CHAPTER 1.0 - PURPOSE AND NEED

1.1 INTRODUCTION

On March 24, 2004, Black Butte Coal Company (BBCC), a joint venture between Kiewit Coal Properties, Inc., a wholly-owned subsidiary of Level 3 Communications of Louisville, Colorado, and Bitter Creek Coal Company, a wholly-owned subsidiary of Anadarko Petroleum Corp. of Houston, Texas, filed a Lease-by-Application (LBA) with the Bureau of Land Management (BLM), which would allow them to access federal coal reserves located adjacent to the existing Black Butte Mine in Sweetwater County, Wyoming. The existing mine and LBA tract are located approximately 28 miles southeast of Rock Springs (**Figure 1.1** and **Figure 1.2**). The application was made pursuant to provisions of the Leasing on Application Regulations found in 43 Code of Federal Regulations (CFR) 3425. The tract applied for, known as the Pit 14 amendment area under BLM case number WYW-160394, is hereafter referred to as the LBA tract. The Proposed Action is to lease and extract the coal reserves within the LBA tract.

The Rock Springs Field Office (RSFO) of the Wyoming BLM analyzed the environmental impacts of issuing a lease in accordance with the National Environmental Policy Act (NEPA). Based on the potential amount of in-place coal associated with the lease tract and adjacent mine operations, the BLM has determined that an Environmental Impact Statement (EIS) would be prepared. The issuance of a lease for the BLM-administered lands in this application (the LBA tract) is a prerequisite for mining, but is not the enabling action that would allow mining to commence. After a lease has been issued by the BLM, but prior to mine development, the lessee must file a permit application package with the Land Quality Division (LQD) of the Wyoming Department of Environmental Quality (WDEQ) and Office of Surface Mining Reclamation and Enforcement (OSM) for a surface mining permit and approval of a mining plan. Analyses of the site-specific permit application and mining plan occurs at that time. Authorities and responsibilities of the BLM and other concerned regulatory agencies are described in Section 1.2 and Section 1.3. **Appendix A** presents a flow chart of the coal LBA process.

The project includes the leasing of federal coal reserves in the LBA tract and reasonably foreseeable mining related actions in a larger project area (**Figure 1.2**). The project area is located adjacent to Black Butte Mine's existing surface coal mine permit area. The project area contains private mineral estates proposed for mining and previously leased federal mineral estate (WYW-6266). The LBA tract is the currently unleased federal mineral estate lands within the project area. According to the application, extraction of coal from the LBA tract by BBCC is required to meet production commitments. Existing mine operations would support the mining of coal in the project area through the use of processing, maintenance, and other ancillary facilities located in the Black Butte Mine permit area.

