

1.1 INTRODUCTION

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 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. The components of the Proposed Action are shown on Figure 1-1, Proposed Action, and Figure 1-2, Coal Lease Area. The physical area that encompasses all of the components of the Proposed Action is termed the project area. Impacts on private as well as federal lands are disclosed and analyzed.

In order to support expansion of the CAM mining operation, CAM must obtain a right-of-way (ROW) or special use permit for surface facilities and linear features associated with the mine on U.S. Bureau of Land Management (BLM)-managed lands. The need to prepare a DEIS 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 and mine facilities (Appendix A, Permit Applications), and followed with a Land Use Lease Application on February 10, 2006. The BLM later determined that the Land Use Lease Application was not needed and returned the application, as all necessary facilities could more appropriately be authorized under the ROW application.

Two additional connected actions will also be analyzed in the DEIS. BLM received a Lease by Application (LBA) from CAM 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 as shown on Figure 1-2, Coal Lease Area. The standard coal lease form is included in Appendix A, Permit Applications. BLM determined that, if this coal were to be leased, it would be by a competitive bid process. Based on the proposed 30 year mine life, the coal resource, and distance from the proposed mine portals, BLM estimated the eastern limits of the project area (also displayed on Figure 1-2).

BLM also received a separate Application for Transmission and Utility Systems and Facilities on Federal Lands from Grand Valley Power (GVP) dated June 8, 2007 to construct an electric transmission line for the power requirements for the Red Cliff Mine. This application is also included in Appendix A, Permit Applications.

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

1.2 BACKGROUND

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 McClane Canyon Mine (MCM) are not adequate for this purpose.

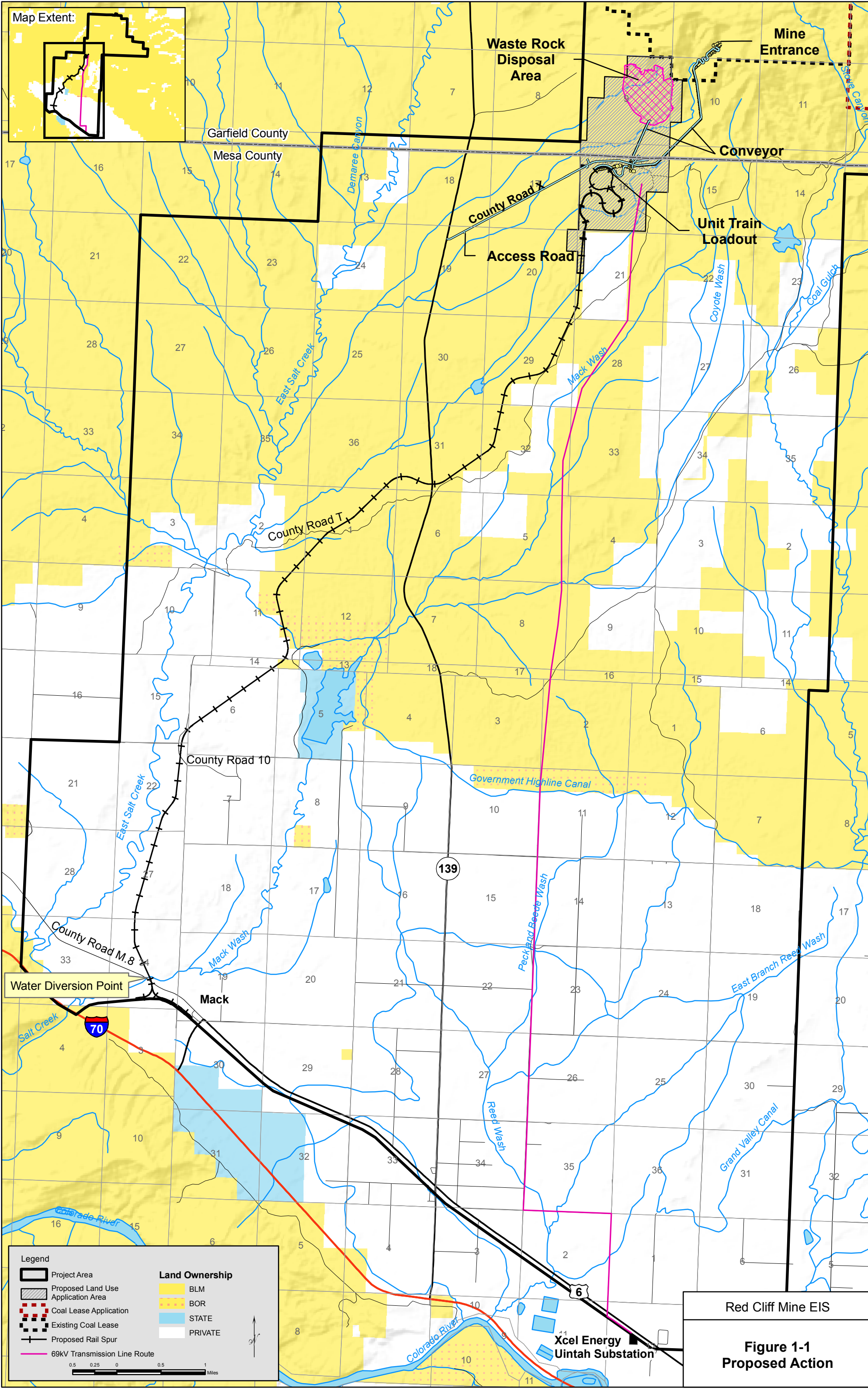
The proposed Red Cliff Mine project area is located approximately 11 miles north of the towns of Mack and Loma, Colorado, and 1.5 miles east of Colorado State Highway (SH) 139, as shown on Figure 1-3, Red Cliff Mine Project Location. McClane Canyon Mining, LLC currently mines approximately 280,000 tons of coal per year from the underground MCM, located 3 miles north of the proposed Red Cliff Mine. The coal is transported by truck to the Cameo Power plant east of Grand Junction. CAM plans to operate to 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.

