

EXPLORATION TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

October 15, 2003

TO: Internal Files

THRU: Karl R. Houskeeper, Environmental Scientist III/Team Lead

FROM: Stephen J. Demczak, Environmental Scientist III/Engineering

RE: 2004 Exploration of ML-48258, PacifiCorp, Deer Creek Mine, C/015/018, Task ID #1743

SUMMARY:

Energy West is proposing to conduct a helicopter-assisted minor coal exploration drilling during the year 2004. The permittee has plans to core-drill four holes by using this method. The drilling will take place in Crandall Canyon, tributary to Huntington Canyon, and un-named drainages reporting to Indian Creek. The proposed drill is located within the current Utah State Coal Lease ML-48258, and the United States Forest Service administrates the surface land. This project is to analyze seam characteristics and coal thickness.

The holes will be drilled using a helicopter-transported drill rig in accordance with the Utah State Coal Lease ML-48258 application for the Notice of Intention of Conduct Minor Coal Exploration. Less than 250 tons of coal will be removed. The permittee has recently conducted minor exploration using this method at Mill Fork Canyon and adjacent areas.

The Division will need concurrence from School and Institutional Trust Lands Administration and US Forest Service with this proposed notice of intent to conduct minor coal exploration on coal lease ML 48258.

The minor exploration project is scheduled to start on May 15, 2004 and be completed by June 30, 2004.

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TECHNICAL ANALYSIS:

COAL EXPLORATION

Regulatory Reference: R645-200.

SCOPE AND RESPONSIBILITIES

Regulatory Reference: 30 CFR 772.1; 30 CFR 772.10; 30 CFR 772.11; R645-100-400; R645-200-100; R645-200-200; R645-201-100.

Analysis:

PacifiCorp has proposed to conduct minor exploration by drill four holes within the Mill Fork Coal Lease ML-48258 in the year 2004.

The permittee has committed to comply with the requirements of R645-200 through R645-203.

This minor coal exploration will be conducted on Utah State Coal Lease ML-48258 and the United States Forest Service administers the surface land; therefore, 43 CFR Part 3480-3487 does not apply.

Findings:

The information given is to address the requirement of the State program and R645-200 through R645-203. The information that was submitted is complete but not necessarily adequate until a review of each regulation is made within this document.

REQUIREMENTS FOR NOTICE OF INTENTION TO CONDUCT MINOR COAL EXPLORATION

Regulatory Reference: 30 CFR 772.10; 30 CFR 772.11; R645-100-412; R645-201-200.

Analysis:

Coal Rule R645-201-221 requires the applicant to give name, address, and telephone number of the applicant's representatives, who will be present at and responsible for conducting the exploration operations. This information has been submitted in the Notice of Intent on Page 2.

R645-100-400, R645-200-100, R645-200-200, and R645-201-100; Energy West Mining has given a Notice of Intention to Conduct Minor Coal Exploration with a narrative and map describing the exploration area and indicating where the exploration will occur.

The permittee will transport drilling equipment, materials, and personnel by helicopter. The drill sites will be relatively level (20 percent slope or less). There will be no removal of vegetation such as grasses and trees, but dead-fall and some taller shrubs (mahogany) or aspen trees will be removed for safety reasons.

The drill site will not be greater than 40 feet by 40 feet area. Brattice or other similar material will be placed on the ground beneath the drill rig. Minor digging, using hand tools may be necessary to level the drill rig using wood block or other materials.

A maximum of twenty pounds of coal will be removed per drill hole with a total of about 80 pounds from all the drill holes. This will be achieved by drilling a three-inch diameter hole. Upon completion, the drill hole will be sealed with cement from the bottom of the hole to ground level.

The exploration is projected to start on May 15, 2004 and end on or near June 30, 2004.

Findings:

The applicant has given all of the necessary information as requirements of R645-201-221 such as name, address, and telephone number.

The permittee has submitted the necessary information to comply with regulations R645-100-400, R645-200-100, R645-200-200, and R645-201-100 in the analysis.

COMPLIANCE DUTIES

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REQUIRED DOCUMENTS

Regulatory Reference: 30 CFR 772.13; R645-202-100.

