ENVIRONMENTAL ASSESSMENT

of the

EAGLE BUTTE COAL LEASE APPLICATION AS APPLIED FOR BY AMAX LAND COMPANY

(Federal Coal Lease Application WYW124783)
June 1994

I. INTRODUCTION

A. Purpose and Need

On July 24, 1991, Meadowlark Farms, Inc. (now AMAX Land Company) filed an application for a coal lease on federal coal reserves located southwest of and adjacent to the Eagle Butte Mine, in accordance with U.S. Department of the Interior regulations and Powder River Regional Coal Team guidelines. The mine is operated by AMAX Coal West, Inc, which is a subsidiary of Cypress-Amax. The coal lease application was filed with the Bureau of Land Management (BLM), the administrative agency responsible for leasing federal coal.

The lands applied for are located in Campbell County, approximately three miles north of Gillette, Wyoming. Figure 1 is a map showing the location of the area. The proposed lease contains approximately 915 acres of federal coal in Campbell County, Wyoming. Figure 2 is a map showing the location of the proposed lease relative to the adjacent federal leases held by AMAX Land Company (i.e. the existing Eagle Butte Mine). The surface of the proposed lease area is owned by private interests with the majority being owned by AMAX Land Company. As applied for, the proposed lease would be mined as part of the existing operations at the Eagle Butte Mine. After mining, the land would be reclaimed for livestock grazing, farming, and wildlife habitat as is the current practice at the Eagle Butte Mine.

The Eagle Butte coal lease application was reviewed by the BLM, Wyoming State Office in Cheyenne, Wyoming. It was determined the application and the lands involved met the requirements of regulations governing coal leasing on application (43 CFR 3425).

The proposed Eagle Butte lease lies within the decertified Powder River Federal Coal Production Region. The Eagle Butte coal lease application was reviewed and approved for processing as a lease-by-application (LBA) by the Powder River Regional Coal Team at the June 15, 1992 meeting in Gillette, Wyoming. Although the Powder River Federal Coal Production Region was decertified as a Federal coal production region in January, 1990, the Regional Coal Team has remained active and has reviewed proposed coal leasing in the region on a yearly basis. The most recent Powder River Regional Coal Team meeting was held on June 16, 1993, in Billings, Montana.

Four LBAs have been issued in the Wyoming portion of the Powder River Federal Coal Region since the region was decertified. There are currently four pending coal lease applications

