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State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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*DDGM issues permit
for two exploration
Needs comments
from FS & SITLA.
Jed 12/4/99*

December 3, 1999

TO: File

THRU: Pamela Grubaugh-Littig, Permit Supervisor *pyl*
Daron Haddock, Permit Supervisor *DH*

FROM: Peter Hess, Reclamation Specialist III *PH*

RE: Notice of Intent to Conduct Minor Coal Exploration, Canyon Fuel Company, LLC, SUFCO Mine, ACT/041/002-99F, Folder #2, Sevier County, Utah

SUMMARY:

ARK Land Company, a subsidiary of ARCH Coal Inc., and a sister company to Canyon Fuel Company, LLC, is proposing to drill three exploration holes during the month of July, in the year 2001 to identify coal characteristics of the upper Hiawatha and lower Hiawatha coal seams in the unleased coal reserves of the area known as the Muddy Tract. The reserves are administered by the State of Utah School and Institutional Trust Lands Administration. The surface management agency is the United States Forest Service, Manti-LaSal National Forest. Upon completion of the exploration activities, the exploration holes will be plugged, and the pads reclaimed.

The application was received at the Price Field Office on November 9, 1999. The intent of this technical analysis is to provide comments to the USFS and Utah SITLA.

TECHNICAL ANALYSIS:

MINOR COAL EXPLORATION

NOTICE OF INTENT TO CONDUCT

Regulatory Reference: R645-201-210.

Analysis:

Minor Coal Exploration

The exploration process will implement the drilling of three boreholes to determine the

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chemical and physical coal characteristics of the upper and lower Hiawatha coal seams at the chosen locations. Less than two hundred and fifty tons of coal will be removed as a result of this three hole exploration (see page 4 of the submittal). This submittal, therefore, qualifies as a minor coal exploration application.

Findings:

ACT/041/002-99F qualifies as a minor coal exploration amendment.

RESPONSIBILITIES FOR COAL EXPLORATION PLAN REVIEW

Regulatory Reference: R645-201-100, 130.

Analysis:

The three exploration holes relative to this minor coal exploration application will be drilled on land whose surface ownership is controlled by the U.S. Forest Service, Manti-La Sal National Forest; coal resources are administered by the State of Utah School and Institutional Trust Lands Administration.

The purpose of this technical review is to provide comments to the USFS and SITLA as part of the UDNR/OGM's on going effort of coordination in the review of coal exploration activities.

Findings:

The lead agency involved in the review of this minor coal exploration application is the State of Utah, School and Institutional Trust Lands Administration, with secondary responsibilities managed by the U. S. Forest Service, Manti-La Sal National Forest. The responsibility of the Utah Department of Natural Resources, Division of Oil, Gas and Mining is to provide comments only to the Utah SITLA and the USFS.

NOTICE OF INTENT TO CONDUCT MINOR COAL EXPLORATION

Regulatory Reference: R645-201-200; 210 through 225.

Analysis:

This NOI to Conduct Minor Coal Exploration includes the following information.

- 1) Regulation 201-221; the name, address, and telephone number of the applicant seeking to explore, (see page 1 of the submittal).

- 2) Regulation 201-222; the name, address, and telephone number of the applicant's representative responsible for conducting the exploration activities, (see page 1 of the submittal).
- 3) Regulation 201-223; a narrative and map describing the exploration area and indicating where exploration will occur, (see Maps 1, 2, and 3 and page 2 of the submittal).
- 4) Regulation 201-224; a statement of the period of intended exploration is included, (see page 3).
- 5) Regulation 201-225; a description of the method of exploration to be used, the amount of coal to be removed, and the practices that will be followed to protect the area from adverse impacts of the exploration activities and to reclaim the area in accordance with the applicable requirements of R645-202. (See pages 7, 8, and 9 of the submittal).

Findings:

This notice of intent to conduct minor coal exploration includes sufficient information to adequately address the requirements of R645-201-210 through 225.

COAL EXPLORATION

COMPLIANCE DUTIES

Regulatory Reference: R645-202-100.

Analysis:

Required Documents

This notice of intent to conduct minor coal exploration includes a commitment to maintain a copy of the approved finalized notice of intent to conduct minor coal exploration for those individuals (i.e., drillers, geologists, and other agents of the Company) who may find it necessary to or who wish to review the application. The applicant has provided five copies of this notice of intent to the UDNR/OGM for distribution to the other agencies involved in this application.

Findings:

The intent of R645-202-100, regarding distribution of required documents relative to this notice of intent to conduct minor coal exploration has been adequately met.

PERFORMANCE STANDARDS

Regulatory Reference: R645-202-210.

Analysis:

Conducting Minor Coal Exploration in Accordance With State Program

This application commits the permittee to conduct this minor coal exploration according to the following.

- 1) Core samples will be recovered.
- 2) The exploration activities will not substantially disturb the natural land surface.
- 3) Drill sites will be reclaimed by back filling mud pits, redistributing any soils removed, and by the scarifying and seeding of the area. All seeding will utilize the seed mixture submitted on page 5. The mix should be reviewed by the USFS and receive that Agency's endorsement.

Findings:

This submittal's commitment to reclaim the drill sites according to the intent of the aforementioned regulation is adequate, assuming the USFS is in agreement on the seed mix to be implemented for the reclamation activities.

Regulatory Reference: R645-202-220.

