

U.S. Department of the Interior
Bureau of Land Management
Little Snake Field Office
455 Emerson Street
Craig, CO 81625-1129

ENVIRONMENTAL ASSESSMENT

EA-NUMBER: CO-100-2006-075 EA

PERMIT/LEASE NUMBER: COC 20900

PROJECT NAME: Coal Lease Modification

LEGAL DESCRIPTION: T. 5 N., R. 86 W., Sec. 19, lot 5 and 6, S $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ N $\frac{1}{2}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$, N $\frac{1}{2}$ N $\frac{1}{2}$ N $\frac{1}{2}$ SE $\frac{1}{4}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$, and N $\frac{1}{2}$ NE $\frac{1}{4}$; Sec. 20, NW $\frac{1}{4}$ NW $\frac{1}{4}$, and SW $\frac{1}{4}$ NW $\frac{1}{4}$. Acres involved: Approximately 296 acres on the existing coal lease and approximately 222 additional acres are being added.

APPLICANT: Twentymile Coal Co. (Peabody Energy Co.)

PLAN CONFORMANCE REVIEW: The proposed action is subject to the following plan:

Name of Plans: Little Snake Resource Management Plan and Record of Decision

Date(s) Approved: April 26, 1989

Results: The proposed action has been reviewed for conformance with this plan (43 CFR 1610.5, BLM 1617.3). The proposed action is in conformance with the objectives for Management Unit 1.

Remarks: The proposed Coal Lease (COC 20900) Modification is located within Management Unit 1 (Little Snake Resource Management Plan). This unit is rated as possessing the highest favorability for the occurrence of coal, and oil and gas resources in the Little Snake Resource Area. The objectives of Management Unit 1 are to realize the potential for development of coal, oil, and gas resources.

IDENTIFY APPLICABLE NEPA DOCUMENTS AND OTHER RELATED DOCUMENTS THAT COVER THE PROPOSED ACTION

Colorado Public Land Health Standards, Decision Record & Finding of No Significant Impact and Environmental Assessment, March 1997.

EA Number: CO-016-85-69 September 9, 1985

EA Number: CO-100-2005-021 March 29, 2005

NEED FOR PROPOSED ACTION: To modify the lease terms to allow the Twentymile Coal Mine to mine all the underground coal reserves and to add approximately 222 acres to their existing COC - 20900 coal lease.

PUBLIC SCOPING PROCESS: This project will be listed on the Little Snake Field Office's web site.

BACKGROUND: Under the terms and conditions of coal lease C-20900, Twentymile Coal Co. leased only the surface coal, but the underground coal resources were not included in the lease agreement. The mine operator now submits an application to modify the lease terms permitting the underground mining of federal coal, including the Wadge and Wolf Creek seams.

A 2004 U.S. Supreme Court decision ruled that subsidence related to underground coal mining does not classify this activity as surface coal mining. Whereas the unsuitability criteria strictly involved surface coal mining disturbance, this lease modification involves strictly mining underground coal reserves. Therefore since the unsuitability criteria related to surface coal mining in the Fish Creek Alluvial Valley Floor and Floodplain does not apply, the underground coal mining can now be classified as suitable for this mining lease.

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES: To modify the existing lease terms to include all of the subsurface coal seams and to add 222 acres.

NO ACTION ALTERNATIVE: A no action alternative will result in federal coal being left behind, in place, and produce a loss of revenue as a result.

AFFECTED ENVIRONMENT/ENVIRONMENTAL CONSEQUENCES/MITIGATION MEASURES

CRITICAL RESOURCES

AIR QUALITY

Affected Environment: Emissions from ongoing underground mining and surface operations are currently released. Coal dusts are generated and affect the local air quality. The Foidel Creek Mine Permit includes an Air Pollution Control Plan which describes dust control measures. An Emission Permit has been issued by the Colorado Department of Public

Health and Environment, Air Pollution Control Division.

Environmental Consequences: The addition of the federal coal to the existing mining operation will not cause any additional air quality impairment. Pollutant emissions would be extended an additional length of time necessary to mine the additional coal reserves.

Mitigative Measures: None

Name of specialist and date: Ole Olsen 5/17/06

AREA OF CRITICAL ENVIRONMENTAL CONCERN

Affected Environment: Not present.