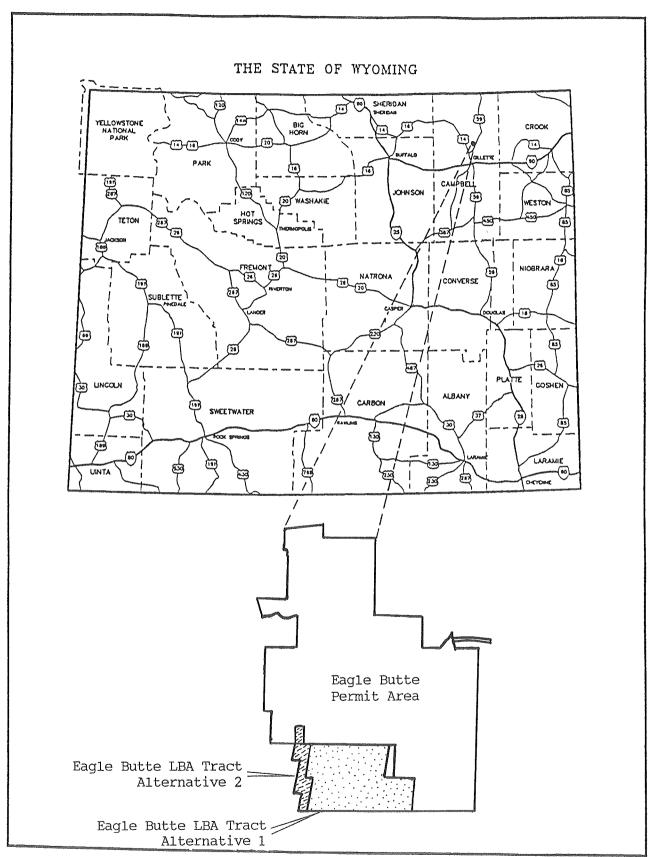
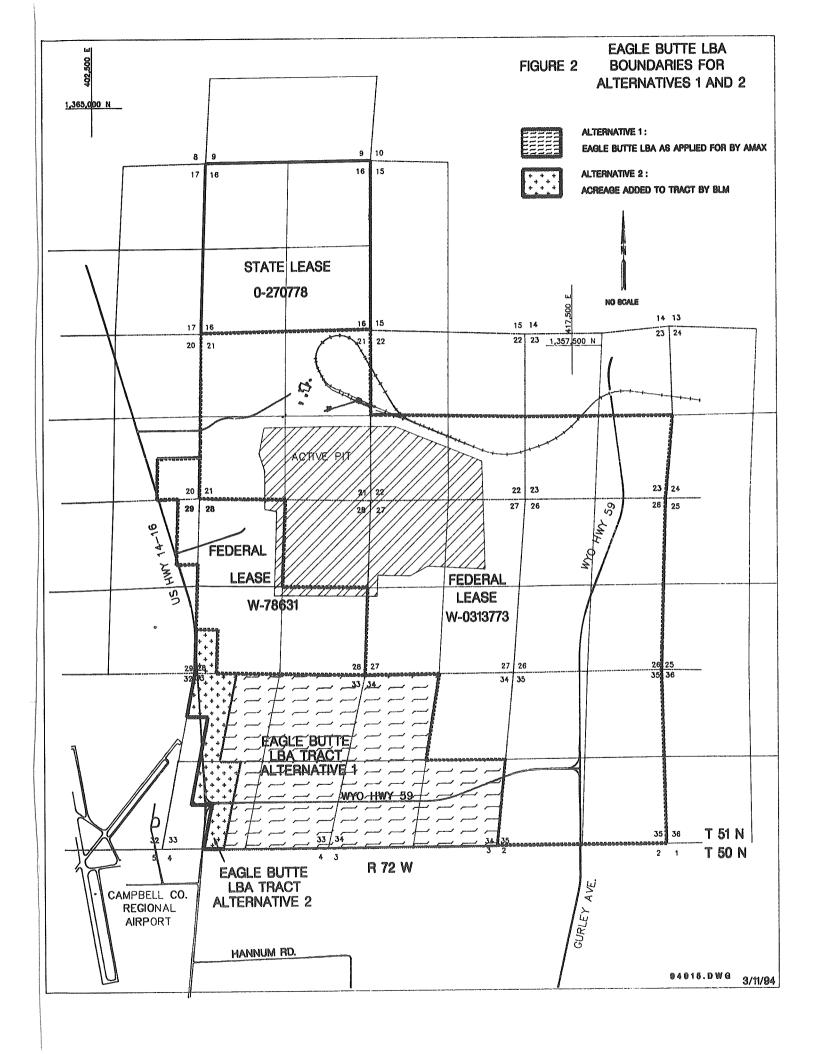


Figure 1. General Location Map of Eagle Butte LBA Tract



in the Powder River Federal Coal Region. Three, including the Eagle Butte application, are in Wyoming, and one pending application is in Montana. The pending and previously issued LBAs in the region are summarized in Table 1.

The BLM must complete three actions for an LBA to be processed: a planning and environmental review, a geologic and mine plan review, and an economic review of the proposed lease area. Leasing by application is a competitive bidding process, and the leases are not issued if the high bid does not meet or exceed the fair market value of the tract as determined by BLM. A public hearing is required for each LBA to take public comments on the environmental analysis, the fair market value, and the maximum economic recovery of coal in each proposed tract.

This Environmental Assessment (EA) satisfies the planning and environmental review portion of the LBA process. It has been prepared to assist the BLM to make a decision on the proposed lease, to provide a basis for public review, and to comply with the requirements of the National Environmental Policy Act of 1969 (NEPA).