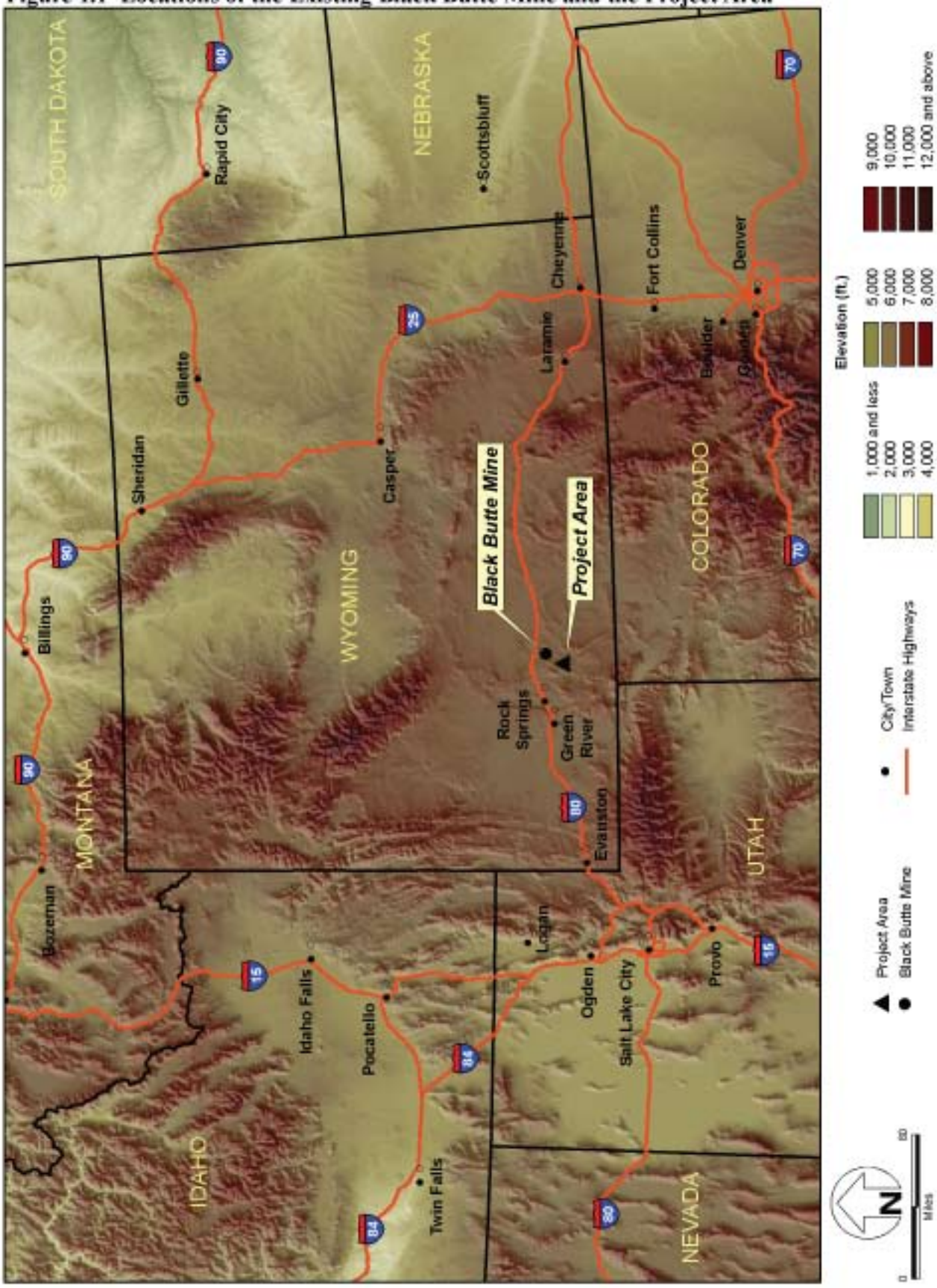
The proposed project includes mixed surface ownership or "checkerboard", with every other section in private ownership and the others federally-owned (**Figure 1.2**). As proposed by BBCC, the proposed project area includes the 1,399-acre LBA tract (federal surface and minerals), 640 acres of previously leased federally owned surface and minerals, 160 acres of split estate (federal surface, State of Wyoming-owned minerals), and 2,159 acres of privately owned land (Anadarko-owned surface and mineral estate). The project area is 4,359 acres.

The BLM administers the federal coal leasing program under the Mineral Leasing Act (MLA). A federal coal lease grants the lessee the exclusive right to obtain a permit to mine coal on the leased tract subject to:

- Terms of the lease,
- The WDEQ Permit to Mine Coal,
- The federal MLA mining plan approval, and
- Applicable state and federal laws.

