission lines would be extended from the primary substation to pad or pole mounted transformers located around the site as necessary to provide electrical power to the mine facilities.

Transmission Line Alternatives

Three alternatives have been developed in response to potential environmental, access, and land ownership issues. These alternatives are shown on Figure 2-18, Transmission Line Alternatives. All alternatives share the same termini; beginning at the Xcel Uintah substation and ending at the

proposed substation. Alternatives A and B share a common route from the Uintah substation along CR 15, CR M, and CR 16 to just north of the Highline Canal; and along the existing pipeline/transmission line in Sections 15, 16, 22, 23, and 26, Township 8 South, Range 102 West. Alternative C shares a route with the Proposed Action from the substation along CR 15, CR M, and CR 14 to just north of the Highline Canal. All land south of the Highline Canal is private, but the transmission line would be constructed in existing utilities easements. North of the Highline Canal, land status is mixed BLM and private; the only easements are along the existing transmission line and pipeline referenced previously.

Alternative A follows CR 16 from north of the Highline Canal to the existing transmission line/pipeline easement in Section 26. This provides easy access but requires additional angle (turning) structures. Mesa County does not have access easements through the private land along CR 16 north of the Highline Canal.

Alternative B follows section and property lines to minimize private land crossings and the need to obtain access easements. Access would be more overland but would follow some existing disturbance and access roads. The line would be harder to access in inclement weather. The alternative crosses three BLM isolated parcels of land; that is, BLM-managed lands surrounded by private land.

Alternative C from the Highline Canal crosses BLM lands to connect with the proposed rail corridor approximately 1,500 feet east of SH 139. This alternative avoids private lands and consolidates railroad, water pipeline, and transmission line disturbance and access for approximately 3.4 miles. Access between the Highline Canal and the rail corridor would be a mix of existing roads/two-tracks and overland travel.

Sources and Routes of Water Supply

Proposed Action

Adequate water resources are not available at the Red Cliff Mine site, so water must be piped to the mining operation. CAM has a 3.0 cubic foot per second absolute water right on Mack Wash, near Mack (Case No. 03CW228). A portion of those waters, totaling approximately 700 acre–feet per year (1.0 cubic feet per second [cfs]), would be piped to the Red Cliff Mine site for use during mining operations. A water-diversion structure would be constructed in-channel on the west bank of Mack Wash, just north of the CR M.8 bridge. The pump and waterline system would have a capacity of approximately 750 gallons per minute (gpm). The diversion/pump would be connected to a meter and water pipeline. The pipeline would be constructed of steel and polyvinyl chloride (PVC) and would be buried along the railroad spur alignment. It would extend to a water tank above the mine portals. This pipeline would supply all of the water needs for the mine operation and would be pumping water more or less continuously throughout the year. The system would remain in operation for the life of the mine. Best Management Practices (BMPs) would be utilized during construction to minimize impacts to in-channel and riparian habitat and to prevent bank degradation. CAM would obtain a permit from the USACE prior to constructing the diversion structure in Mack Wash.

A water tank would be located at the Red Cliff Mine site above the portal level. The water tank would be a fabricated steel tank constructed on a concrete or oiled-sand base. The tank would be approximately 52 feet in diameter and 32 feet high, providing a capacity of approximately 500,000 gallons. A smaller water tank would also be constructed near the coal preparation plant.

Means/Locations of Waste Rock (Gob) Disposal

Proposed Action with Modifications

A waste rock disposal area encompassing approximately 190 acres was originally proposed. During agency scoping, the CDOW expressed concern regarding impact to the sage-covered terraces at the south end of the disposal area. To lessen the impact to this important wildlife habitat, this feature was redesigned to impact fewer acres of this habitat. Figure 2-6, Waste Rock Pile, shows both the original area and the redesigned waste rock pile.

Methane Venting

Proposed Action

Ventilation air systems are used in underground mines to maintain low concentration levels of methane during mining operations, as methane is combustible at concentrations between 5 percent and 15 percent. As a safety precaution, ventilation systems are required in mines that have any detectable levels of methane.

Coal mine methane (CMM) degasification systems are used to supplement mine ventilation air systems to ensure that methane in underground mines remains within safe concentration levels. While degasification systems are primarily used for safety reasons, they can also be used to recover methane to be utilized as an energy resource.

The Proposed Action is to vent methane using a ventilation fan and 2 to 3 methane degasification wells per longwall panel. Methods of reducing methane emissions will be examined and implemented using an adaptive management strategy to determine the technical, economical, and legal feasibility.