B. Conformance With Land Use Plan

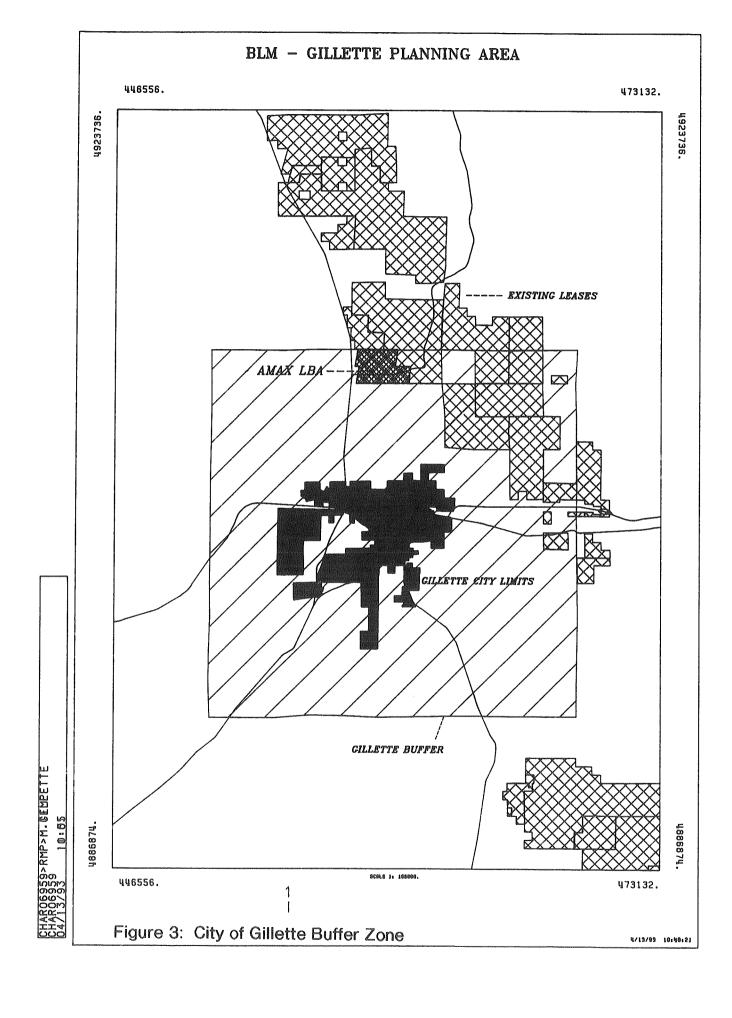
The BLM's principal authority to manage public lands is established by the Federal Land Policy and Management Act of 1976 (FLPMA). Through this authority, the BLM is responsible for managing resources on public lands in a manner that maintains or improves them. The BLM planning regulations are set forth in 43 Code of Federal Regulations (CFR) 1600. The Buffalo Resource Area Resource Management Plan (RMP), and its associated Environmental Impact Statement (EIS) is the plan which governs the management of lands and minerals in Campbell County (BLM, 1985). The Buffalo Resource Area consists of Campbell, Johnson, and Sheridan counties. The proposed action is in conformance with the current land use plan.

A buffer zone around the City of Gillette in which coal leasing is not allowed was established at the request of the city in 1979, when the Buffalo Management Framework Plan was first amended. The Gillette buffer zone was carried forward into the Buffalo RMP in 1985. The purpose of the buffer zone, which extends 3 miles beyond the Gillette Planning District (Figure 3), is to allow for community expansion and open space. The RMP states that new leasing is not allowed within the 3-mile buffer zone, although there are pre-existing leases within it, along the north and east boundaries (Figure 3).

In 1987, Wyodak Resources Development Corporation applied for a lease modification for coal that was within the Gillette Buffer Zone. If this coal was not mined, it would be bypassed. The City of Gillette passed a resolution in favor of approving Wyodak's lease modification.