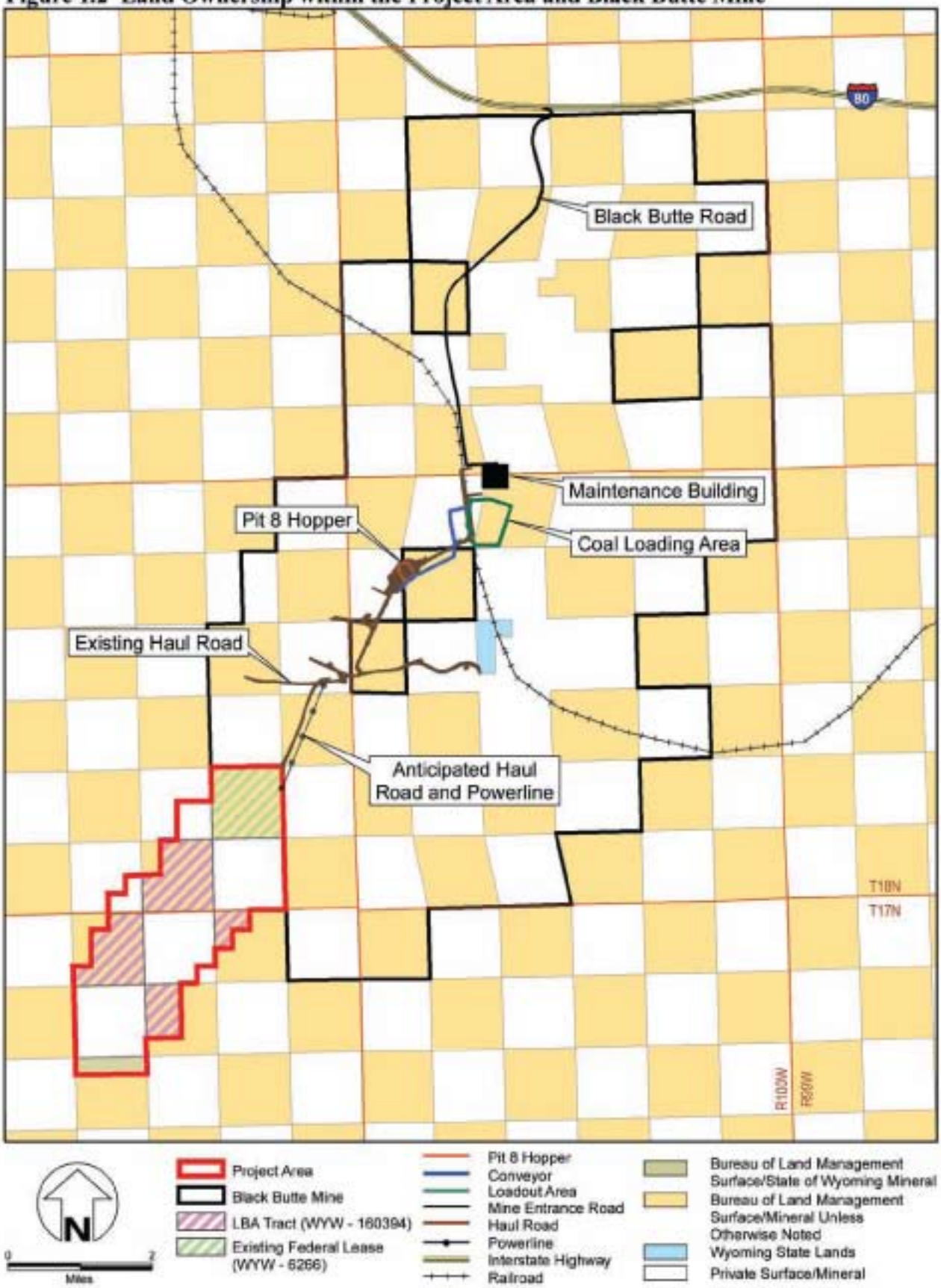
No warranty is made by the Bureau of Land Management for the use of data for purposes not intended by BLM.

Figure 1.1 Locations of the Existing Black Butte Mine and the Project Area



No warranty is made by the Bureau of Land Management for use of the data for purposes not intended by BLM.

Figure 1.2 Land Ownership within the Project Area and Black Butte Mine



The BLM's mineral leasing program encourages the development of domestic oil, gas, and coal reserves, and reduction of the U.S. dependence upon foreign energy sources. As a result of leasing and the subsequent mining and sale of federal coal resources, the public receives lease bonus payments, lease royalty payments, rental payments, and a supply of low cost coal for power generation.

