Appendix N

Coal Screening Criteria in the Grand Junction Field Office

APPENDIX N
COAL SCREENING CRITERIA IN THE GRAND JUNCTION FIELD OFFICE

INTRODUCTION

The federal government provides for leasing of coal under the Mineral Leasing Act of 1920 (the Act), as amended. Regulations established under the Act outline procedures for considering development of coal deposits through a leasing system involving land use planning and environmental analysis. This document summarizes the federal coal management decisions for the US Department of the Interior, BLM, GJFO planning area and documents the unsuitability criteria applied to potential coal lands for future development. The identification of areas acceptable for further consideration for coal leasing is a major land use planning decision in the BLM's RMP, which guides the Secretary of the Interior on making coal leasing decisions. Planning decisions outlined in this document will guide the development of the federal coal resource in the planning area.

The lands suitable for further consideration for coal leasing in the GJFO planning area were identified using the first three of the four screening procedures outlined in 43 CFR 3420.1-4:

1. Identify only lands that have coal development potential;
2. Review federal lands during land use planning using the unsuitability criteria set forth in 43 CFR 3461 to determine which areas are unsuitable for all or stipulated methods of coal mining involving surface coal mining operations;
3. Evaluate multiple land use decisions (trade-offs) that could eliminate lands from leasing that contain resources presently deemed more important than coal; and

4. Consult with the surface owner for private surface lands overlying federal coal. (This screen was not applied to this planning process.)

COAL PLANNING PROCESS

The following section describes the screening procedures and criteria used to determine lands suitable for further consideration for coal leasing in the GJFO planning area.

Screen 1: Identification of Coal Development Potential

The coal potential area extends to a maximum development depth of 2,500 feet (Figure 2-11, Appendix A). Coal potential in the GJFO planning area is considered deep coal, with overburden depths too great to assume any surface mining potential. These lands constitute the coal development potential identified in the Approved Resource Management Plan and include current coal leases and unleased federal coal resources where development could occur by year 2032. These areas were brought forward for the coal unsuitability review outlined in Screen 2, below.

Screen 2: Unsuitability Review

As outlined in 43 CFR 3461, the BLM considered 20 criteria that were based mostly on resource values to determine whether those lands identified as having development potential (Screen 1) were suitable for development. Due to the depths of coal resources within the GJFO planning area, it is anticipated that all coal would be mined by underground mining techniques. Screen 2, as it applies within the GJFO, would therefore only be applicable to surface operations such as vent holes, portals, load out facilities, roads, and other surface disturbances related to underground coal mining.

In the GJFO planning area, the areas identified as having coal development potential represent deep coal deposits with no clearly defined areas where surface impacts would occur. As such, these coal resources are generally exempted from the restrictions of the unsuitability criteria.

Some criteria have exceptions or exemptions as listed in the regulations. If the exemption or exception for a specific criterion can be applied, the coal lands being evaluated were not considered unsuitable and could be considered for leasing.

The regulations outlining the procedures for unsuitability determinations provide that "federal lands with coal deposits that would be mined by underground mining methods shall not be assessed as unsuitable where there would be no surface coal mining operations" (43 CFR 3461.1 [a]). Surface coal mining operations are defined in 43 CFR 3400.0-5 as "activities conducted on the surface of lands in connection with a surface coal mine or surface operations and surface impacts incident to an underground mine." In other words, unsuitability criteria will be applied to all coal lands that are potentially recoverable by surface mining methods (i.e., where earthen material above the

coal beds is physically moved to access the coal beds and those areas where associated support facilities and structures are located).

"Surface operations and surface impacts" apply to the support facilities and structures built on the surface for underground mines and the surface disturbance that it causes; therefore, lands will generally be considered unsuitable if the expected mining activities would result in direct impacts on the surface.

Criterion 1

All federal lands included in the following land systems or categories shall be considered unsuitable: National Park System, National Wildlife Refuge System, National System of Trails, National Wilderness Preservation System, National Recreation Areas, land acquired with money derived from the Land and Water Conservation Fund, National Forests, and federal lands in incorporated cities, towns, and villages.

Analysis

No land systems or categories under this criterion exist in the potential coal development areas.