In response to Wyodak's application and the resolution from the City of Gillette, the Buffalo RMP was amended in 1988 to allow limited coal leasing within the Gillette Buffer Zone

			GION LEASING SUMM	2 4 3 3 3		6/94
EASE BY APPLICATIONS	(LBAs): SALI	HELD				
WYOMING BA EASE NO. PPLICANT	APPLICATION DATE	AS APPLIED FOR ESTIMATED LEASE SIZE & COAL TONNAGE	STATUS	AS OFFERED LEASE SIZE & EST. TONS OF MINEABLE COAL	SALE INFORMATION	AVERAGE COAL QUALITY DATA FROM LEASE SALE NOTICE
IACOBS RANCH Iacobs Ranch Mine NYW117924 Kerr-McGee	10/10/89	1465.16 Acres 123 MM Tons	Sale Held: 9/26/91; EA unsuccessfuly appealed by PRBRC*, WOC*, and Sierra Club; Lease Effective: 10/1/92; Motion by PRBRC* for IBLA reconsideration denied	1708.62 Acres 132,681,204 Tons	1 bid received: \$20,114,930.00 \$11,770.00/acre; 15.1 cents/ton Accepted	Btu/lb=8540 Ash=5.4%, Sulfur 0.47% Strip Ratio=2.46 BCY**/t
MEST BLACK THUNDER NYW118907 Black Thunder Mine Thunder Basin Coal Co.	12/22/89	3225 Acres 400 MM Tons	Sale held: 8/12/92, Bid Accepted Lease Effective: 10/1/92	3492.495 Acres 417,834,298 Tons	1 bid received: \$71,909,282.69 \$20,586.68/acre, 17.2 cents/ton Accepted	Btu/lb=8839 Ash=4.40%, Sulfur=0.25 Strip Ratio=2.72 BCY**/t
NORTH ANTELO PE/ROCHELLE MYW119554 N.Ant & Rochelle Mines Powder River Coal Co.	E 3/2/90 Filed as two applications	N. Antelope 954 Acres, 120 MM Tons; Rochelle 1196 Acres, 150 MM Tons	Sale Held: 9/28/92, Bid Accepted Lease Effective: 10/1/92	Offered as One Tract: 3064.04 Acres 393,600,000 Tons	1 bid received, \$86,987,765.00 \$28,389.89/acre, 22.1 cents/ton Accepted	NA ROCH Btu/lb= 8804, 8700 Ash = 4.40%, 4.31% Sulfur=0.35%, 0.13% Ratio = 2.29, 2.16 BCY**/ton
WEST ROCKY BUTTE WYW122586 Proposed Rocky Butte Mine Northwestern Resources Co.	12/4/90	390 Acres 50 MM tons	Sale Held: 12/3/92, Bid Rejected; Sale Held 1/7/93, Bid Accepted; Sale Procedure Appealed, Sale upheld by IBLA; Lease Effective 1/1/93; PRBRC* Reconsideration Request Denied; Logical Mining Unit Approved	463.205 Acres 55,000,000 Tons	12/3/92, 1 bid received, \$14,200,000 \$30,603. 45/acre, 25.8 cents/ton Bid Rejected 1/7/92, 1 bid received, \$16,500,000 \$35,621.38/acre, 30.0 cents/ton Bid Accepted	Upper Coal(98% of coal) Btu/lb=8354 Ash=4.30%, Sulfur=0.27 Average Overall Strip Ratio=3.75BCY**/tr
SUMMARY		ESTIMATED 999,115,50	D RECOVERABLE TONS COAL LEASED, TOTAL	BONUS \$195,511,9	77.69	
LEASE BY APPLICATION	S (LBA'S): PE	NDING				
WYOMING						
EAGLE BUTTE WYW124783 Eagle Butte Mine AMAX Land Co./ AMAX Coal West, Inc.	7/25/91	915 Acres 150 MM Tons	Scoping meeting held 4/14/93 in Gillette; Draft EA released 11/5/93; Public Hearing held on 12/8/93 in Gillette			
ANTELOPE WYW128322 Antelope Mine Antelope Coal Co.	12/29/92	462.2 Acres 60 MM Tons	Scoping Meeting held 2/17/94 in Douglas; Second scoping period ended May 16, 1994; EA is in preparation			
NORTH ROUNDUP WYW127221 North Rochelle Mine Ziegler Coal Co.(formerly Shell)	7/22/92	1439 Acres 140 MM tons	Regional Coal Team recommended processing on 6/16/93; EIS will be prepared			
MONTANA WESTERN ENERGY COMPAN' MTM80697 Rosebud Mine Western Energy Co.	Y 1/29/92	2061 Acres 39.3 MM Tons	Scoping Meetings Held during July and August 1992; Draft EIS Released			