Environmental Consequences: Not applicable.

Mitigative Measures: Not applicable

Name of specialist and date: Jim McBrayer – 7/20/2006

CULTURAL RESOURCES

Affected Environment: Cultural resources, in this region of Colorado, range from late Paleo-Indian to Historic. For a general understanding of the cultural resources in this area of Colorado, see *An Overview of Prehistoric Cultural Resources, Little Snake Resource Area, Northwestern Colorado*, Bureau of Land Management Colorado, Cultural Resources Series, Number 20, *An Isolated Empire, A History of Northwestern Colorado*, Bureau of Land Management Colorado, Cultural Resource Series, Number 2 and *Colorado Prehistory: A Context for the Northern Colorado River Basin*, Colorado Council of Professional Archaeologists.

Environmental Consequences: The proposed project, Twentymile Coal Company, A Proposed Block for the Coal Lease Modification, has undergone a Class III cultural resource survey:

Metcalf, Michael D.

2006 Twentymile Coal Company, A Proposed Block for the Coal Lease Modification, Class III Cultural Resource Inventory BLM 54.17.06. Metcalf Archaeological Consultants, Inc. Eagle, Colorado.

The survey identified no eligible to the National Register of Historic Places prehistoric cultural resources. The proposed project may proceed as described in this EA with the following mitigative measures in place.

Mitigative Measures:

The following standard stipulations apply for this project:

1. The operator is responsible for informing all persons who are associated with the operations that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are encountered or uncovered during any project activities, the operator is to immediately stop activities in the immediate vicinity of the find and immediately contact the authorized officer (AO) at (970) 826-5000. Within five working days, the AO will inform the operator as to:

- Whether the materials appear eligible for the National Register of Historic Places;
- The mitigation measures the operator will likely have to undertake before the identified area can be used for project activities again; and
- Pursuant to 43 CFR 10.4(g) (Federal Register Notice, Monday, December 4, 1995, Vol. 60, No. 232) the holder of this authorization must notify the AO, by telephone at (970) 826-5000, and with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony.
- Further, pursuant to 43 CFR 10.4(c) and (d), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer.

Name of specialist and date: Gary D. Collins July 5, 2006

ENVIRONMENTAL JUSTICE

Affected Environment: The project would not directly affect the social, cultural, or economic well being and health of Native American, minority or low-income populations. The project area is relatively isolated from population centers, so no populations would be affected by physical or socioeconomic impacts from the project.

Environmental Consequences: None.

Mitigative Measures: None.

Name of Specialist and Date: Louise McMinn, Realty Specialist 05/17/2006

FLOOD PLAINS

Affected Environment: Fish Creek and its associated floodplains overlie the additional coal reserves that are proposed for inclusion in the federal coal lease. The Little Snake Resource Management Plan had identified the 100-year floodplain along Fish Creek as unsuitable for surface coal operations. On February 23, 2004 the Supreme Court rejected the petition for certiorari, seeking to have the High Court reverse the *Citizens Coal Council v. Norton* (03-834) decision of the United States Court of Appeals for the District of Columbia Circuit of

June 2004. In essence, the issue of surface subsidence caused by underground coal mining was not intended to be included in the definition of surface coal operations. Therefore, the unsuitability criteria, does not apply to this coal leasing action.

No structures are present within the 100-year floodplain on this segment of Fish Creek.

About a mile down the valley the downstream segments of Fish Creek and its associated floodplains have been undermined and subsided in the last five years. It is estimated that the gradient of Fish Creek has been increased by 0.6 percent as a result of the subsidence.

As currently proposed the alignment of two long wall panels in the west half of section 19 are roughly perpendicular to Fish Creek. Fish Creek begins to flow northeast and parallel to the development mining along the edge of the long wall panels in the east half of section 19.

Environmental Consequences: During subsidence which could range from 0 to 67 inches it would be expected that the floodplains and stream channel would subside an equal depth. In areas of the stream which may not subside (or minimally subside) initially, such as areas overlying the development mining (gateway) an undetermined amount of stream incision (deepening) could be initiated. Erosion and scouring of the stream channel within these gateway areas can be expected and some disconnect with the active floodplain could result for an undetermined length. Because this possibility exists Twentymile Coal Company will need to establish stream cross sections, referencing the width of the stream and active floodplain and vertical height separating the channel and active floodplain; stream gradients and sinuosity will also need to be determined.

