



**FINDING OF NO SIGNIFICANT IMPACT
FOR
SHEPHERD AREA COAL FIRES**

Shepherd Area Coal Fires
Abandoned Mine Lands
Musselshell and Yellowstone Counties

The Department of Environmental Quality – Abandoned Mine Lands (DEQ-AML) has determined that reclamation activities at the Shepherd Area Coal Fires will have no significant impact on the human environment. This FONSI is based on the attached environmental assessment (EA) that adequately and accurately discuss the need, environmental issues, and impacts of the proposed project and appropriate mitigation measures. It provides sufficient evidence and analysis for determining that a detailed statement (EIS) is not necessary.

Based on the EA, the project is not expected to have any significant adverse impacts upon terrestrial and aquatic life or habitat, including endangered species, water quality, air quality, geological features, cultural or historic features, or social quality.

Devin Clary
Devin Clary, Reclamation Specialist

9-23-2009
Date

ENVIRONMENTAL ASSESSMENT
SHEPHERD AREA COAL FIRE PROJECT
8/24/2009

SECTION 1.0: PURPOSE AND NEED FOR ACTION

AGENCY NAME:

Montana Department of Environmental Quality
Mine Waste Cleanup Bureau
Abandoned Mine Lands Program

LOCATIONS:

Shepherd Area Coal Fires

- NW1/4 of Section 16 of Township 6N, Range 28E, Musselshell County
- NE1/4 NW1/4 and NW1/4 NE1/4 of Section 19 of Township 6N, Range 28E, Yellowstone County
- NE1/4 of Section 24 of Township 6N, Range 27E, Yellowstone County

TYPE AND PURPOSE OF ACTION:

The Montana Department of Environmental Quality (DEQ), Mine Waste Cleanup Bureau, has elected to investigate and evaluate the need for extinguishing three coal fires in Musselshell and Yellowstone Counties, Montana. The purpose of this project is to address the coal seam fire associated with the coal seam outcrop. The outcrop fire site is located within

Specific actions, which will take place as part of this reclamation project to control the most imminent threat from the outcrop fire, include:

- a. Excavating and extinguishing the burning coal seam, and replacing the overburden material.
- b. Grade and Contour disturbed areas
- c. Revegetation

To accomplish the reclamation project described above, the Office of Surface Mining and Enforcement Field Office Director must authorize the use of the Montana Mine Waste Cleanup Bureau, Abandoned Mine Lands Program funding.

The coal fires are associated with high risk of wildland fire activity and general land degradation. The reclamation plan would include excavating and extinguishing the burning material, backfilling, grading, and contouring any disturbance area, and revegetating the disturbed area with native grasses.

SECTION 1.1 PROPOSED ACTIONS

This project will be undertaken under the direction of the Abandoned Mine Lands Program administered by the Remediation Division of the Montana Department of Environmental Quality to perform coal fire control work and to repair surface damage at one site located in Musselshell County and at two sites located in Yellowstone County. The three sites are located within an 8-square mile area that is situated about 40 road miles north-northeast of Shepherd, Montana.

Coal fire control work will remove, cool, extinguish, and bury hot, burning coal materials, which is burning up to 30 feet below the surface. This work will require excavating overburden to expose hot areas, repairing associated surface damages, and preparing disposal areas. Approximately, 8.2 acres of backfilling, grading and contouring will be required to fill excavated areas and reclaim other construction disturbance. Water will be supplied and delivered to two of the sites for dust suppression and cooling.