If BBCC acquires a federal coal lease, the coal resources within the project area would be accessed as a maintenance tract to extend mine life at the existing Black Butte Mine by an estimated 20 years. The proposed mining method for Pit 14 operations would be dragline with trackhoe and dozer assisted strip mining. Extracted coal would be used for electric power generation. After mining, disturbed land would be reclaimed for livestock grazing, recreation, and wildlife habitat pursuant to WDEQ regulations.

1.2 PURPOSE AND NEED FOR THE PROPOSED ACTION

The existing Black Butte Mine started operations in the late 1970s. Overburden removal operations began in early 1979 in preparation for coal shipments to Black Butte Mine customers (BBCC 2004a). These shipments have continued from Black Butte Mine at various levels, and the mine continues to operate today. In 1988, Black Butte Mine acquired an interest in the Leucite Hills Mine, located approximately four miles to the north of the existing Black Butte Mine. Coal production at these existing BBCC facilities has been slowing because existing privately and federally leased coal reserves are too deep to be economically recovered by conventional surface mining methods (e.g., draglines). As a result, additional minable coal reserves are needed to meet production requirements of the company's customers (including the Jim Bridger Power Plant) to meet the growing regional demand for electricity.

BBCC plans to supplement the decreasing supply of surface-mined coal with the addition of adjacent mining operations. The development of surface mining operations next to the existing surface mine would allow BBCC to use many of the existing support systems at the Black Butte Mine (e.g., roads, overland conveyor, administrative and maintenance facilities), thereby minimizing costs and disturbances to the environment. The purpose of BBCC's proposal would be to extract federally and privately owned coal reserves to meet current production requirements of the existing Black Butte Mine.

The primary purpose of the Energy Policy Act of 1992, as amended, is to add energy supplies from diverse sources, including domestic oil, gas, coal, hydropower, and nuclear power. BLM recognizes that the continued extraction of coal is essential to meet the nation's current and future energy needs. As a result, private development of federal coal reserves is integral to the BLM coal leasing program. This Proposed Action meets aspects of the Energy Policy Act of 2005 that encourage and facilitate meeting national demands for electricity from a domestic source of energy.

1.3 REGULATORY AUTHORITY AND RESPONSIBILITY

The BBCC lease application was submitted and will be processed and evaluated under the federal authorities including:

- Federal Coal Leasing Amendments Act
- Federal Land Policy and Management Act (FLPMA)
- Mineral Leasing Act, as amended (MLA)
- Multiple-Use Sustained Yield Act of 1960
- National Environmental Policy Act (NEPA)
- Surface Mining Control and Reclamation Act (SMCRA)

The BLM is the lead agency responsible for leasing federal coal lands under the MLA, as amended by Federal Coal Leasing Amendments Act, and is responsible for preparation of this EIS under NEPA. The OSM is a cooperating agency. Following issuance of a coal lease by the BLM, BBCC would be

responsible for revising their existing permit through the development of a permit application and mining plan for the entire project area including the LBA tract. SMCRA gives OSM the responsibility of administering programs that regulate surface coal mining operations. In November of 1980, a program was approved (Section 503 of SMCRA) in which WDEQ was given permanent authority to regulate surface coal mining operations on non-federal lands within the state. In January 1987, WDEQ entered into a cooperative agreement with the U.S. Secretary of the Interior (Section 523(c) of SMCRA) that authorizes WDEQ to regulate surface coal mining operations on federal lands within the state.

Pursuant to the cooperative agreement, a federal coal leaseholder in Wyoming must submit a permit application package to OSM and WDEQ/LQD for any proposed coal mining and reclamation operations in the state. WDEQ/LQD reviews the permit application package to ensure it complies with permitting requirements, and that the coal mining operation would meet the performance standards of the approved Wyoming program. If the permit application package does comply, WDEQ/LQD issues the applicant a permit to conduct coal mining operations. OSM, BLM, and other federal and state agencies review the permit application package to ensure it complies with the terms of the coal lease, the MLA, and other federal and state laws and regulations. OSM recommends approval, approval with conditions, or disapproval of the MLA mining plan to the Assistant Secretary of the Interior for Land and Minerals Management. Before the MLA mining plan can be approved, OSM obtains input from BLM and the surface managing agency, if other than BLM.