No threat to human safety, life, welfare and property will result from modifying the coal lease and implementing the proposed action.

Mitigative Measures: Same as for Surface Hydrology

Name of specialist and date: Ole Olsen 5/17/06

INVASIVE, NONNATIVE SPECIES

Affected Environment: Houndstongue, hoary cress (whitetop), Canada thistle, and other biennial thistles are known to occur in this area. There is the potential for noxious weeds, such as dalmatian and yellow toadflax, leafy spurge, knapweeds, perennial pepperweed and others, to exist and spread in these areas.

Environmental Consequences: Since the proposed action is underground, it is not anticipated that the proposed action would increase any invasive species establishment and production. Vehicular traffic associated with coal mining, as well as wind and water can cause invasive species to spread into new areas. Given an opportunity, many of these invasive species have the potential to become the dominant cover species without control and eradication efforts. The utilization of interim reclamation techniques can facilitate control of invasive species and reduce the potential of long term infestation of invasive and

noxious weed species. All principles of Integrated Pest Management should be employed to control noxious weeds on public lands.

Mitigative Measures: None

Name of specialist and date: Ole Olsen 5/17/06

MIGRATORY BIRDS

Affected Environment: Golden eagle and prairie falcon are the only two birds on the 2002 Birds of Conservation Concern list that are likely to use the project area. Nests for both species have historically occurred within one mile of the project area. It is not known if these nests are currently active.

Environmental Consequences: It is very unlikely that nest sites would be damaged as a result of subsidence. Some changes may occur to habitat which support prey species for these two raptor species. Any negative impacts to prey species habitat would make the area less likely to be used for nesting.

Since mining activities are underground, disturbance of nesting birds should not occur as a result of the proposed activity. Chance of take of either species is very small.

Mitigative Measures: None

Name of specialist and date: Timothy Novotny 5/30/06

NATIVE AMERICAN RELIGIOUS CONCERNS

A letter was sent to the Uinta and Ouray Tribal Council, Southern Ute Tribal Council, Ute Mountain Ute Tribal Council, and the Colorado Commission of Indian Affairs on January 21, 1999. The letter listed the projects that the BLM would notify them on and projects that would not require notification. No comments were received (Letter on file at the Little Snake Field Office). This project requires no additional notification.

Name of specialist and date: Gary D. Collins July 5, 2006

PRIME & UNIQUE FARMLANDS

Affected Environment: Not Present

Environmental Consequences: None

Mitigative Measures: None

Name of specialist and date: Ole Olsen 5/17/06

T&E SPECIES - SENSITIVE PLANTS

Affected Environment: There are no BLM sensitive plant species on lands overlaying the Proposed Action.

Environmental Consequences: None

Mitigative Measures: None

Name of specialist and date: Hunter Seim 5/17/06

T&E SPECIES – ANIMALS

Affected Environment: There are no threatened or endangered animal species or habitat for such species in or near the project area. The mine location does contain breeding and nesting habitat for Columbian sharp-tailed grouse, a BLM special status species. There are six sharp-tailed grouse leks within one mile of the proposed mine site. The closest lek is approximately ¼ mile from the mine.

Environmental Consequences: Mining activities associated with the lease modification would be limited to underground activities and are not likely to disturb sharp-tailed grouse leks. Subsidence from mining activities may have an impact on Columbian sharp-tailed grouse nesting habitat. Subsidence could alter water table patterns and result in changes in vegetation available to grouse for nesting. Subsidence could result in ponding of Fish Creek and could result in some nesting habitat being flooded. Depending on when subsidence occurs, some nests could be destroyed. If ponding were to occur, it is possible that improved brood rearing habitat could be produced as a result.

Mitigative Measures: None

Name of specialist and date: Timothy Novotny 5/30/06

T&E SPECIES – PLANTS

Affected Environment: There are no federally listed threatened or endangered plant species on lands overlaying the Proposed Action.

Environmental Consequences: None

Mitigative Measures: None

Name of specialist and date: Hunter Seim 5/17/06

WASTES, HAZARDOUS OR SOLID

Affected Environment: If the release does occur, the environment affected would be dependent on the nature and volume of material released. If there are no releases, there will be no environmental impact.