A mine ventilation fan and steel duct work would be located at the return entry on the portal level. The ventilation fan is approximately 8-feet in diameter. It will likely be necessary to install two or three methane degasification wells in each longwall panel. Methane degasification wells are drilled from the surface in advance of longwall mining. As the longwall panel advances, the methane wells begin to function. After the longwall panel is complete and sealed the methane wells are turned off and sealed.

The location of the methane wells and the timing of drilling are unknown at this time. Methane well placement would be based on need as established by the conditions in the mine as well as surface conditions and will be designed site-specifically as the project progresses.

On their existing leases, CAM has agreed to pursue an adaptive management strategy with BLM. BLM would propose a similar strategy with any future lessee. 43 CFR 46 contains the U.S. Department of Interior's regulations for implementing the National Environmental Policy Act. These regulations were amended effective November 14, 2008 to allow for the incorporation of adaptive management strategies into alternatives, including the Proposed Action.

An adaptive management process will be utilized to evaluate the feasibility of mitigating methane from the ventilation air fans and any methane degasification wells for the Red Cliff Mine. Upon approval of the mine plan, the mine operator will have one (1) year to identify existing methane recovery projects and pilot ventilation air methane (VAM) projects that may be applicable to this project. At the end of the one (1) year time period, the mine operator will

submit a report outlining the technical and economic feasibility of mitigating and/or capturing and using the methane gas being vented at these projects. Annually thereafter, the mine operator shall provide BLM with summaries on the status of these projects and any mitigation and/or capture methods implemented, including the effectiveness of methane capture, the percent of methane captured, any operational difficulties, and findings regarding suitability of the projects' costs and adaptability. The annual reports must also outline any legal obstacles precluding implementation of any methane mitigation and/or capture. If methane mitigation and/or capture is deemed technically, economically, and legally feasible, the mine operator and BLM will develop a schedule for implementation.

Coal Lease Area

In selecting a lease area, BLM must consider the feasibility of mining the coal using modern mining techniques and maximizing the recovery of public resources. Currently, it is feasible to mine this coal using only underground mining methods. Surface mining is not an option due to the ratio of the amount of recoverable coal to the depth of the overburden. Using modern underground mining techniques, it is generally not feasible to recover coal with overburdens in excess of 2,000 feet.

Lease Area BLM Proposed Action

The future lease area is approximately 23,000 acres in size and includes the LBA area proposed by CAM. The overburden cutoff depth is 2,000 feet, and the coal could feasibly be mined from the proposed Red Cliff Mine entrance (portals).

IMPACTS AND MITIGATION

In compliance with NEPA, the existing conditions of the human and natural environment that could be impacted, beneficially or adversely, by the Proposed Action and alternatives were identified and analyzed. In addition, cumulative impacts from other projects or activities in the past, present, or reasonably foreseeable future projects were considered. Energy development has recently experienced rapid growth in the west due to market conditions and national energy policy. Due to the abundance of natural gas and mineral resources in northwest Colorado, this area has experienced unprecedented growth in resource extraction. Actions considered for the cumulative impact analysis are those actions related to mining and energy development in northwest Colorado, and effects of projected population growth on residential and commercial development and traffic increases. Certain resources, such as socioeconomics, further define the analysis area as Mesa and Garfield counties, where the mine and facilities will be located.

Impacts from the alternatives have been compared to the Proposed Action in Table 2-2, Alternatives Considered Summary. This table can be used to compare impacts and determine which resources should be examined as a preferred alternative is selected. For the following resources, there is no substantive difference between the alternative and the Proposed Action: grazing, utilities, hazardous materials, health and safety, air quality, cultural resources, paleontology, geology, and groundwater.

For the remaining resources, the following table shows which resources are discriminators for each alternative, as compared with the Proposed Action. An "X" in the box indicates that impacts for this resource are different from those of the Proposed Action; a blank box means that

the impact is not substantively different from the Proposed Action. The "greater than" (>) symbol (shown in blue) indicates that the impacts from the alternative to the resource are greater than the Proposed Action. The "less than" (<) symbol (shown in orange) indicates that the impacts from the alternative to the resource are less than the Proposed Action. Generally, the impacts assessed in the table do not include temporary impacts associated with construction.

SUMMARY OF DISCRIMINATOR RESOURCES

Resource	Alternative				
	Grade Separated Crossing at CR M.8	Noiseless Crossings	T-line Alt. A	T-line Alt. B	T-line Alt. C
Land Ownership and Use	X>		X>	X>	
Recreation			<X	<X	<X
Socioeconomics	<X	<X			
Transportation*	<X				
Visual	X>	X>	X>	X>	<X
Noise	<X	<X			
Soils	X>		<X	<X	<X
Surface Water			X>	X>	
Floodplains			X>	X>	
Vegetation	X>		<X	<X	<X
Wetlands and Riparian	X>				
Fish and Wildlife	X>		<X	<X	<X
Threatened, Endangered, and Special Status Species			<X	<X	<X

*Transportation includes safety concerns for the traveling public.