in situations where coal adjacent to existing mines would be bypassed if leasing was not allowed within the buffer zone, and where coal leasing would not conflict with city planning. In August of 1988, the decision was approved "...to amend the Buffalo RMP so that the Bureau can consider new applications for emergency coal leases, exchanges, or lease modifications within the 3-mile buffer zone surrounding the Gillette Planning District. All applications within the Gillette Buffer Zone would have to be adjacent to an existing mining operation and extend no more than 1 mile beyond existing coal lease boundaries....".

The regulations which are applicable to the above types of coal leasing actions are as follows: 43 CFR 3425--Leasing on Application for emergency coal leases; 43 CFR 3435--Lease Exchanges for coal lease exchanges; and 43 CFR 3432--Lease Modifications for coal lease modifications.

The LBA process is also a part of the 43 CFR 3425 regulations. LBAs were not specifically listed in the amendment to the Buffalo RMP because that process could not be used until the Powder River Basin was decertified as a federal coal producing region in January of 1990. Since the Buffalo RMP was amended in 1988 to allow leasing within the Gillette Buffer Zone under the regulations at 43 CFR 3425, it is not necessary to amend the plan to include LBAs. An RMP plan change adding LBAs to the types of leasing actions that can be considered in the Gillette Buffer Zone was approved by the Buffalo Resource Area Manager on August 17, 1993. The City of Gillette passed a resolution in support of AMAX's proposed LBA on July 1, 1991.

The coal leasing unsuitability criteria listed in the Federal Coal Management Regulations (43 CFR 3461) have been applied to the lease application area. Table 2 summarizes the unsuitability criteria (column 1), describes the findings for the entire area of the Buffalo Resource Area RMP (column 2), and presents a validation of these findings for the Eagle Butte LBA tract, including the lands under Alternatives 1 and 2 (column 3). The table shows that none of the lands located on the tract were found unsuitable for leasing, and therefore the tract is available for further consideration for leasing.

C. Relationship To Statutes, Regulations, Or Other Plans

The Eagle Butte coal lease application was submitted and is being processed and evaluated under the following authorities: Mineral Leasing Act of 1920 as amended; Multiple-Use Sustained Yield Act of 1960; National Environmental Policy Act of 1969 (NEPA); Federal Coal Leasing Amendments Act of 1976 (FCLAA); Federal Land Policy and Management Act of 1976 (FLPMA); and the Surface Mining Control and Reclamation Act of 1977 (SMCRA).

The leasing of federal coal is the responsibility of the BLM under FCLAA. This environmental assessment has been prepared to evaluate the potential impacts which could be expected to occur if the proposed lease is issued and mined. If the proposed Eagle Butte LBA