Environmental Consequences: Consequences will be dependent on the volume and nature of the material released. In most every situation involving hazardous materials, there are ways to remediate the area that has been contaminated. Short-term consequences will occur, but they can be remedied, and long-term impacts will be minimal.

Mitigative Measures: None

Name of specialist and date: D. Johnson 5/22/06

WATER QUALITY - GROUND

Affected Environment: The surface formation is the Cretaceous Lewis Shale. Groundwater will be impacted by the mining of the additional acres of coal.

Environmental Consequences: Groundwater has been addressed in the existing environmental documents for the existing mining operations. With proper mining practices and by following the mitigation address in the approved mine plan and environmental documents, there should be no significant environmental consequences to groundwater.

Mitigative Measures: None

Name of specialist and date: Robert Ernst 5/17/06

WATER QUALITY - SURFACE

Affected Environment: Runoff from the area affected by the proposed action will flow to Fish Creek, which is a perennial tributary to Trout Creek. The water quality of Fish Creek must support the following beneficial uses: Aquatic Life Cold 1, Recreation 1a and Agriculture.

Longwall mining in the vicinity has occurred since about 1988 and runoff water from the subsided areas, as well as, mine inflow water derived from the mined coal aquifer has been released into Foidel Creek and Fish Creek. The mine inflow water has TDS levels comparable to Foidel Creek upstream of the underground mine, however subsequent handling and holding of this water tends to increase the TDS levels. Twentymile Coal makes use of some of this water in the conduct of various mining activities, especially dust

suppression.

Colorado Department of Public Health and Environment, Water Quality Control Division has issued Pollutant Discharge Elimination System Permits (NPDES) for various discharge points, including Fish and Foidel Creeks. Current levels of Total Dissolved Solids in these creeks are monitored upstream of the mine activities and discharge is regulated. Discharged water is also treated with sodium hydroxide (NaOH) to maintain the pH of the water between 8.8 and 9 to precipitate iron and lower the TDS. When the creeks are surging with spring runoff water more of the mine inflow water is released to the streams and the dilution effect reduces the concentration of TDS, iron and sodium to acceptable levels to meet classified uses downstream. Conversely, when low or no water flows occur, the amount of water discharged is reduced accordingly.

Environmental Consequences: Subsidence of the ground surface likely will cause localized gradient changes on soil surfaces and within stream channels. Additional sediments could be generated in the short term from overland flow across soil surfaces and scouring of the Fish Creek stream channel. However, localized deposition is expected to occur within the stream channel, except during high runoff events. Higher levels of TDS and Total Suspended Solids could result from sediment transport. No sediment dams are present downstream of the area to be subsided.

Mitigative Measures: Same as for Surface Hydrology

Name of specialist and date: Ole Olsen 5/17/06

WETLANDS/RIPARIAN ZONES

Affected Environment: Ongoing subsidence evaluations conducted by Twentymile Coal Company involving Alluvial Valley Floors associated with Fish, Foidel and Middle Creeks, as well as perennial stream flow and other shallow bedrock aquifers suggests that ground water levels may be minimally altered. On the larger perennial streams the effects of subsidence cause a pooling of water in the zone of subsidence and more streamside riparian habitat is created. One assumption stated in a recent subsidence evaluation conducted by SubTerra, Inc (PR6 AVF Subsidence Evaluation) is that "Fish Creek elevation will rise, relative to the surrounding ground, a distance equal to predicted ground subsidence at that point."

Environmental Consequences: In the short term following the initial subsidence it is expected that pooling of water will occur in the areas of substantial subsidence. More riparian habitat would be expected. These pools are expected to decrease in area as the stream channel undergoes localized scouring and deposition. If the ground water table maintains its pre-subsidence elevation after subsidence more riparian vegetation and habitat could result.

Mitigative Measures: Same as for Surface Hydrology

Name of specialist and date: Ole Olsen 5/17/06

WILD & SCENIC RIVERS

Affected Environment: Not present.

Environmental Consequences: Not applicable.

Mitigative Measures: Not applicable

Name of specialist and date: Jim McBrayer – 7/20/2006

WILDERNESS, WSAs

Affected Environment: Not present.

Environmental Consequences: Not applicable.