SECTION 2.0: IMPACTS ON THE PHYSICAL ENVIRONMENT

SHEPHERD AREA OUTCROP FIRES	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
<p>1. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:</p> <p>Are soils present which are fragile, erosive, susceptible to compaction, or unstable? Are there unusual or unstable geologic features? Are there special reclamation considerations?</p>	<p>Soils present at the Shepherd Area Outcrop Fire Sites are unstable and erosive due to sloughing, heat, and baked soil conditions. There are no special reclamation activities being considered for the Shepherd Area fires outside the normal scope of work.</p> <p>The coal outcrop fires of Musselshell and Yellowstone counties are situated within the Bull Mountains. The Bull Mountains basin is defined by sedimentary rock of the Fort Union Formation deposited during the later portion of the tertiary period. Outcrop fires within Musselshell and Yellowstone counties are burning within the Tongue River member.</p> <p>Stratigraphically, the highly dissected terrain, underlain by discontinuous sandstones, siltstones, shales, and relatively thin coal seams, are found within the Bull Mountains area and throughout eastern Montana. At the surface, exposed sandstone cliffs and steep slopes naturally weather and erode, resulting in toppling of rock and sloughing of surface materials on slopes.</p>
<p>2. WATER QUALITY, QUANTITY AND DISTRIBUTION:</p> <p>Are important surface or groundwater resources present? Is there potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality?</p>	<p>The project will not impact the groundwater or surface water quality in the vicinity of the outcrop fires. The outcrop sites are located within the Tongue River Member of the Fort Union Formation. Common drilling depths in the Fort Union Formation (the regional aquifer) typically range from 50 to 300 feet; however, depths may exceed 1,000 feet. Surface water that flows in the vicinity of the actively burning coal seams is ephemeral and occurs primarily during the spring run-off.</p>
<p>3. AIR QUALITY:</p> <p>Will pollution or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?</p>	<p>This project is not located in any special air quality zones regulated by the State of Montana. The current ambient air quality of the area of the outcrop fire sites is good.</p>
<p>4. VEGETATION COVER, QUALITY AND QUANTITY:</p> <p>Will vegetative communities be significantly impacted? Are any rare plants or cover types present?</p>	<p>The native plant communities that would be impacted are common on the sedimentary plains of Montana. Consultation with the Montana Natural Heritage Program indicates no plant species occur within the project area. No noxious weed infestations were noted. Reclamation of the sites and seeding of native plant species would limit impacts to the vegetative communities.</p>

SHEPHERD AREA OUTCROP FIRES	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
<p>5. TERRESTRIAL, AVIAN AND AQUATIC LIFE HABITATS:</p> <p>Is there substantial use of the area by important wildlife, birds or fish?</p>	<p>A variety of big game, small mammals, game birds, and song birds typical of undeveloped land throughout Yellowstone and Musselshell counties potentially use this area. The existing land use is anticipated to continue and therefore, no direct or cumulative wildlife impacts are anticipated.</p>
<p>6. UNIQUE, ENDANGERED, FRAGILE, OR LIMITED ENVIRONMENTAL RESOURCES:</p> <p>Are any federally listed threatened or endangered species or identified habitat present? Any wetlands? Species of special concern?</p>	<p>The Department of Environmental Quality has consulted with the Montana Natural Heritage Program for information on threatened and endangered animal species that might reside in the vicinity of the outcrop fires. No threatened or endangered species have been identified in or project area. The Natural Heritage Program indicated that Townsend's Big-eared bats, the Lark Bunting, and the Common Sagebrush Lizard are species of concern for the area. The project area does not support suitable habitat for bat species as there are no caves, mine openings or treed areas near the project locations. The project area also does not support suitable habitat for the Lark Bunting or Sagebrush Lizard as the fires and resulting effects have destroyed any nesting or security coverage such as sagebrush or other forbs. No other species of concern have been documented near the project area. No wetlands have been delineated in the project area.</p>
<p>7. HISTORICAL AND ARCHEOLOGICAL SITES:</p> <p>Are any historical, archeological or paleontological resources present?</p>	<p>Based on a cultural resource inventory conducted by Renewable Technologies Inc., the project areas do not contain and paleontological significant items or areas and require no special treatment prior to fire suppression activities.</p>
<p>8. AESTHETICS:</p> <p>Is the project on a prominent topographic feature? Will it be visible from populated or scenic areas? Will there be excessive noise or light?</p>	<p>The project area is situated in a quiet rural area. Ranching activity associated with the movement of livestock are the only noises at the sites. Access to the project area is through privately held property. The project area is not located on or near any prominent topographic features.</p>
<p>9. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:</p> <p>Will the project use resources that are limited in the area? Are there other activities nearby that will affect the project?</p>	<p>The project will require the use of minimal quantities of water in order to perform abatement activities and dust control. Sources of water will come from landowner supplied livestock watering tanks.</p>
<p>10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES:</p> <p>Are there other activities nearby that will affect the project?</p>	<p>There are no other activities nearby that will affect the projects.</p>