Table 2. Validation of Unsuitability Criteria for Eagle Butte LBA Tract

UNSUITABILITY CRITERIA	FINDINGS FROM THE BUFFALO RESOURCE AREA RMP (BLM, 1985)	VALIDATION FOR EAGLE BUTTE LBA TRACT
1. Federal Land Systems. All federal lands included in the following systems are unsuitable for leasing: National Parks, National Wildlife Refuges, National System of Trails, National Wilderness Preservation System, National Wild and Scenic Rivers, National Recreation Areas, Lands acquired through the Land and Water Conservation Fund, National Forests, and federal lands in incorporated cities, towns and villages.	None of the listed federal land categories are present within the Buffalo Resource Area coal development review area.	Not applicable to Eagle Butte LBA.
2. Rights-of-Way and Easements. 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 are unsuitable for leasing.	Rights of way and buffers for mainline railroads, I-25 and I-90 were declared unsuitable.	None of these rights of way are on the tract; the area is available for further consideration.
3. Dwellings, Roads, Cemeteries, and Public Buildings. Federal lands within 100 feet of a right-of-way of a public road or a cemetery or within 300 feet of any public building, school, church, community or institutional building or public park or an occupied dwelling.	Within the study area there were 390 acres around dwellings that were considered unsuitable.	The only buildings on or within 300 feet of the tract are owned by AMAX; the tract is therefore available for further consideration.
4. Wilderness Study Areas. Federal lands designated as wilderness study areas are unsuitable while under review for possible wilderness designation.	A portion of the Fortification Creek wilderness study area is within the review area, but not near the Eagle Butte Tract.	There are no unsuitable findings; the tract is available for further consideration.
5. Lands with Outstanding Scenic Quality. Scenic federal lands designated by visual resource management analysis as Class I (outstanding visual quality or high visual sensitivity) but not currently on the National Register of Natural Landmarks are unsuitable.	No lands on the review area meet the scenic criteria as outlined.	There are no unsuitable findings; the tract is available for further consideration.
6. Land Used for Scientific Study. Federal lands under permit by the surface management agency and being used for scientific studies involving food or fiber production, natural resources, or technology demonstrations are unsuitable for the duration of the study except where mining would not jeopardize the purpose of the study.	No lands on the review area are under permit	. There are no unsuitable findings; the tract is available for further consideration.
7. Historic Lands and Sites. All publicly or privately owned places which are included in or eligible for inclusion in the National Register of Historic Places and an appropriate buffer zone are unsuitable. Sites with potential for listing on the National Register will be reviewed with the State Historic Preservation Office for acceptability for mining if they are under consideration for leasing.	On the basis of consultation with the State Historic Preservation Office there were no unsuitable findings under this criterion in the review area. No sites in the area are listed on the NRHP.	There are no unsuitable findings; the tract is available for further consideration.

UNSUITABILITY CRITERIA	FINDINGS FROM THE BUFFALO RESOURCE AREA RMP (BLM, 1985)	VALIDATION FOR EAGLE BUTTE LBA TRACT
8. Natural Areas. Federal lands designated as natural areas or National Natural Landmarks are unsuitable.	The Dry Creek Petrified Tree Natural Area was identified as unsuitable. This is not on or near the tract.	There are no unsuitable findings; the tract is available for further consideration.
9. Critical Habitat for Threatened or Endangered Plant and Animal Species. Federally designated critical habitat for T & E plant and animal species, and scientifically documented essential habitat for those species are unsuitable.	There is no federally designated critical habitat for T & E plant or animal species within the review area. Prairie dog towns were considered acceptable pending study.	*There are no unsuitable findings; the tract is available for further consideration.
10. State Listed Species. Federal lands containing habitat determined to be critical or essential for plant or animal species listed by a state pursuant to state law as T & E shall be considered unsuitable.	Wyoming does not maintain a state list of T & E species of plants or animals. Therefore, this criterion does not apply.	There are no unsuitable findings; the tract is available for further consideration.
11. Bald or Golden Eagle Nests. An active bald or golden eagle nest and appropriate buffer zone are unsuitable unless the lease can be conditioned so the eagles will not be disturbed during the breeding season or unless golden eagle nests will be moved.	About 116,000 acres were declared unsuitable under this criterion, and about 1,360 acres were found suitable pending further study.	*No eagle nests were found on or near the Eagle Butte LBA tract. There are no unsuitable findings; the tract is available for further consideration.
12. Bald and Golden Eagle Roost and Concentration Areas. Bald and golden eagle roost and concentration areas on federal lands during migration and wintering are unsuitable unless mining can be conducted in such a way as to ensure that eagles shall not be disturbed.	No golden eagle roost or concentration areas occur on the review area. Bald eagle roosts and buffer areas encompassing about 980 acres were declared unsuitable.	*No bald eagle roosts are on or near the tract; the tract is available for further consideration.
13. Federal lands containing an active falcon (excluding kestrel) cliff nesting site and a suitable buffer zone shall be considered unsuitable.	About 5,700 acres were determined unsuitable because of prairie falcon nests and buffer areas.	*None of the sites are on the Eagle Butte LBA tract; the tract is available for further consideration.
14. Habitat for Migratory Bird Species. Federal lands which are high priority habitat for migratory bird species of high federal interest shall be considered unsuitable.	About 460 acres were declared unsuitable due to two active merlin nests.	*Neither site is on the LBA tract; the tract is available for further consideration.
15. Fish and Wildlife Habitat for Resident Species. Federal lands which the surface management agency and state jointly agree are fish and wildlife habitat of resident species of high interest to the state, and which are essential for maintaining these priority wildlife species, shall be considered unsuitable.	About 13,300 acres were declared unsuitable under this criterion.	No unsuitable areas are on the tract; the tract is available for further consideration.