Criterion 2

Federal lands that are within rights-of-way or easements, or within surface leases for residential, commercial, industrial, or other public purposes on federally owned surface, shall be considered unsuitable.

Analysis

Numerous rights-of-way are present within the potential coal development areas. The lands within these rights-of-way are unsuitable for surface coal mining operations.

Criterion 3

Federal lands affected by Section 522(e) (4) and (5) of the Surface Mining Control and Reclamation Act shall be considered unsuitable. This includes lands within 100 feet of the outside line of the right-of-way of a public highway; within 100 feet of a cemetery; within 350 feet of any occupied public building, school, church, community, or institutional building or public park; or within 300 feet of an occupied building.

Analysis

Interstate 70, including the lands within 0.5-mile of either side of both rights-of-way, are unsuitable for coal mining operations.

Other public roads and facilities are also considered unsuitable for coal mining operations. An evaluation of public roads and facilities will be conducted when a coal lease is nominated and determined unsuitable for surface coal mining operations.

Criterion 4

Federal lands designated as WSA shall be considered unsuitable while under review by the Administration and the Congress for possible wilderness designation.

Analysis

The Demaree Canyon (22,700 acres) and Little Book Cliffs WSAs (29,300 acres) are both within the potential coal development areas and have been determined unacceptable for coal leasing per Screen 3 (below). As such, a suitability determination under Screen 2 is not applicable.

Criterion 5

Scenic federal lands designated by visual resource management (VRM) analysis as Class I (an area of outstanding scenic quality or high visual sensitivity) but not currently on the National Register of Natural Landmarks shall be considered unsuitable.

Analysis

VRM Class I areas within the GJFO planning area are unsuitable for surface coal mining operations. The Demaree Canyon and Little Book Cliffs WSAs are managed as VRM Class I areas but have been determined unacceptable for coal leasing per Screen 3 (below). As such, a suitability determination under Screen 2 is not applicable. Additional areas that are located outside of the WSAs and designated as VRM Class I are determined unsuitable for surface coal mining operations.

Criterion 6

Federal lands under permit by the surface management agency and being used for scientific studies involving food or fiber production, or natural resources or technology demonstrations and experiments shall be considered unsuitable for the duration of the study, demonstration, or experiment, except where mining could be conducted in such a way as to enhance or not jeopardize the purposes of the study, as determined by the surface management agency, or where the principal scientific user or agency give written concurrence to all or certain methods of mining.

Analysis

The ant research area and owl banding station is considered unsuitable for surface coal mining operations.

Criterion 7

All publicly owned places on federal lands that are included in the National Register of Historic Places shall be considered unsuitable. This criterion applies to any areas that the surface management agency determines, after consultation with the Advisory Council on Historic Preservation and the State Historic

Preservation Office, are necessary to protect the inherent values of the property that made it eligible for listing in the National Register of Historic Places.

Analysis
There are no publicly owned places on federal lands that are included in the National Register of Historic Places.

Criterion 8
Federal lands designated as natural areas or as National Natural Landmarks shall be considered unsuitable.

Analysis
No natural areas or National Natural Landmarks are designated within the potential coal development areas.

Criterion 9
Federally designated critical habitat for threatened or endangered plant and animal species, and habitat for federal threatened or endangered species, which is determined by the US Department of the Interior, US Fish and Wildlife Service (USFWS) and the surface management agency to be of essential value, and where the presence of threatened or endangered species has been scientifically documented, shall be considered unsuitable.

Analysis
Threatened or endangered habitat is unsuitable for surface coal mining operations. Underground coal mining operations may occur if, after consultation with USFWS, USFWS determines that reasonable and prudent measures included in the Biological Opinion will mitigate and/or minimize impacts to the species or its critical habitat. Threatened or endangered habitat areas that would be directly or indirectly impacted by surface facilities outlined in the mine plans will be surveyed prior to any mine plan approval. The mine plans will incorporate avoidance of the species and their habitat.

Criterion 10
Federal lands containing habitat determined critical or essential for plant or animal species listed as threatened or endangered by the state pursuant to state law shall be considered unsuitable.