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 the waste rock pile, railroad loop, the unit train loadout, and a conveyor system to move the coal and waste rock. County Road (CR) X (also known as Mitchell Road or Power Line Road) would be upgraded to serve as the mine access road from SH 139. Other facility components are listed subsequently.

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

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 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. The proposed route is shown on Figure 1-1, Proposed Action.

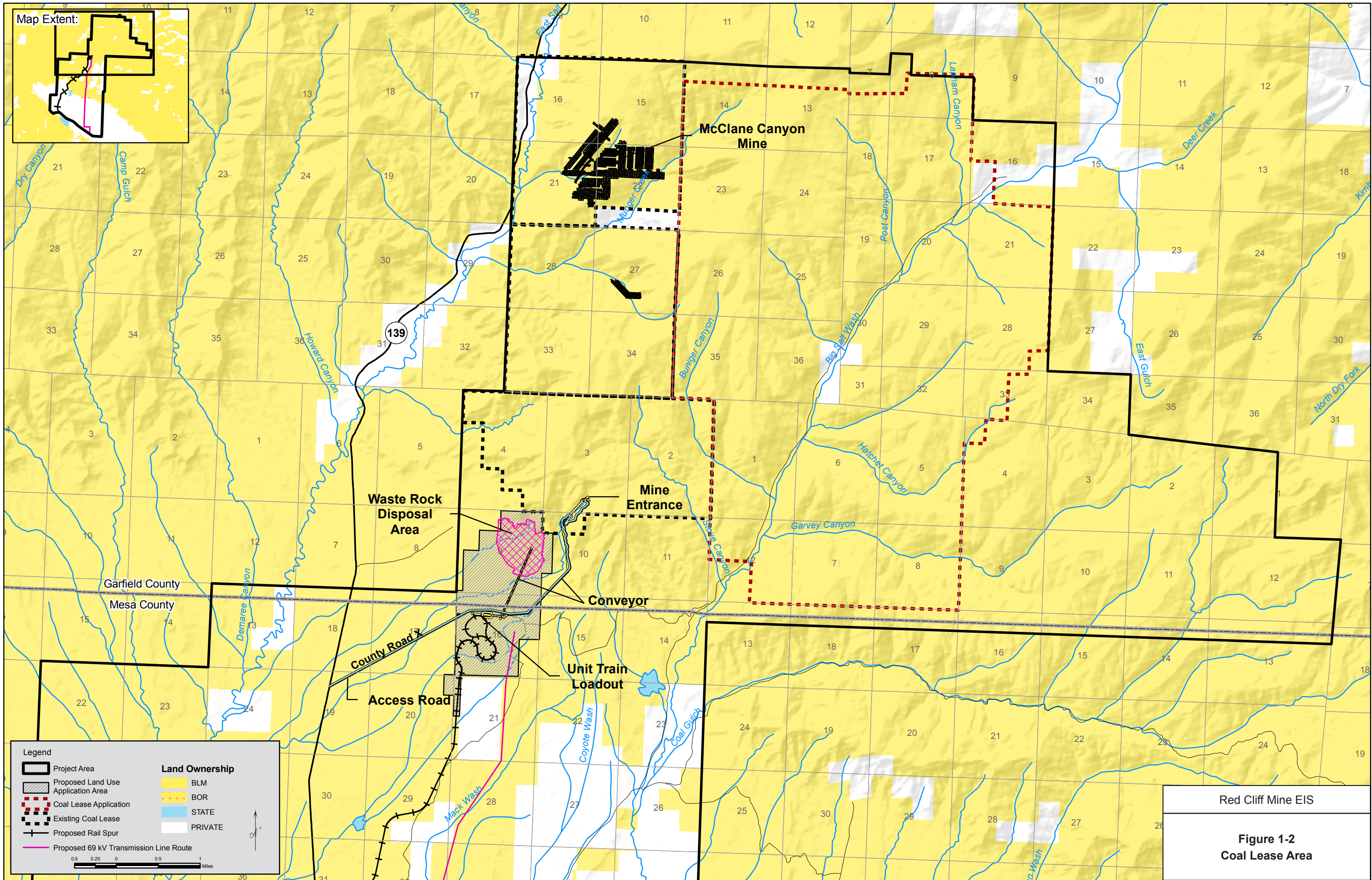
Underground mining would be conducted 24 hours per day, 7 days per week, and 365 days per year by room and pillar and longwall mining techniques. CAM's production from the Red Cliff Mine would be up to 8 million tons per year of clean coal, with an estimated life of mine of 30 years. CAM is proposing 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.