If a proposed LBA tract is leased to an existing mine, the lessee is required to revise its coal mining permit prior to mining the coal, following the processes outlined above. As a part of that process, a new mining and reclamation plan would be developed showing how the lands in the new LBA tract would be mined and reclaimed. The revised permit area may be larger than the revised lease area to allow for disturbances outside the actual coal removal areas for such purposes as mining private or state mineral holdings, overstripping, matching to undisturbed topography, and constructing flood control, sediment control, and related facilities.

Specific impacts that would occur during the mining and reclamation of the LBA tract would be addressed in the mining and reclamation plans, as would the specific mitigation measures for anticipated impacts. WDEQ enforces the performance standards and permit requirements for reclamation during a mine's operation and has primary authority in environmental emergencies. The OSM retains oversight responsibility for this enforcement. BLM has authority in emergency situations where WDEQ or OSM cannot act before environmental harm and damage occurs. The BLM has the responsibility to consult with other state or federal agencies that have jurisdiction by law or special expertise with respect to potential environmental impacts.

The proposed leasing of the LBA tract and the reasonably foreseeable mining scenario has been analyzed in accordance with the requirements of NEPA, and the President's Council on Environmental Quality (CEQ) implementing regulations. This EIS serves the following purposes:

- It provides the public and government agencies with information about the potential environmental consequences of the project and its alternatives.
- It identifies practicable means to avoid or minimize environmental harm from the project and its alternatives.
- It provides the responsible official with information upon which to make an informed decision regarding the project.

NEPA requires federal agencies to use a systematic, interdisciplinary approach to ensure the integrated use of natural and social sciences in planning and decision making. Factors considered during the analysis process regarding the LBA tract include whether the proposal and alternatives are in conformance with the policies, regulations, and management plans of the BLM and other agencies likely associated with the project.

This EIS is not a decision document. The EIS documents the process used to analyze potential impacts of the project (i.e., LBA tract, leasing, and reasonably foreseeable mining) as proposed by the BBCC (hereafter referred to as the Proposed Action) and alternatives; and, it discloses the environmental effects of the Proposed Action and alternatives. A Record of Decision (ROD), signed by the responsible official (i.e., BLM State Director, Wyoming State Office), will document the final decision.

BLM decision options include:

- Approving the Proposed Action as submitted;
- Approving an alternative to the Proposed Action to account for environmental or recoverable coal concerns;
- Approving the Proposed Action or an alternative with mitigation measures to reduce environmental impacts; and
- Rejecting the Proposed Action (e.g., choosing the No Action Alternative or another alternative).

If BLM approves the Proposed Action, only those activities on public land detailed in the lease application would be authorized to occur. If BLM denies the Proposed Action, the applicant can modify and resubmit the lease application to address concerns on the original project. **Appendix B** presents other federal and state permitting requirements that must be satisfied to mine the LBA tract.

Sweetwater County administers land use within the county in accordance with its approved land use plan (Sweetwater County 2002), and also issues road encroachment authorizations, special use permits for roads, and permits for septic systems. BBCC would apply for all necessary permits, land use changes, and/or authorizations from the appropriate Sweetwater County agency or department for the specific program to be undertaken.

1.4 RELATIONSHIP TO EXISTING PLANS, POLICIES, AND PROGRAMS

In addition to the previously listed federal acts, guidance and regulations for managing and administering public lands, including the federal coal lands in the BBCC application, are set forth in 40 CFR 1500-1508 (Protection of Environment), 43 CFR 1600 (Planning, Programming, Budgeting), 43 CFR 3400 (Coal Management), and the Green River Resource Management Plan (RMP) and ROD (BLM 1997). Specific guidance for processing lease applications is provided by BLM Manual 3420 (Competitive Coal Leasing) (BLM 1989). Development of this EIS follows the BLM's National Environmental Policy Act Handbook (H-1790-1) (BLM 1988).