Mitigative Measures: Not applicable

Name of specialist and date: Jim McBrayer – 7/20/2006

NON-CRITICAL ELEMENTS

PALEONTOLOGY

Affected Environment: The two geologic formations at the surface are the Cretaceous age Williams Fork Formation, a member of the Mesa Verde Group (Kw) and Lewis Shale Formation (Kls). Kw is a light-brown to white sandstone, gray shale, with major coal seams. Thickness is 1,100-2,000 ft. This has been classified a Class Ia formation for the potential for occurrence of scientifically significant fossils. Kls is a dark-gray homogenous marine shale. Thickness is estimated at 1,500-1,900 ft. This unit has been classified a Class II formation for the potential for occurrence of scientifically significant fossils. For the purposes of this proposed action, a Class Ia Paleo classification will apply.

Environmental Consequences: Scientifically significant fossils are found abundantly within this formation (Armstrong & Wolney, 1989). The potential for discovery of significant fossils on this location is considered to be high. If any such fossils are located here, construction activities could damage the fossils and the information that could have been gained from them would be lost. The significance of this impact would depend upon the significance of the fossil. The proposed action could also constitute a beneficial impact to paleontological resources by increasing the chances for discovery of scientifically significant fossils.

_____ The terrain is such that outcrops are exposed (eg. Badlands), therefore, a surface survey for paleontological resources will be required prior to surface disturbance.

_____ The majority of the terrain is covered with developed soils and vegetation. Therefore, a surface survey for paleontological resources will not be required.

X The proposed action constitutes limited surface disturbance so as to make discovery of fossils by surface survey unlikely.

Mitigative Measures: Ceasing operations and notifying the Field Office Manager immediately upon discovery of a fossil during construction activities can effectively mitigate this impact. An assessment of the significance is made and a plan to retrieve the fossil or the information from the fossil is developed.

The majority of the terrain is covered with developed recent soils and vegetation. Therefore, a surface survey for paleontological resources will not be required.

Standard Discovery Stipulation

"If cultural or paleontological resources are discovered during exploration operations under this license, the licensee shall immediately notify the Field Office Manager and shall not disturb such discovered resources until the Field Office Manager issues specific instructions.

- a. Within 5 working days after notification, the Field Office Manager shall evaluate any cultural resources discovered and shall determine whether any action may be required to protect or to preserve such discoveries.
- b. The cost of data recovery for cultural resources discovered during exploration operations shall be borne by the licensee, if the licensee is ordered to take any protective measures. Ownership of cultural resources discovered shall be determined in accordance with applicable law."

References

Armstrong, Harley J. and Wolney, David G., 1989, Paleontological Resources of Northwest Colorado: A Regional Analysis, Museum of Western Colorado, Grand Junction, CO, prepared for Bur. Land Management, Vol. I of V.

Miller, A.E., 1977, Geology of Moffat County, Colorado, Colo. Geol. Surv. Map Series 3, 1:126,720.

Name of specialist and date: Robert Ernst 11 May 2006

SOILS

Affected Environment: Soils are derived from Lewis Shale and the Williams Fork Formation. Clay and clay loam soil textures would be expected. Moderate to high runoff and moderate to high water erosion hazard would also be associated with these soils.

Environmental Consequences: The soil resource overlying the zone of subsidence is expected to remain intact with regards to important characteristics and properties. Some fracturing or loosening of the soil profile may occur in areas where the surface is flexed from the irregular pattern of subsidence and to a lesser degree some compression may result in and near the areas of maximum subsidence. These modifications to the soil profile could result in increased percolation of water in areas that were flexed and reduced percolation in areas which were compressed.

These slight modifications to the soil profile are not expected to cause appreciable changes to the characteristics or properties of the soils, especially with regards to fertility or available soil moisture.

Mitigative Measures: None

Name of specialist and date: Ole Olsen 5/17/06

SURFACE HYDROLOGY

Affected Environment: Fish Creek and its associated Alluvial Valley Floor overlie the additional coal reserves that are proposed for inclusion in the federal coal lease. The Little Snake Resource Management Plan had identified this Alluvial Valley Floor along Fish Creek as unsuitable for surface coal operations. On February 23, 2004 the Supreme Court rejected the petition for certiorari, seeking to have the High Court reverse the *Citizens Coal Council v. Norton* (03-834) decision of the United States Court of Appeals for the District of Columbia Circuit of June 2004. In essence, the issue of surface subsidence caused by underground coal mining was not intended to be included in the definition of surface coal operations. Therefore, the unsuitability criteria, does not apply to this coal leasing action.