Red Cliff Mine EIS

**Figure 1-1
Proposed Action**

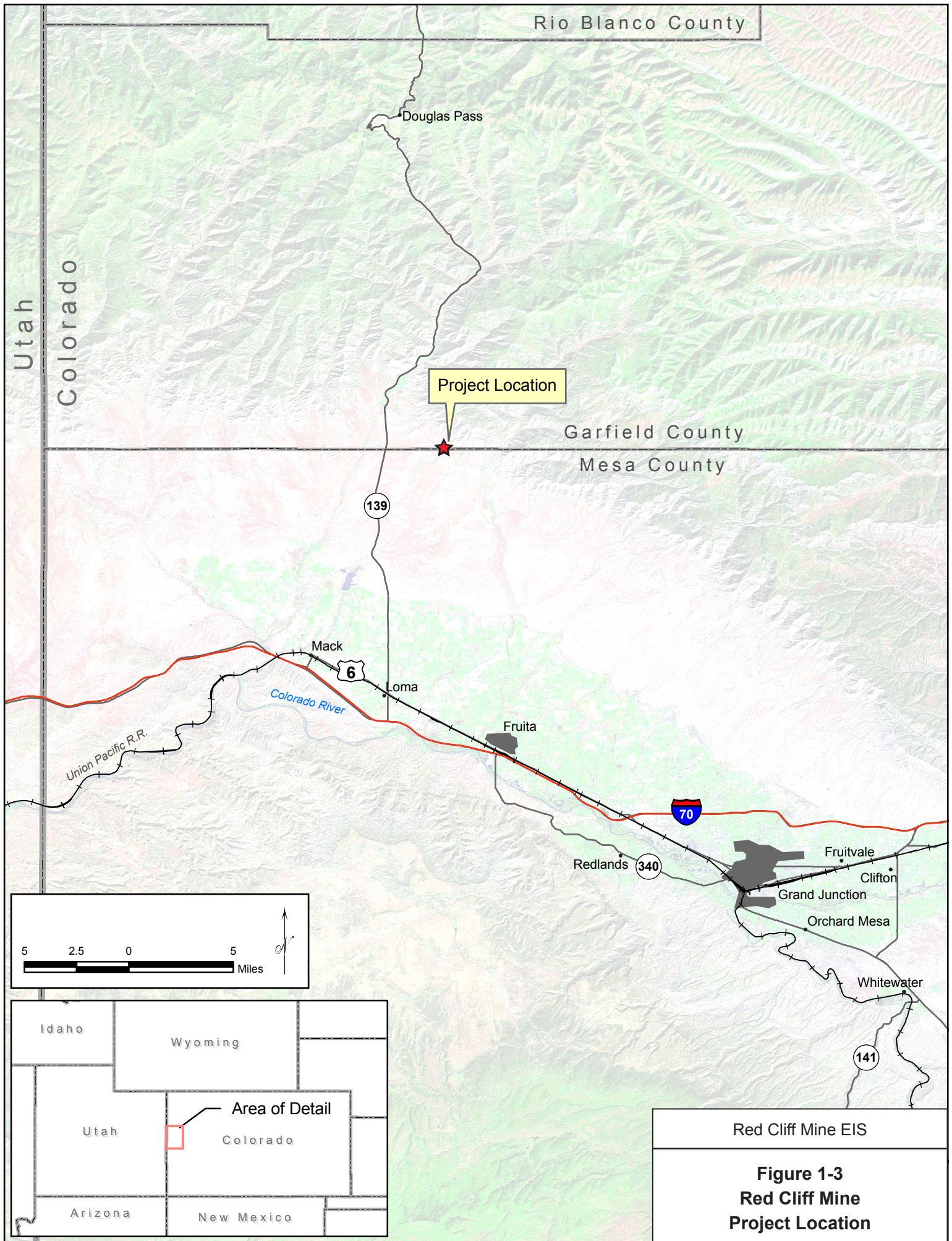
This page intentionally left blank



Red Cliff Mine EIS

Figure 1-2
Coal Lease Area

This page intentionally left blank



Red Cliff Mine EIS

Figure 1-3
Red Cliff Mine
Project Location

This page intentionally left blank

CHAPTER ONE**Purpose and Need**

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
- Electrical transformers
- Bathhouse/office building
- Outdoor material storage areas
- 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
- Conveyor transfer buildings
- Railroad
- Maintenance road
- Water pipeline and diversion
- Coal storage piles
- Unit train loadout
- Coal preparation plant
- Mine access roads

Additional information regarding these facilities and the proposed operation is included in the Proposed Action in Chapter 2, Alternatives, of this DEIS.

In 2004, exploratory drilling on the existing federal coal leases held by CAM in the project area indicated that there were substantial coal reserves in the southern portion of the leases. Exploratory drilling on surrounding BLM lands also indicated that substantial reserves existed outside of CAM's existing leases. CAM submitted an LBA for additional federal coal underlying BLM lands (see Figure 1-2, Coal Lease Area). If CAM is the successful bidder for this coal, it would be mined and shipped using the mine portals and facilities described in this DEIS.

1.3 NEED FOR THE PROPOSED ACTION

The BLM recognizes the development of coal reserves as important to both the local economy and the nation (BLM 1987). 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.