UNSUITABILITY CRITERIA	FINDINGS FROM THE BUFFALO RESOURCE AREA RMP (BLM, 1985)	VALIDATION FOR EAGLE BUTTE LBA TRACT
16. Floodplains. Federal lands in riverine, coastal, and special floodplains shall be considered unsuitable unless stipulated methods of mining can be undertaken without substantial threat of loss of life or property.	After consultation with the USGS, it was determined that floodplains can be mined with site specific stipulations and resource protection safeguards to be developed during mining and reclamation planning. Therefore, all lands within the review area are available for further consideration.	There are no unsuitable findings; the tract is available for further consideration.
17. Municipal Watersheds. Federal lands which have been committed by the surface management agency to use as municipal watersheds shall be considered unsuitable.	There are no municipal watersheds within the review area.	There are no unsuitable findings; the tract is available for further consideration.
18. National Resource Waters. Federal lands with national resource waters, as identified by states in their Water Quality Management Plans, and 1/4-mile buffer zones shall be considered unsuitable.	There are no natural resource waters within the review area.	There are no unsuitable findings; the tract is available for further consideration.
19. Alluvial Valley Floors. All lands identified by the surface management agency, in consultation with the state, as AVFs where mining would interrupt, discontinue or preclude farming, are unsuitable. Additionally, when mining federal lands outside an AVF would damage the quality or quantity of water in surface or underground systems that would supply AVFs, the land shall be considered unsuitable.	Lands along prominent drainages were considered potential AVFs pending a final determination by the state. These lands are placed in an "available pending further study" category and are not considered unsuitable.	The WDEQ/LQD has determined that potential AVF lands on and adjacent to the Eagle Butte LBA tract are not significant to farming (April 22, 1993 letter from Lou Harmon (DEQ) to M. Nicholson (AMAX).
20. State or Indian Tribe Criteria. Federal lands to which is applicable a criterion proposed by the state or Indian tribe located in the planning area and adopted by rulemaking by the Secretary are unsuitable. * Based on consultation with the U.S. Fish and Wildlife Service, see commen	The state has no applicable criteria and there is no Indian tribe located in or near the planning area. Therefore there is no unsuitability finding.	Various tribal entities were notified during the scoping process. None expressed concerns. Thus the tract is available for further consideration.

^{*} Based on consultation with the U.S. Fish and Wildlife Service, see comment letter 2, Appendix B

tract is leased, the lessee will be required to obtain a coal mining permit prior to mining the coal. As a part of that process, a new Mine and Reclamation plan must be developed. Specific impacts which will occur during the mining and reclamation of the tract will be addressed in that proposed Mine and Reclamation Plan and specific mitigation for any anticipated impacts will be described.

After a coal lease is issued, SMCRA gives the Office of Surface Mining Reclamation and Enforcement (OSM) primary responsibility to administer programs that regulate surface coal mining operations and the surface effects of underground coal mining operations. Pursuant to Section 503 of SMCRA, the Wyoming Department of Environmental Quality (WDEQ) developed, and in November 1980 the Secretary of the Interior approved, a permanent program authorizing WDEQ to regulate surface coal mining operations and surface effects of underground mining on non-federal lands within the State of Wyoming. In January 1987, pursuant to Section 523(c) of SMCRA, WDEQ entered into a cooperative agreement with the Secretary of the Interior authorizing WDEQ to regulate surface coal mining operations and surface effects of underground mining on federal lands within the state.