About a mile down the valley the downstream segments of Fish Creek and its Alluvial Valley Floor have been undermined and subsided.

Environmental Consequences: Some localized erosion and deposition is expected to result from overland flow and stream flow, on the ground surface and within stream channels, respectively. The erosion or scouring of the stream channel is discussed in the Floodplains Section, as it relates to a possible disconnect with the active floodplain. Pre-subsidence data needs to be obtained on the stream morphology followed by the same data gathering after subsidence has occurred. Twentymile Coal Company will need to establish stream cross sections, referencing the width of the stream and active floodplain and vertical height

separating the channel and active floodplain; stream gradients and sinuosity will also need to be determined. Pre-subsidence and post-subsidence quantifiable data needs to be collected.

Twentymile Coal Co. is currently monitoring the post-subsidence of the Fish Creek stream channel. Monitoring protocol that has been established for Foidel and Middle Creek should be applied to this stream segment, as well. This protocol is stated in the mitigative measures No. 2.

Mitigative Measures:

1. Twentymile Coal Company will need to establish stream cross sections, referencing the width of the stream and active floodplain and vertical height separating the channel and active floodplain; stream gradients and sinuosity will also need to be determined. Pre-subsidence and post-subsidence quantifiable data needs to be collected. Data stations need to be established where stream scours are expected to occur with associated stations established upstream to quantify depth and distance where stream incising may occur.

2. If headcutting is greater than three feet (depth) or if incising of two feet or greater occurs more than 400 feet from the point of origin of the headcut, then channel morphology should be evaluated. Channel mitigation measures should be initiated, if warranted, after the evaluation. A visual examination, possibly combined with analytical results, should be considered as an appropriate method for determining "damage". The character of the stream, flow, sediment load, and sediment characteristics will all influence the advent or extent of damage that may require repair.

Name of specialist and date: Ole Olsen 5/17/06

VEGETATION

Affected Environment: Upland plant communities overlaying the Proposed Action are composed primarily of Gambel oak and mountain shrub.

Environmental Consequences: Since the Proposed Action involves underground mining, there would be no direct impact to any upland plant communities at the surface. Any subsidence related to mining activities would result in minimal impacts, and no detrimental impacts which would result in loss of community structure or resilience would occur. The No Action Alternative would not impact upland plant communities.

Mitigative Measures: None

Name of specialist and date: Hunter Seim 5/17/06

VISUAL RESOURCES

Affected Environment: Visual Resource Management (VRM) classifications for the proposed project area include: Class II (low levels of landscape change allowed - low levels of landscape change allowed and should not attract the attention of casual observers. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant features of the landscape); Class III (moderate levels of landscape change allowed); Class IV (major modification of landscape change allowed)

Environmental Consequences: The proposed action will not impact existing VRM classifications.

Mitigative Measures: None

Name of specialist and date: Jim McBrayer - 7/20/2006

WILDLIFE, AQUATIC

Affected Environment: Fish Creek provides potential habitat for a variety of aquatic species including cold water fishes and potentially the northern leopard frog.

Environmental Consequences: It is difficult to determine what affects if any subsidence, if it occurs, might have on aquatic habitat along Fish Creek. Subsidence could result in ponding of Fish Creek which would likely benefit most aquatic wildlife species using Fish Creek. However, subsidence could result in down cutting of the channel and a loss of riparian vegetation and a decrease in aquatic wildlife habitat.

Mitigative Measures: None

Name of specialist and date: Timothy Novotny 5/30/06

WILDLIFE, TERRESTRIAL

Affected Environment: The proposed project area contains year round habitat for mule deer and elk in all but the most severe winters. Golden eagle, red-tailed hawk and prairie falcon are also known to use the project area for nesting and fledgling activities. A variety of small mammal species may use the project area as well.

Environmental Consequences: Mining activities and potential subsidence have little potential to affect mule deer, elk and any raptor species that use the project area. There is potential for alteration of habitat for small mammal species. It is difficult to determine whether these impacts would harm or improve habitat for these animals. It is unlikely that any small mammal species populations would be harmed from this activity.