The ROW Application for Transmission and Utility Systems and Facilities on Federal Lands, if approved, would allow CAM to provide for the construction and operation of an efficient infrastructure to increase coal production in a practical and feasible manner by (1) mining valuable coal reserves from the existing leases, (2) transporting the coal to market in an efficient and effective fashion, and (3) developing and mining additional coal reserves in potential new coal leases. BLM needs to respond to the applications as required by 43 *Code of Federal*

CHAPTER ONE

Purpose and Need

Regulations (CFR) 2802.4 and either approve or deny the ROW grant and the permit for construction and operation. BLM must also approve or deny the ROW grant for the transmission line, and BLM must either deny the LBA, or hold a competitive lease sale.

Under Section 404 of the Clean Water Act, the USACE may issue a permit for discharge of dredged or fill material into the navigable waters of the U.S. The USACE needs to ensure that the Section 404 permit that they would issue complies with current requirements, which may include selection of the Least Environmentally Damaging Practicable Alternative (LEDPA) (40 CFR 230.10(a)).

1.4 DECISIONS TO BE MADE

BLM has received ROW applications from CAM and from GVP and an LBA from CAM. BLM can issue the permits for the Proposed Action as submitted in the applications, modify the actions based on analysis contained in this EIS and issue permits, or deny the applications.