Pursuant to the cooperative agreement, a federal coal lease holder in Wyoming must submit a permit application package (PAP) to OSM and WDEQ for any proposed coal mining and reclamation operations on federal lands in the state. WDEQ reviews the PAP to ensure that the permit application complies with the permitting requirements and that the coal mining operation will meet the performance standards of the approved Wyoming state permanent program. OSM, BLM, and other federal agencies review the PAP to ensure that it complies with the terms of the coal lease, the Mineral Leasing Act of 1920, NEPA, and other federal laws and their attendant regulations. If the PAP does comply, WDEQ issues the applicant a permit to conduct coal mining operations. OSM recommends approval, approval with conditions, or disapproval of the mining plan to the Assistant Secretary of the Interior, Land and Minerals Management. Before the mining plan can be approved, the BLM must concur with this recommendation.

WDEQ enforces the performance standards and permit requirements for reclamation during the mine's operation and has primary authority in environmental emergencies. OSM retains oversight responsibility for this enforcement. BLM has authority in those emergency situations where WDEQ or OSM cannot act before significant environmental harm or damage occurs.

There is a significant amount of permitting in addition to the coal mining permit required before mining can commence. Table 3 lists the state and Federal regulatory agencies which must be consulted prior to mining and the additional permits that may be needed.

Table 3: Federal and State Permitting Requirements and Agencies

FEDERAL	STATE	
Coal Lease (Bureau of Land Management)	Coal Lease (State Land Commission)	
Scoria Lease (Bureau of Land Management)	Scoria Lease (State Land Commission)	
Exploration Drilling (Bureau of Land Management)	Permit to Mine (WDEQ-Land Quality Division)	
Dept. of Interior Permit to Mine/ SMCRA Oversight (Office of Surface Mining)	Permit to Construct (WDEQ-Air Quality Division)	
Drinking Water (Environmental Protection Agency)	Industrial Siting (Industrial Siting Commission)	
Wastewater (National Pollution Discharge Elimination System)	Water Rights (State Engineer's Office)	
Water Impoundment (Mine Safety and Health Admin.)	NPDES Impoundments (WDEQ-Water Quality Division, WDEQ-Land Quality Division)	
Wetlands (Army Corps of Engineers)	Sedimentation Reservoirs (WDEQ-Land Quality Division)	
Hazardous Waste I.D. Number (Environmental Protection Agency)	Storm Water Discharge (WDEQ-Land Quality Division)	
Nuclear Source (Nuclear Regulatory Commission) Explosives (Bureau of Alcohol, Tobacco and Firearms)	Solid Waste (WDEQ-Land Quality)	
Radio (Federal Communications Commission)		

D. Public Participation

The Eagle Butte lease application was reviewed by the Powder River Regional Coal Team at their last three yearly public meetings (September 6, 1991 in Cheyenne, Wyoming; June 25, 1992 in Gillette, Wyoming; and June 16, 1993 in Billings, Montana). The company presented information about the Eagle Butte Mine and the lease application to the regional coal team at the June 25, 1992 meeting.

Preliminary scoping for developing the initial draft EA was based upon the issues considered in the previously prepared environmental analyses and detailed mine permits in the Powder River Coal Region. In March, 1993, more than 160 notices of a scheduled scoping meeting were mailed to federal state agencies, local governments, conservation groups, commodity groups, and individuals who may be impacted by this lease application. A scoping meeting was held in Gillette, Wyoming, on April 14, 1993. Five written comments were received on the Eagle Butte lease application, and several additional oral comments were made at the scoping meeting. Issues identified and concerns expressed during the scoping meeting have been addressed in this draft EA where possible.

The draft EA was issued in November, 1993. A public hearing was held on December 8, 1993 in Gillette, Wyoming. Forty three comment letters were received. These comment letters and responses are included as Appendix A in this final document. This final document includes revisions made in response to the comments received on the draft document.

Additional review and coordination with state and federal agencies was also done. Specifically, letters were written to appropriate agencies advising of the pending lease application and requesting their concerns. Results are discussed below in the sections dealing with the respective environmental disciplines.