Mitigative Measures: None

Name of specialist and date: Timothy Novotny 5/30/06

OTHER NON-CRITICAL ELEMENTS: For the following elements, those brought forward for analysis will be formatted as shown above.

Non-Critical Element	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Fluid Minerals		RE 5/17/06	
Forest Management	DJ 5/22/06		
Hydrology/Ground		RE 5/17/06	
Hydrology/Surface			See Surface Hydrology
Paleontology			See Paleontology
Range Management		JHS 5/17/06	
Realty Authorizations		LM 5/17/06	
Recreation/Travel Mgmt		RS 5/30/06	
Socio-Economics		LM 5/17/06	
Solid Minerals		RE 5/10/06	
Visual Resources			See Visual Resources
Wild Horse& Burro Mgmt	DJ 5/22/06		

CUMULATIVE IMPACTS SUMMARY:

STANDARDS

PLANT AND ANIMAL COMMUNITY (animal) STANDARD:

The proposed project area contains healthy productive habitat for a variety of wildlife species. While there is some potential for alteration of this habitat, it is unlikely that subsidence resulting from mining activities would leave this area unsuitable for wildlife use. This standard is currently being met and will continue to be met in the future.

Name of specialist and date: Timothy Novotny 5/30/06

SPECIAL STATUS, THREATENED AND ENDANGERED SPECIES (animal) STANDARD:

There are no threatened or endangered species or habitat for such species in or near the project area. The project site does contain breeding and nesting habitat for Columbian sharp-tailed grouse, a BLM special status species. No lek sites should be damaged as a result of this project. The proposed project is not likely to have a long term negative impact on nesting habitat for Columbian sharp-tailed grouse. Brood rearing habitat for this species may be altered as a result of subsidence however; it is not possible to say if this would have a positive or negative affect on

sharp-tailed grouse. This standard is currently being met and will continue to be met in the future.

Name of specialist and date: Timothy Novotny 5/30/06

PLANT AND ANIMAL COMMUNITY (plant) STANDARD: The Proposed Action would not result in any direct impacts to the upland plant communities. Subsidence would not create any impacts which would adversely impact these communities. The Proposed Action meets this standard.

The No Action Alternative would meet this standard as no direct or indirect impacts would occur.

Name of specialist and date: Hunter Seim 5/17/06

SPECIAL STATUS, THREATENED AND ENDANGERED SPECIES (plant) STANDARD: There are no federally listed threatened or endangered or BLM sensitive plant species on lands overlaying the Proposed Action. This standard does not apply.

Name of specialist and date: Hunter Seim 5/17/06

RIPARIAN SYSTEMS STANDARD: The riparian standard for healthy public lands will not be affected by the proposed action which occurs on private surface.

Name of specialist and date: Ole Olsen 5/17/06

WATER QUALITY STANDARD: The water quality standard for healthy public lands will not be affected by the proposed action which occurs on private surface.

Name of specialist and date: Ole Olsen 5/17/06

UPLAND SOILS STANDARD: The upland soil standard for healthy public lands will not be affected by the proposed action which occurs on private surface.

Name of specialist and date: Ole Olsen 5/17/06

PERSONS/AGENCIES CONSULTED: Uintah and Ouray Tribal Council, Colorado Native American Commission, Colorado State Historic Preservation Office.

FONSI

The environmental assessment, analyzing the environmental effects of the proposed action, has been reviewed. With the implementation of the attached mitigation measures there is a finding of no significant impact on the human environment. Therefore, an environmental impact statement is not necessary to further analyze the environmental effects of the proposed action.