Following completion of the EIS, the BLM Grand Junction Field Office Manager would prepare a proposed Record of Decision (ROD). If the decision is to approve the proposed project, the Field Manager would forward the ROD, Red Cliff Mine Final EIS, competitive lease application, a Maximum Economic Recovery (MER) report, lease special stipulations, and bonding requirements to the BLM Colorado State Office. The Colorado State Office would draft the proposed lease terms and conditions and provide preliminary recommendations for the lease tract to the Colorado State Director, who would make a determination on leasing action. The Colorado State Office would then prepare the local newspaper notice and *Federal Register* notices of the sale and post such notices of the proposed sales in the Public Room at the BLM Colorado State Office. A sales panel consisting of the Deputy State Director for Mineral Resources, a BLM mining engineer, a BLM geologist, and a BLM mineral economist would then be designated as the group that would analyze prospective bidders and make recommendations regarding bids received at the lease sale. If the coal is leased, approval to mine the coal would require submission of a mine permit application to the OSM, and to the DRMS. The mine permit application would be reviewed by both OSM and DRMS who provide their recommendations to the Department of Interior (DOI), Assistant Secretary for Lands and Minerals Management who approves or denies the mining permit.

The USACE would issue a Section 404 permit for the discharge of dredged or fill material into waters of the U.S. if they determine that the selected alternative would have minimal impact to waters of the U.S. or if it has more than minimal impact but is determined to be the LEDPA.

1.5 CONFORMANCE WITH BLM LAND USE PLAN

Lands and resources in the project area are managed under the Grand Junction Field Office RMP (BLM 1987). One of the objectives of the RMP was to identify areas that are acceptable for further leasing under the federal coal leasing program. The RMP identified geographic “emphasis areas” where the management of a particular resource would be emphasized over all other resources. The management philosophy of Emphasis Area Cc was an emphasis on coal. The BLM’s goal was to, “identify approximately 350,389 acres as acceptable for further coal leasing consideration.” In the RMP, the BLM identified the Book Cliffs Coal Field (included in Emphasis Area Cc) as one of two areas with economically feasible coal development potential in

CHAPTER ONE**Purpose and Need**

the project area. No lands inside the study area have been determined unsuitable for coal leasing (BLM 1987). CAM's existing coal leases are included in Emphasis Area Cc. Portions of the Proposed Lease Area are also included in Emphasis Area Cc. Map GJDRMP21.pdf showing Emphasis Area Cc can be found on the BLM Grand Junction website at http://www.blm.gov/co/st/en/BLM_Programs/land_use_planning/rmp/grand_junction.html.

In 2004, the BLM completed the North Fruita Desert Management Plan (NFDMP), which addresses recreational opportunities in the area and amends the RMP by adding an additional No Surface Occupancy (NSO) area. The goal of the management direction of the NFDMP is to afford protection to the resources present in North Fruita Desert Planning Area while still allowing for a variety of recreational and commercial opportunities. The NFDMP states, "The management actions outlined in the NFDMP are intended to allow traditional uses to continue such as grazing, and oil and gas development, as well as to prevent additional resource degradation and minimize user conflicts while allowing for both present and future recreational uses" (BLM 2004). The proposed railroad spur (on BLM lands) and some of the related facilities (but not the mine portals) are located within the North Fruita Desert Planning Area.

1.6 RELATIONSHIP TO STATUTES, REGULATIONS, OR OTHER PLANS

Other agencies, including those listed as cooperating agencies in Section 1.1, Introduction, have various responsibilities for reviewing the Proposed Action and issuing permits for construction and operation of the mine and/or related facilities. Table 1-1, List of Permits and Approvals, lists other agencies and permits/reviews required.

Table 1-1
LIST OF PERMITS AND APPROVALS

| Federal Government | |
|--|--|
| Bureau of Land Management (BLM) | <ul style="list-style-type: none"> • Lease Issuance and Administration • Resource Recovery Protection Permit (R2P2) recommendation • Right-of-way (ROW) grants • Approve Exploration License |
| U.S. Bureau of Reclamation (BOR) | <ul style="list-style-type: none"> • License Agreement |
| Office of Surface Mining (OSM) | <ul style="list-style-type: none"> • Mining Plan Decision Document Preparation (Surface Mining Control and Reclamation Act of 1977 [SMCRA]) |
| U.S. Department of the Interior (DOI) – Assistant Secretary for Land and Minerals Management | <ul style="list-style-type: none"> • Mining Plan Approval (Mineral Leasing Act) |
| U.S. Department of Justice | <ul style="list-style-type: none"> • Anti-trust review of proposed coal lessee |
| U.S. Army Corps of Engineers (USACE) | <ul style="list-style-type: none"> • Section 404 Permit |
| Environmental Protection Agency (EPA) | <ul style="list-style-type: none"> • Spill Prevention Control and Countermeasure (SPCC) Plan • Review of Section 404 Permit • Notification of Hazardous Waste Activity |
| U.S. Fish and Wildlife Service (USFWS) | <ul style="list-style-type: none"> • Threatened and Endangered Species Consultation |