Analysis:

The permittee stated to have a copy of the Notice of Intent to Conduct Minor Coal Exploration for review by an authorized representative of the Division upon request.

Findings:

The permittee has met the minimum requirements of this section in the R645 Coal Rules.

OPERATIONAL STANDARDS

Regulatory Reference: 30 CFR 772.13; R645-202-200.

Analysis:

R645-202-200; Energy West Mining will not substantially disturb the land surface and will remove less than 250 tons of coal.

PacifiCorp has committed to comply with all coal exploration requirements of the State Program, and any conditions on approval of the exploration plan.

Roads

PacifiCorp will use only existing roads for this project no new roads will be constructed. The applicant of the Notice of Intent will be using US Forest Service roads for staging areas of heavy equipment. The US Forest Service will be notified 48 hours in advance of heavy equipment traveling on the road.

The applicant will be using U.S. Forest Development Roads #245 and #040 and #017. Prior to drilling, Energy West will obtain a permit for the use of these roads.

Topsoil

Topsoil will be separately removed, stored, and redistributed on areas disturbed by coal exploration activities. The method of drilling used by PacifiCorp will disturb a small amount of topsoil. The leveling of the drill rig and associated equipment may require a small amount of excavation. Brattice cloth is to be used to cover the ground to protect the topsoil and surface vegetation.

Diversions of Overland flows and streams

The applicant will not construct diversions or affect overland flows and streams. However, the applicant will be pumping water from streams for the drilling operation. The method is to lay an intake hose directly into the stream and pump the water to the drill site. The pump will be located near the stream. Using this method will not disturb the stream.

PacifiCorp has obtained the necessary permissions and water rights actions to take water for drilling from local drainages. The amount of water required for the project is estimated at 80,000 gallons for the entire drilling project or 20,000 gallons per hole.

Hydrologic Balance

The minor exploration project will have minor surface disturbance. The disturbance is limited to leveling the rig and associated structures. There will be no construction of a drill pad or impoundments; therefore, the impact on the hydrologic balance will be minimal, if any.

Acid- or toxic forming materials

The applicant has committed to handle and dispose of acid or toxic forming materials in accordance with R645-301-731.100 and R645-301-731.300.

During the drilling operation, water and drilling fluids will be recirculated to the extent possible. Any returned cuttings and other material will be captured in a container at the drill site. The cutting material will be transported from the drill site to the staging area by helicopter and then by vehicle to the Deer Creek or Cottonwood Waste Rock Sites for disposal.

If spills occur, all affected material will be removed from the site and disposed of at an approved location. If soil is removed during spill containment and clean up, the site of removal will be reconstructed and seeded with the approved seed mixture.

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Findings:

The information given is found to meet the requirements of the R645 Minor Coal Exploration performance/operational standards.

RECLAMATION STANDARDS

Regulatory Reference: 30 CFR 772.13; R645-202-200.

Analysis:

Approximate original contour

The drill site areas will be basically flat with no major excavation occurring. Minor shoveling may be needed for leveling the drill rig. The area will be at approximate original contour.

Boreholes

Groundwater is not anticipated. However, if ground water is present it will be reported to (SITLA, USFS, and DOGM) and a determination will be made regarding the modification of the drill hole to a monitoring well.

Upon completion, each drill hole will be completely sealed with cement/bentonite from the bottom of the hole to ground level. Enough cement will be mixed and pumped into the hole to completely seal the coal horizon. The remainder of the hole will be filled completely with bentonite slurry to within five feet of the surface. A cement surface plug will fill the top five feet. A brass monument marker will be placed in the top of the cement surface plug with the hole number and year.

Facilities and Equipment

All drilling equipment and materials will be removed from the drill area once drilling is completed. Sealing will start thereafter and all equipment and material for sealing drill holes will be removed when sealing is completed.

Findings:

The information for this section is considered adequate to meet the requirements of this section of the Letter of Intent.

RECOMMENDATION:

This Applicant has met the minimum requirements of the Notice of Intent to conduct minor exploration on state lease ML-48258. However, there is one condition attached to the TA and it is as follows:

R645-202-232, Prior to conducting minor exploration, the applicant must receive Special Road Use Permits from the U. S. Forest Service.

This Notice of Intent is recommended for approval with the above condition attached.