As required by the Federal Coal Leasing Amendments Act of 1976, this EIS and the alternatives discussed herein have been developed in conformance with the Green River RMP, ROD, and RMP decisions and guidance including standards, guidelines and land use objectives and actions for short- and long-term development of federal leasable minerals. The overall management objective for leasable solid minerals (coal) in the Green River RMP is:

> *To provide for both short- and long-range development of federal coal, in an orderly and timely manner, consistent with the policies of the federal coal management program, environmental integrity, national energy needs, and related demands (BLM 1997).*

Coal land use planning utilizes four screens established by the Federal Coal Management Program. These screens are used to identify whether a coal tract is acceptable for lease consideration. They include:

- Identification of Coal Development Potential;
- Application of Coal Unsuitability Criteria;
- Evaluation of Multiple Use Conflicts; and
- Surface Owner Consultation.

A coal tract acceptable for further leasing consideration must be located within areas determined to have coal development potential. The LBA tract lies within the Green River-Hams Fork Coal Region of northwest Colorado and south-central/southwestern Wyoming; Maps 19 and 31 of the Green River RMP and ROD (BLM 1997).

Coal unsuitability criteria listed in the federal coal management regulations (43 CFR 3461) and described in the Green River RMP, have been applied to the LBA tract as part of the Green River RMP planning process. **Appendix C** of this EIS summarizes the unsuitability criteria, describes the general recommendations of the Green River RMP, and presents the findings for this coal tract. As indicated in **Appendix C,** no lands within the LBA tract have been found unsuitable for coal mining and the use of these lands for mining complies with the intent of the land use policies of the Green River RMP.

The lands identified in this project are acceptable for consideration of coal leasing and subsequent coal mining. The LBA tract lands are within crucial winter range for mule deer. During development of the Green River RMP, the greater Cooper Ridge area (which includes the current Proposed Action) was "determined acceptable for further consideration for federal coal leasing and development, pending further analysis". Further analysis revealed that the area was determined acceptable with the following mitigation measures:

- No concurrent coal mine development, and
- The area would be reclaimed appropriately.

No other coal mines exist in the Cooper Ridge area. As a result, wintering habitat and a migration corridor will be maintained to meet the needs of the South Rock Springs Mule Deer Herd. Surface coal mining falls under stringent regulations for reclamation, which is overseen by the WDEQ. Not only must the area be replanted with appropriate grasses, forbs and shrubs, it must also be re-graded to approximate pre-mining topography. Thus, the South Rock Springs Mule Deer Herd would have appropriate forage to meet their dietary needs as well as terrain to conform to their surrounding environment following reclamation of the mine. The proposal to mine the LBA tract is therefore in conformance with the Green River RMP.

In accordance with 43 CFR 3420.1-4e(3), multiple land use conflict analysis was completed after the coal unsuitability review, as part of the Green River RMP planning process, to identify and eliminate additional coal deposits from further consideration for leasing. This step in the coal screening process is applied to protect resource values of a locally important or unique nature that were not identified in the unsuitability criteria. The multiple use conflicts analysis in the Green River RMP identified no lands within the project area that would be unacceptable for coal leasing. The screening process identified mitigation measures needed to protect both cultural and wildlife resource values that would be applied should the coal be leased.

However, this step in the screening process did identify the application of mitigation measures to protect both cultural and wildlife resource values.

The determination of the Green River RMP for cultural resource values during processing of individual coal lease applications states that surveys would be done and tribes known to have inhabited the area would be solicited for comments. Both of these steps have been taken and have revealed no known conflicts. Surveys for cultural and historic sites would continue during mine plan approval processing and the term of the lease and mine-life. Thus cultural resource values would be protected.