1. Beneficial, adverse, direct, indirect, and cumulative environmental impacts have been disclosed in the EA. Analysis indicated no significant impacts on society as a whole, the affected region, the affected interests or the locality. The physical and biological effects are limited to the Little Snake Resource Area and adjacent land.
2. Public health and safety would not be adversely impacted. There are no known or anticipated concerns with project waste or hazardous materials.
3. There would be no adverse impacts to regional or local air quality, prime or unique farmlands, known paleontological resources on public land within the area, wetlands, floodplain, areas with unique characteristics, ecologically critical areas or designated Areas of Critical Environmental Concern.
4. There are no highly controversial effects on the environment.
5. There are no effects that are highly uncertain or involve unique or unknown risk. Sufficient information on risk is available based on information in the EA and other past actions of a similar nature.
6. This alternative does not set a precedent for other actions that may be implemented in the future to meet the goals and objectives of adopted Federal, State or local natural resource related plans, policies or programs.
7. No cumulative impacts related to other actions that would have a significant adverse impact were identified or are anticipated.
8. Based on previous and ongoing cultural surveys, and through mitigation by avoidance, no adverse impacts to cultural resources were identified or anticipated. There are no known American Indian religious concerns or persons or groups who might be disproportionately and adversely affected as anticipated by the Environmental Justice Policy.
9. No adverse impacts to any threatened or endangered species or their habitat that was determined to be critical under the Endangered Species Act were identified. If, at a future time, there could be the potential for adverse impacts, treatments would be modified or mitigated not to have an adverse effect or new analysis would be conducted.
10. This alternative is in compliance with relevant Federal, State, and local laws, regulations, and requirements for the protection of the environment.

DECISION AND RATIONALE: I have reviewed this environmental assessment including the explanation and resolution of any potentially significant environmental impacts. I have determined that the proposed action with the mitigation measures described below will not have any significant impacts on the human environment and that an EIS is not required. I have determined that the proposed project is in conformance with the approved land use plan. It is my decision to implement the project with the mitigation measures identified below.

It is my decision to implement the project with the mitigation measures identified below.

MITIGATION MEASURES: See Attachment A: Additional Stipulations

COMPLIANCE PLAN(S): The project will be inspected for compliance with the mining plan and upon completion of operations.

SIGNATURE OF PREPARER:

DATE SIGNED:

SIGNATURE OF ENVIRONMENTAL REVIEWER:

DATE SIGNED:

SIGNATURE OF AUTHORIZED OFFICIAL:

DATE SIGNED:

ATTACHMENTS: Attachment A: Additional Stipulations. Stipulations in addition to the standard coal lease stipulations.

Attachment A: Additional Stipulations
EA No.: **CO-100-2006-075 EA**
Federal Coal Lease **COC 20900**
Peabody Coal Company

1. Cultural Resources

The operator is responsible for informing all persons who are associated with the operations that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are encountered or uncovered during any project activities, the operator is to immediately stop activities in the immediate vicinity of the find and immediately contact the authorized officer (AO) at (970) 826-5000. Within five working days, the AO will inform the operator as to:

- Whether the materials appear eligible for the National Register of Historic Places;
- The mitigation measures the operator will likely have to undertake before the identified area can be used for project activities again; and
- Pursuant to 43 CFR 10.4(g) (Federal Register Notice, Monday, December 4, 1995, Vol. 60, No. 232) the holder of this authorization must notify the AO, by telephone at (970) 826-5000, and with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony.
- Further, pursuant to 43 CFR 10.4(c) and (d), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer.

2. Paleontological Resources

If paleontological resources are discovered during exploration operations under this license, the licensee shall immediately notify the Field Office Manager and shall not disturb such discovered resources until the Field Office Manager issues specific instructions.

- a. Within 5 working days after notification, the Field Office Manager shall evaluate any cultural resources discovered and shall determine whether any action may be required to protect or to preserve such discoveries.
- b. The cost of data recovery for cultural resources discovered during exploration operations shall be borne by the licensee, if the licensee is ordered to take any protective measures. Ownership of cultural resources discovered shall be determined in accordance with applicable law.

3. Stream Erosion – Surface Water Hydrology

1. Twentymile Coal Company will need to establish stream cross sections, referencing the width of the stream and active floodplain and vertical height separating the channel and active floodplain; stream gradients and sinuosity will also need to be determined. Pre-subsidence and post-subsidence quantifiable data needs to be collected. Data stations need to be established where stream scours are expected to occur with associated stations established upstream to quantify depth and distance where stream incising may occur.

2. If head cutting is greater than three feet (depth) or if incising of two feet or greater occurs more than 400 feet from the point of origin of the head cut, then channel morphology should be evaluated. Channel mitigation measures should be initiated, if warranted, after the evaluation. A visual examination, possibly combined with analytical results, should be considered as an appropriate method for determining "damage". The character of the stream, flow, sediment load, and sediment characteristics will all influence the advent or extent of damage that may require repair.