CHAPTER ONE**Purpose and Need**

Table 1-1
LIST OF PERMITS AND APPROVALS

| Federal Government | |
|--|---|
| Treasury Department (Department of Alcohol, Tobacco, and Firearms) | <ul style="list-style-type: none"> • Explosives User Permit |
| Mine Safety and Health Administration (MSHA) | <ul style="list-style-type: none"> • Mine Identification Number • Legal Identify Report • Miner Training Plan Approval • Ventilation Plan Approval • Ground Control Plan |
| State of Colorado | |
| Colorado Division of Reclamation, Mining, and Safety (DRMS) | <ul style="list-style-type: none"> • Exploration Notice of Intent • Mining and Reclamation Permit |
| Public Utilities Commission (PUC) | <ul style="list-style-type: none"> • State Highway and County Road crossing permits for the railroad |
| Colorado Air Pollution Control Division | <ul style="list-style-type: none"> • Permit to Construct • Permit to Operate |
| Colorado Water Quality Control Division | <ul style="list-style-type: none"> • Storm Water Discharge Permit • National Pollutant Discharge Elimination System (NPDES) |
| Colorado State Engineer | <ul style="list-style-type: none"> • Water Rights |
| Colorado State Historic Preservation Officer (SHPO) | <ul style="list-style-type: none"> • Historic and Archaeological Review |
| Colorado Department of Transportation (CDOT) | <ul style="list-style-type: none"> • Highway Access • Construction and Maintenance Agreement |
| Local Government | |
| Mesa County | <ul style="list-style-type: none"> • Conditional Use Permit • Surface Alteration Permit • Utility Permit |
| Garfield County | <ul style="list-style-type: none"> • Special Use Permit for Extraction, Processing, Storage and Material Handling of Natural Resources • Building permits |

The USACE, in accordance with their regulations, would issue either a nationwide or individual Section 404 permit, depending on the anticipated impact to waters of the U.S. An individual 404 permit would only be issued for the LEDPA, which is the alternative that has the least adverse impact on the aquatic ecosystem, as long as it does not have other significant environmental consequences and is practicable.

The Surface Mining Control and Reclamation Act of 1977 (SMCRA), gives OSM primary responsibility to administer programs that regulate surface coal mining operations on federal lands and the surface effects of underground coal mining operations on federal lands. Pursuant to Section 503 of SMCRA, the Colorado Division of Mined Land Reclamation (now DRMS) developed, and the Secretary of the DOI approved, a permanent program authorizing DRMS to regulate surface coal mining operations and surface effects of underground coal mining on non-

CHAPTER ONE**Purpose and Need**

federal lands within the state of Colorado. In September of 1982, pursuant to Section 523(c) of SMCRA, the Governor of Colorado entered into a cooperative agreement with the Secretary of the Interior authorizing Colorado to regulate surface coal mining operations and the surface effects of underground mining on federal lands within the state of Colorado.

Pursuant to this cooperative agreement, federal coal lease holders in Colorado must submit permit applications to both OSM and DRMS for proposed mining and reclamation operations on lands in the state of Colorado. DRMS will review the permit application packages to ensure that the permit application complies with its permitting requirements found in the *Regulations of the Colorado Mined Land Reclamation Board for Coal Mining* (Colorado Division of Minerals and Geology 2005), and that the coal mining operation will meet the approved permanent regulatory program's performance standards. If the permit application package complies with the applicable regulations and performance standards, DRMS would issue a Mining and Reclamation Permit and OSM would prepare a Mining Plan Decision Document for the Assistant Secretary for Land and Minerals Management recommending approval, disapproval, or conditional approval of the mining plan.

The public has the opportunity to provide comments to DRMS and request an informal conference or a public hearing on each permit application package. These opportunities for comment are published as legal notices in a local newspaper of general circulation.