SECTION 3.0: IMPACTS ON THE HUMAN POPULATION

SHEPHERD AREA OUTCROP FIRES	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
<p>1. HUMAN HEALTH AND SAFETY:</p> <p>Will this project add to health and safety risks in the area?</p>	<p>Extinguishing the coal seam fires would eliminate threats to public health and general welfare.</p>
<p>2. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION:</p> <p>Will the project add to or alter these activities?</p>	<p>The project area has social and economic values as part of Montana ranch operations. The project area contributes little in the way of social or economic value outside of the ranching context; however improved cattle grazing property will result from the projects.</p>
<p>3. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:</p> <p>Will the project create move or eliminate jobs? If so, estimated number.</p>	<p>The project will have a positive impact on the local economy due to the local employment via materials purchased at the local level and Davis-Bacon wages paid to laborers through the selected contractor. It is anticipated that this work will create five to seven jobs.</p>
<p>4. LOCAL AND STATE TAX BASE AND TAX REVENUES:</p> <p>Will the project create or eliminate tax revenue?</p>	<p>No effect on tax base or revenues.</p>
<p>5. DEMAND FOR GOVERNMENT SERVICES:</p> <p>Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc.) be needed?</p>	<p>Any additional traffic added to existing roads will occur during initial mobilization and final demobilization of the project areas and will not require any additional government services.</p>
<p>6. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:</p> <p>Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?</p>	<p>Reclamation construction activities associated with the project area would comply with zoning or management plans that are currently in place by the state of Montana Department of Natural Resources and/or the United States Bureau of Land Management.</p>
<p>7. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:</p> <p>Are wilderness or recreational areas nearby or accessed through this tract? Is there recreational potential within the tract?</p>	<p>Access to the state owned land is through privately held property. The project area has portions that are located on state owned land as well as private property. The project area receives very little to no recreational use; thus, the project area has negligible recreational resource value.</p>

SHEPHERD AREA OUTCROP FIRES	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
<p>8. DENISTY AND DISTRIBUTION OF POPULATION AND HOUSING:</p> <p>Will the project add to the population and require additional housing?</p>	<p>The project will not require long term housing needs. However, due to the remoteness of the project areas, temporary lodging such as hotels may be needed throughout the project duration.</p>
<p>9. SOCIAL STRUCTURES AND MORES:</p> <p>Is some disruption of native or traditional lifestyles or communities possible?</p>	<p>The project will not disrupt native or traditional lifestyles or communities.</p>
<p>10. CULTURAL UNIQUENESS AND DIVERSITY:</p> <p>Will the action cause a shift in some unique quality of the area?</p>	<p>The projects will not cause any shifts in unique qualities of the areas.</p>
<p>11. PRIVATE PROPERTY IMPACTS:</p> <p>Are we regulating the use of private property under a regulatory statute adopted pursuant to the police power of the state? (Property management, grants, of financial assistance, and the exercise of the power of eminent domain are not within this category.) If not, no further analysis is required.</p>	<p>At the completion of the projects, work areas that required revegetation will be fenced off in order to provide opportunities for successful revegetation. This action has been approved by all landowners involved with the projects. No other regulatory action will take place. Consent of land owners and land management agencies has been received. Work is being performed with land owner consent.</p>

SECTION 4.0: PERSONS, ORGANIZATIONS AND AGENCIES CONTACTED

State Historic Preservation Office
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