Analysis
Species currently listed as threatened or endangered by the State of Colorado but not listed by USFWS shall be determined unsuitable for surface coal operations. Underground coal mining operations may occur if, after consultation with the State of Colorado, the State determines reasonable and prudent measures will mitigate and/or minimize impacts to the species or its critical habitat. State threatened or endangered habitat areas that would be directly or indirectly impacted by surface facilities outlined in any mine plan will be

surveyed prior to mine plan approval. Mine plans will incorporate avoidance of the species and their habitat.

Criterion 11

A bald or golden eagle nest or site on federal lands that is determined to be active and an appropriate buffer zone of land around the nest site shall be considered unsuitable. Consideration of availability of habitat for prey species and of terrain shall be included in the determination of buffer zones. Buffer zones shall be determined in consultation with USFWS.

Analysis

Bald and golden eagle nests are unsuitable for surface coal mining operations. Several golden eagle nests are within the potential coal development areas, mostly along the Book Cliffs. Bald eagle habitat and one known nest site occur within the potential coal development areas.

No surface coal mining facilities that require daily human activities will be built within active areas or within buffer zones with active nests of bald or golden eagles.

Underground coal mining operations may occur if:

- They can be conditioned in such a way, either in manner or period of operation, that eagles will not be disturbed during breeding season; or
- The surface management agency, with the concurrence of USFWS, determines that the golden eagle nest(s) will be moved.

Buffer zones may be decreased if the surface management agency determines that the active eagle nests will not be adversely affected.

Criterion 12

Bald and golden eagle roost and concentration areas on federal lands used during migration and wintering shall be considered unsuitable.

Analysis

There are no known bald or golden eagle roosts or concentration areas within the potential coal development areas. Eagles do visit the area during winter, but no critical habitat areas have been identified.

Criterion 13

Federal lands containing a falcon (excluding kestrel) cliff nesting site with an active nest and a buffer zone of federal land around the nest site shall be considered unsuitable. Consideration of availability of habitat for prey species and of terrain shall be included in the determination of buffer zones. Buffer zones shall be determined in consultation with USFWS.

Analysis

Falcon nests are considered unsuitable for surface coal mining operations. Falcon nests that would be directly or indirectly impacted by surface facilities outlined in a mine plan will be surveyed prior to mine plan approval. The mine plan will incorporate avoidance of the species and their habitat.

Protections for bald and golden eagles are identified under Criterion 11.

Criterion 14

Federal lands that are high-priority habitat for migratory bird species of high federal interest on a regional or national basis, as determined jointly by the surface management agency and USFWS, shall be considered unsuitable.

Analysis

Critical habitat of migratory birds, listed on the USFWS list of Birds of Conservation Concern, is unsuitable for surface coal mining operations. Critical migratory bird habitat that would be directly or indirectly impacted by surface facilities outlined in the mine plan will be surveyed prior to mine plan approval. The mine plan will incorporate avoidance of the species and their habitat. Underground mining may occur where the surface management agency, after consultation with USFWS, determines that all or certain stipulated methods of coal mining will not adversely affect the migratory bird habitat during the periods when such habitat is used by the species.

Criterion 15

Federal lands that the surface management agency and the state jointly agree are fish and wildlife habitat for resident species of high interest to the state, and that are essential for maintaining these priority wildlife species, shall be considered unsuitable. Examples of such lands that serve a critical function for the species involved include: (i) active dancing and strutting grounds for sage-grouse, sharp-tailed grouse, and prairie chicken; (ii) winter ranges crucial for deer, antelope, and elk; (iii) migration corridor for elk; and (iv) extremes of range for plant species.

Analysis

This criterion includes sensitive fish, wildlife, and plants as designated by the BLM and Colorado Division of Wildlife, as well as high-value species such as deer, elk, moose, and bighorn sheep. Areas that contain these species are suitable for limited surface coal mining operations.

Surface coal mining operations may occur within deer and elk critical winter range. Construction or daily activity within elk calving areas will be allowed only if no reasonable alternative sites exist outside the critical habitat. Lease stipulations and conditions of approval, as determined by BLM and Colorado Division of Wildlife, will be required to minimize disturbance within the critical habitats.

Underground mining may occur if, after consultation with the State, the surface management agency determines that all or certain stipulated methods of coal mining will not have a significant long-term impact on the species being protected.

Criterion 16

Federal lands in riverine, coastal, and special flood plains (100-year recurrence interval) on which the surface management agency determines that mining could not be undertaken without substantial threat of loss of life or property shall be considered unsuitable for all or certain stipulated methods of mining.