The determination of the Green River RMP for wildlife resource values, specifically the crucial winter range for the South Rock Springs Mule Deer Herd, states that activities that simultaneously and continuously occur within their crucial winter range must be balanced. This balance would be maintained through appropriate sequencing and timing of development and coal leasing. Neither concurrent coal development nor other coal leases exist within the South Rock Springs Mule Deer Herd crucial winter

range at this time. Thus the intent of the Green River RMP to protect mule deer habitat on Cooper Ridge would be met. Furthermore, as part of the Green River RMP planning process:

> *Only the areas that were determined to be acceptable for coal development (including specified mining methods and mitigation requirements) became a part of the coal development scenario for the Proposed Plan. As a result, there were no unacceptable adverse affects that would be caused by coal development identified in the analysis of the Proposed Plan (BLM 1997).*

Due to the multiple land use conflict analysis, the project area was found to be suitable and acceptable for further coal leasing consideration with appropriate mitigation as stated above. Therefore, lands contained within the LBA tract are in conformance with the Green River RMP.

Surface owner consultation was completed during the preparation of the Green River RMP. It states:

> *There were no surface owners of split-estate lands (i.e., privately-owned surface over federally owned coal) who expressed a preference against surface mining the federal coal on their lands. Therefore, there were no federal coal lands in the Planning Area determined to be unavailable for further consideration for leasing and development due to surface owner consultation. It should be understood that surface owner of split estate lands still have the opportunity to consent or refuse to consent to the leasing of federal coal under their lands before such federal coal leases would be issue (BLM 1997).*

The lands and minerals within the project area are administered by the BLM, or are owned by State of Wyoming or private interests. One partial section (section 16) is federal surface and State of Wyoming owned coal. All private lands within the project area, both surface and coal, are owned by Anadarko. The remaining lands within the LBA tract are all federally owned surface and coal. There are no split estate coal lands where the surface is privately owned and the mineral estate is federally owned, nor where the mineral is privately owned and the surface is federally owned.

The Coal Occurrence and Development Potential area is subject to continued field investigations, studies, and evaluations to determine if certain methods of coal mining may occur without having long-term impacts on wildlife, cultural, and watershed resources in general and on threatened and endangered plant and animal species in particular. The Endangered Species Act (ESA) was amended in 1982 to allow the 'taking' of listed species (incidentally) during an otherwise lawful activity by non-federal entities (*Federal Register* Vol. 64, No. 45, 1999). Take is defined in the ESA as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect any threatened or endangered species. Harm may include significant habitat modification where it actually kills or injures a listed species through impairment of essential behavior (e.g., nesting or reproduction). Non-federal property owners, such as private landowners, corporations, or state or local governments, wishing to conduct activities on their land that could result in the incidental take of a listed species, must first obtain an incidental take statement from the U.S. Fish and Wildlife Service (USFWS) [Section 10(a)(1)(B)]. To obtain a statement, the applicant must develop a Habitat Conservation Plan designed to offset any harmful effects that the proposed activity could have on the species.

The following list includes existing NEPA documents relevant to the proposed project:

- BLM Green River RMP, EIS and ROD (BLM 1996, 1997);
- Cumulative air quality analyses for the Jonah Infill Drilling Project (BLM 2006, TRC Environmental Corporation 2006);
- BLM coal exploration drilling project EA of the Ten Mile Rim (BLM 2001);
- BLM Bridger Power Plant flue gas de-sulfurization pond expansion project EA (BLM 2002); and
- Air Quality Analysis for the Jonah Infill Drilling Project (BLM 2005a).

1.5 PUBLIC INVOLVEMENT

To allow for an early and open process for determining the scope and significance of issues related to the proposed project (40 CFR 1510.7), a public scoping period was provided by BLM. A Notice of Intent (NOI) to prepare an EIS was published in the *Federal Register* on January 4, 2005 (*Federal Register* 70 v5:1464-1465; WY-920-1320-EL; WYW160394). Publication of this notice in the *Federal Register* initiated a 30-day scoping period that provided for acceptance of comments through February 4, 2005, and announced that the BLM would hold a public meeting on January 26, 2005. BLM issued a news release regarding proposed project scoping to local media organizations. Scoping comments were received from 11 individuals and organizations during the scoping period.

The draft EIS (DEIS) was completed and published for public review in March 2006 (*Federal Register* 71 v57:14892; WY-040-1320-EL, WYW-160394), followed by a formal public hearing held at the BLM's Rock Springs Field Office on May 10, 2006. Two comments were recorded at the public hearing. In addition to the comments recorded at the public hearing, seven (one repeated oral comments made at the hearing) letters were received during the public comment period. Please see **Section 5.4** for more details.