Grade-Separated Crossing of CR M.8

Greater impacts associated with the grade separated crossing of CR M.8 are basically due to the larger footprint, additional fill requirements, and height above existing grade. Fewer or lesser impacts are due to mitigation of some of the social concerns, including safety and noise.

Noiseless Crossings Traffic Control Devices

This alternative mitigates some of the social concerns regarding noise impacts. The only increase in impacts (Visual) is due to the higher visibility requirements of the noiseless crossings.

Transmission Line Alternative A

Greater impacts are due to the need to cross private lands north of the Highline Canal in areas that have no existing easements. This line also crosses a small floodplain segment of Big Salt Wash. Fewer or lesser impacts are due to a slightly shorter transmission line length, less impact to the North Fruita Desert Special Recreation Management Area (SRMA), and better existing access due to construction along CR 16.

Transmission Line Alternative B

Greater impacts are due to the need to cross private lands north of the Highline Canal in areas that have no existing easements. This line also crosses a small floodplain segment of Big Salt Wash. Fewer or lesser impacts are due to a slightly shorter transmission line length and less impact to the North Fruita Desert SRMA.

Transmission Line Alternative C

Fewer or lesser impacts are due to the line paralleling the proposed railroad and pipeline corridor for approximately 3.4 miles, lowering and consolidating impacts. No private lands north of the Highline Canal would be crossed.

MITIGATION

Mitigation measures to lessen or lower impacts to all resources have been proposed. These measures address both temporary and long term impacts and impacts on private and federally managed lands. Some of the mitigation measures have been incorporated into the Proposed Action through redesign of project facilities (e.g., proposed rail alignment and redesign of the waste rock pile). New alternatives were developed as mitigation in response to some of the impacts identified by the community such as traffic safety, emergency vehicle access, and noise (e.g., grade-separated crossing of CR M.8 and noiseless crossing devices). BLM can implement mitigation measures on federally managed lands. Other measures that may mitigate potential social impacts identified by community members would require action by local governments through land use planning. Protection of some resources (e.g., drainages) will be included in permits issued by DRMS. Other impacts will be mitigated through consultation with the U.S. Fish and Wildlife Service (USFWS) and in a permit issued by the USACE. The Public Utilities Commission will also be involved as they issue permits for the railroad to cross SH 139 via an underpass and county roads at grade.

With the issuance of the Final EIS and Record of Decision (ROD), BLM will identify the appropriate mitigation measures along with the preferred alternative.

PUBLIC AND AGENCY INVOLVEMENT

Publication of the Notice of Intent (NOI) on July 27, 2006 initiated the scoping period and announced the BLM's intention to prepare a DEIS. Scoping for the DEIS took place from July 27 to September 25, 2006.

The BLM utilized the public scoping process to identify issues to direct (drive) the formulation of alternatives and to frame the scope of analysis in the EIS. A total of 53 written comments were received during the scoping period. The scoping report, entitled "Public Scoping Report for the Environmental Impact Statement: Proposed Red Cliff Mine Project near Mack, Colorado (December 2006)," (BLM 2006) summarizes issues identified during the scoping process, and is available upon request from the BLM Grand Junction Field Office. The scoping report provides a general summary of the issues found in these letters.

A public scoping meeting was held at the City of Fruita Council Chambers on Thursday, August 24, 2006. The meeting consisted of brief presentations of the project and the NEPA process by BLM and CAM, followed by an open house-style question and answer period. Handouts included the project description, map, and comment sheet.

BLM held an agency scoping meeting on August 24, 2006 with cooperating agencies and other interested agencies to discuss the project description, purpose and need, other needed permits, key environmental issues, and agency concerns. Representatives from the following agencies attended the meeting: USFWS; Mesa County; DRMS; BOR; City of Fruita; Colorado State Parks; Colorado Department of Transportation (CDOT); USACE; and the OSM.

BLM has continued agency consultation throughout the NEPA process with agencies including USACE, USFWS, Mesa County, DRMS, CDOT, CDOW, OSM, the Colorado State Historic Preservation Officer (SHPO), and three Native American Indian tribes (Southern Ute, Ute Mountain Ute, and Northern Ute).

Public participation is ongoing throughout the EIS process. Members of the public have the opportunity to comment on the content of the DEIS during the specified 60-day comment period. A public meeting will be conducted to present the alternatives and impacts to the public and receive their comments. The Final EIS will consider all substantive oral and written comments received during the 60-day comment period. The ROD will be issued by the BLM upon completion and approval of the Final EIS.