Mesa and Garfield counties would be issuing special or conditional use permits, and Mesa County would also issue a Surface Alteration Permit and a Utility Permit. Prior to issuing a ROW grant and permit, BLM would comply with Section 7 of the Endangered Species Act (ESA) entailing coordination with the U.S. Fish and Wildlife Service (USFWS). Additionally, BLM would comply with Section 106 of the National Historic Preservation Act; coordinating with the Colorado State Historic Preservation Officer (SHPO) and appropriate Indian tribes.

CAM must also obtain permits or license agreements from other federal and state agencies including:

- U.S. Bureau of Reclamation (BOR) – A License Agreement is required to cross BOR land and the Highline Canal with the railroad and other facilities. BOR has on-the-ground jurisdiction over public lands withdrawn for authorized water control purposes; however, BLM has the opportunity, through a Memorandum of Understanding (MOU) with BOR, to allow for other uses on the ROW lands as long as the primary water purposes are not adversely impacted (BLM 2004).
- The Colorado Public Utilities Commission (PUC) – Requires permits for railroad crossings of SH 139, CR M.8, and CR 10.
- Colorado Department of Transportation (CDOT) – Requires an Access Permit for the intersection of CR X and SH 139, and a Construction and Maintenance Agreement for the SH 139 underpass crossing of the railroad.
- Colorado Department of Public Health and Environment (CDPHE) – Water Quality Control Division requires a Discharge Permit, 401 Water Quality Permit; a Stormwater Permit including a Stormwater Management Plan; and approves the Wastewater Treatment Plant.
- CDPHE – Air Pollution Control Division requires a Construction Permit.

Permit applications and issuance are and will be in compliance with the appropriate sections of the following federal regulations:

- 43 CFR Parts 2800-2808 – Rights-of-way
- 43 CFR Parts 3400 and 3480 – Leases/permits for recovery of coal deposits

1.7 EIS SCOPE, FUTURE APPROVALS, AND ENVIRONMENTAL REVIEWS

Assuming that all of the permits are issued and approvals are granted that are described in the preceding Sections 1.3, 1.4, and 1.6, there are continuing application requirements that CAM would need to make and approvals that would need to be received during the proposed 30 year life of the Red Cliff Mine. The scope of this EIS includes the proposed life of the mine; however, of necessity, it does so using currently available information. Mine plans are customarily prepared for a five year period. 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.

Additional environmental resources operation and reclamation information would be required, and environmental reviews would be conducted in association with future mine permit applications. This EIS only contains detailed information from the mine permit application for CAM's existing coal lease which is shown on Figure 1-2, Coal Lease Area. 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, as described in Section 1.6, Relationship to Statutes, Regulations, or Other Plans. This application would need to meet both the state and the federal requirements. The federal requirements for underground coal mine permit applications are found in 30 CFR Parts 783 and 784. A copy of these regulations has been included in Appendix B, Standard Practices and Mitigation Measures. The state and federal requirements are very similar.

OSM would review the additional information in the mine permit application to determine if this EIS adequately describes the environmental impacts of mining the lease by application area. If it does not, they would prepare a supplemental NEPA document (either an environmental assessment or an EIS) to accompany their recommendation to the Assistant Secretary for Land and Minerals Management 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.

1.8 SUMMARY

BLM's objective is to promote the timely and orderly development of publicly owned coal resources, in cooperation and coordination with public, state, and local governments; Indian tribes; and involved federal agencies and to prevent any unnecessary or undue degradation to the federal lands and resources. Based on the results of the analysis in the EIS, the BLM will select a preferred alternative and document the decision in a ROD. If a development alternative is selected, the BLM would approve the applications as submitted or make modifications. The details of construction methods, scheduling of activities, and environmental protection measures would be included in the authorization of the applications. Based on the analysis in the EIS, the BLM will make a decision regarding the competitive leasing of federal coal included in CAM's LBA. Other agencies may also use information presented in this DEIS as they review the project in the context of their authorizing actions.

Chapter 2, Alternatives, presents CAM's Proposed Action, the No Action Alternative, and other alternatives that would meet the purpose and need for this project. Chapter 3, Affected Environment, describes the existing conditions of various natural and human environments. The potential environmental impacts or consequences resulting from the implementation of each alternative are then disclosed and analyzed in Chapter 4, Environmental Consequences and Mitigation. A summary of public involvement activities is included in Chapter 5.