1.6 ISSUES IDENTIFIED AND FORMULATION OF ALTERNATIVES

Scoping identified (1) physical, biological, and social resources that could be affected by the proposed project, and (2) issues related to each resource that would be analyzed in detail (**Table 1.1**). Identification of the specific resources and related issues was then used to identify possible alternatives and to determine whether any new alternatives would be carried forward for detailed analysis.

Certain issues were determined to not be "significant issues related to the Proposed Action" (40 CFR 1501.7(3)) because they would not potentially be affected or impacted by the proposal. Other issues brought forth during public scoping and reasons for eliminating the issues from consideration in the analysis are provided below:

- Deny Pit 14 Coal LBA and Use Land for Wild Horses: This issue was eliminated from consideration because it does not meet the Purpose and Need of the action. Nor would this follow the management goals, objectives, and management actions defined in the Green River RMP.
- In response to comments from EPA, BLM updated the analysis to document consideration of an additional alternative (Section 2.4.4). No additional issues were identified as a result of public comment on the DEIS.

1.7 DEPARTMENT OF JUSTICE CONSULTATION

In the event of a competitive coal lease sale, but prior to issuance of a lease, the BLM will solicit the opinion of the Department of Justice on whether the planned lease issuance creates a situation inconsistent with federal antitrust laws. The Department of Justice is allowed 30 days to make this determination. If the Department of Justice has not responded in writing within 30 days, the BLM can proceed with issuance of the lease.

Table 1.1 Resource Issues Identified for Detailed Analysis

Resource	Issue
Physical Resources	
Air Quality	Impact of pollutant emissions. Impacts on visibility resulting from pollutant emissions and possible impairment in Bridger Wilderness from cumulative sources. Impacts of atmospheric deposition of pollutants.
Fluid Minerals	Long- and short-term impact on lease development. Impacts on lease status.
Leasable Minerals - Coal	Impact on mineral management associated with resource depletion. Impact on loss of coal resource due to mining.
Soils	Impacts on soils resulting from excavation and storage during the operational life of the project. Impact of erosion resulting from soil loss during the operational and reclamation phase of the project. Impacts on soil during the reclamation phase of the project.
Water Resources (including surface and groundwater)	Effects on the watershed, including changes in flow and headward erosion. Impact on and change in groundwater quality and quantity and associated effects on area seeps and springs.
Biological Resources	
Vegetation	Short-term and long-term impact on the capacity for vegetative production. Potential for increased noxious weed infestations. Impacts on habitats providing vegetation cover for special status species and wildlife (e.g., greater sage-grouse and big game).
Special Status Species (includes federally listed and BLM-sensitive plants and animals)	Direct or indirect modification or destruction of federally listed or BLM sensitive species habitat. Direct or indirect modification of potential greater sage-grouse habitat.
Wildlife and Fisheries	Direct or indirect modification or destruction of suitable or potentially suitable wildlife (big game, raptors, migratory birds, amphibians and reptiles) and fisheries habitat.
Livestock Grazing – Included for discussion in Social Resources	Impacts on livestock grazing and allotment use. Impact on or loss of range improvements. Impact on important water sources.
Wild Horses	Impacts on wild horse Herd Management Area (HMA). Impact on or loss of range improvements. Impact on important water sources. Impact on reduced carrying capacity.
Social Resources	
Land Tenure and Rights-of-Way (ROW) (includes transportation corridors)	Impact on any land management considerations (leasing, realty actions, ROWs). Impact on public lands access.
Recreation	Impact on dispersed big game hunting. Impact on off-highway vehicle (OHV) use.
Visual Resources	Impact on Visual Resource Management.
Cultural (including Historic Trails and Native American Religious Concerns)	Impact on known cultural sites and National Register of Historic Places (NRHP) status. Impact on historic trail and management of historic trail sections.
Social and Economic	Impact on economic opportunities in Sweetwater County.