Analysis

No coastal flood plains exist in the potential coal lease areas. One hundred-year flood plains exist along the drainages in the potential coal development areas, but only the Colorado River has been delineated. As such, the entire Colorado River corridor has been identified as unsuitable.

Criterion 17

Federal lands that have been committed by the surface management agency to use as municipal watersheds shall be considered unsuitable.

Analysis

The Palisade and Grand Junction municipal watersheds are within the potential coal development areas and are considered unsuitable for surface coal mining operations.

Criterion 18

Federal lands with national resource waters, as identified by states in their water quality management plans, and a buffer zone of federal lands 0.25-mile from the outer edge of the far banks of the water, shall be unsuitable.

Analysis

No national resource waters have been identified by the State of Colorado in the potential coal development areas.

Criterion 19

Federal lands identified by the surface management agency, in consultation with the state in which they are located, as alluvial valley floors according to the definition in 43 CFR 3400.0-5 (a) of this title, the standards in 30 CFR Part 822, the final alluvial valley floor guidelines of the Office of Surface Mining

Reclamation and Enforcement when published, and approved state programs under the Surface Mining

Control and Reclamation Act of 1977, where mining would interrupt, discontinue, or preclude farming, shall be considered unsuitable. Additionally, when mining federal land outside and alluvial valley floor would materially

damage the quantity or quality of water in surface or underground water systems that would supply alluvial valley floors, the land shall be considered unsuitable.

Analysis
The Office of Surface Mining has tentatively identified approximately 2,400 acres in the potential coal development areas as alluvial valley floors. Most of these areas are undeveloped rangelands not presently significant to agriculture. They include:

- The alluvium of West Salt Creek from the headwaters to approximately two (2) miles south of the Book Cliffs.
- The alluvium of East Salt Creek from the headwaters to approximately two (2) miles south of the Book Cliffs.
- The alluvium of Big Salt Wash from the headwaters to approximately three (3) miles south of the Book Cliffs.
- Several sub-irrigated areas in the headwaters area of Middle Dry Fork, North Dry Fork, McKay Fork, and Kimball Creek.

Surface coal mining operations may occur within alluvial valley floors if no reasonable alternative sites exist outside these areas. Lease stipulations and conditions of approval, will be required to minimize disturbance and affects to water supplies within these areas.

Criterion 20
Federal lands in a state to which is applicable a criterion (i) proposed by the state or Indian tribe located in the planning area, and (ii) adopted by rulemaking by the Secretary, shall be considered unsuitable.

Analysis
There are no lands within the potential coal development areas that have been proposed by the State of Colorado or Indian tribes to be unsuitable.

Screen 3: Trade-offs

This screen requires evaluating multiple land use decisions (trade-offs) that could eliminate lands from leasing that contain resources presently deemed more important than coal. This screen has been applied as part of the land use conflict-resolution process. Where conflicts were identified between coal development and development or protection of other resources, a determination was made as to which resource was more important. The following have been determined to be areas where another resource is more important than coal and potential impacts could not be mitigated. These conflict areas are determined unacceptable for further coal leasing and development.

The Demaree Canyon (22,700 acres) and Little Book Cliffs (29,300 acres) WSAs are both within the potential coal development areas. Of these 52,000

acres, 2,156 acres are currently under coal lease. An estimated 277 million tons of in-place coal underlies the Demaree Canyon WSA, and an estimated 349 million tons of in-place coal underlies the Little Book Cliffs WSA. Both areas are unacceptable for leasing per Screen 3, pending Congressional decisions on wilderness recommendations. This determination is based on Section 308 of the Fiscal Year 1984 Interior Appropriations Act, which prohibits leasing. The WSAs could become acceptable for leasing if Congress does not designate them as Wilderness.

The following additional areas are unacceptable for further coal leasing and development under Screen 3.

- The Colorado River corridor, which is unacceptable for further coal leasing and development.
- The Grand Junction and Palisade municipal watersheds, which is unacceptable for further coal leasing and development.

Screen 4: Consultation with Private Surface Owners

Screen four, consultation with the surface owner for private surface lands overlying federal coal, was not completed for the Approved RMP.