Analysis:

Minor Coal Exploration Performance Standards Mandate

In this application, the permittee has made a commitment to conduct the minor coal exploration in accordance with the R645 performance standards relative to same.

Findings:

The submittal adequately addresses this requirement.

OPERATIONAL STANDARDS

Regulatory Reference: 202-231.

Analysis:

Habitats of Unique or Unusually High Value/Threatened and Endangered Species

The applicant's submittal commits to conducting the exploration and reclamation activities during periods that do not impact breeding and nesting periods for sage grouse, bald eagle or peregrine falcon. No exploration will occur within one-half mile of known breeding and nesting areas, (see page 2).

Findings:

The submittal adequately addresses this requirement.

ROADS

Regulatory Reference: 202-232.

Analysis:

Roads

No roads or other transportation facilities will need to be constructed. All exploration activities will take place on U. S. Forest Service road NFT025, with all access being provided by established FDR roads. Minor work will be needed to make the access routes travelable for the drill rigs. The work planned for the access routes will be to smooth off rough spots and remove some water bars on the National Forest Trail 025. In some cases material gravel will have to be hauled in to smooth traverses over bedrock ledges. Rutted roads will be smoothed with a small grader. None of the established roads will be widened. Water bars which will be removed on NFT 025 will be replaced upon completion of the exploration activities.

All roads associated with this minor exploration application are established Forest Service roads or trails; all R645 rules relative to primary roads are inapplicable.

Findings:

The roads described within this submittal are regulated by USFS guidelines. The R645 Utah coal rules are not applicable to same.

TOPSOIL

Regulatory Reference: R645-202-233.

Analysis:

Protection of Topsoil Resource

Preparation of the three drill pads will be accomplished by grubbing the topsoil horizon A and vegetation material with a small D-6 dozer. The removed material will be stockpiled and protected from water erosion by surrounding the pile with a properly constructed silt fence, (see page 4). Redistribution of the soils will occur during the reclamation of the drill sites.

Findings:

This submittal adequately addresses the requirements of R645-202-233.

HYDROLOGY

Regulatory Reference: R645-202-234.

Analysis:

Diversions of Overland Flows and Streams

The exploration sites will be drilled on a large ridge with small drainages on both sides. Elevations vary from 8400 to 9100 feet. Should any overland flows occur, they will be coursed about the exploration sites through utilization of berms, water bars, ditches, and/or culverts, preventing surface water contamination. Box Canyon Creek is the major drainage in the area.

Findings:

This submittal adequately addresses the requirements of R645-202-234.

Regulatory Reference: R645-202-235. and R645-301-356.300. through -301-356.400.

Analysis:

**Coal Exploration Activities Relative to Maintenance of Prevailing Hydrologic Balance
Maintenance of Siltation Structures / Revegetation of Sites**

The submittal commits the applicant to cementing the boreholes for their entire length. Any aquifers encountered will be sealed off to preclude cross connection/contamination.

Findings:

This submittal adequately addresses the requirements of R645-301-356.300. and -301-356.400.

IMPOUNDMENTS

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Regulatory Reference: R645-301-512.240; -301-513.200; -301-514.300; -301-515.200;
-301-533.100 through -533.600

Analysis:

**P.E. Certification of Impoundment Designs
MSHA pond requirements
Impoundments
Impoundment Hazards/Notification of DOGM
Impoundments**

The construction of mud pits at the drill sites will be necessary to control the drilling medium and keep it within the exploration site. These will be totally incised below the soil "A" horizon if there is sufficient soil depth. It is felt that these containments do not have enough volume to warrant the application of the aforementioned regulations.

Findings:

The aforementioned regulations, as they relate to impoundments, are not applicable to this submittal.

GROUND WATER

Regulatory Reference: R645-301-731.100, -301-731.110, -301-731.111

Analysis:

Hydrologic Balance Protection/Groundwater

Page 5 of the submittal commits the applicant to implement methods for protection of ground water. It is not anticipated that acid or toxic forming materials will be encountered during exploration because none have been encountered previously. Mud pits will allow evaporation of drilling water, minimizing the potential for this water to impact ground water systems. Preventive methods will be implemented to prevent the over topping of mud pits. All exploration boreholes will be plugged for their entire depth to prevent future contamination of ground water systems via surface influx.

Findings:

This submittal adequately addresses the requirements of R645-301-731.100 through .111.

Regulatory Reference: R645-301-731.112.

Analysis:

Ground Water Protection Relative to Surface Coal Mining

This regulation relates to surface coal stripping operations. The SUFCO Mine is an underground extraction operation.

Findings:

R645-301-731.112 is not applicable to this submittal.

SURFACE WATER

Regulatory Reference: R645-301-731.120; -301-731.121; -301-731.122

Analysis:

**Surface Water Protection
Surface Water Quality and Quantity Protection**

These regulations have been previously addressed under R645-301-731.100-111.

Findings:

This submittal adequately addresses the requirements of R645-301-731.120 through .122.

Regulatory Reference: R645-301-731.200 through -301-731.210.

Analysis:

Ground Water Monitoring

The exploration holes will be plugged for their entire depth as part of their reclamation. Thus, same will not be used for water monitoring purposes. This regulation is not applicable.

Findings:

Ground water monitoring will not be conducted through these exploration holes. This regulation is not applicable.

Regulatory Reference: R645-301-731.210; -301-731.211; -301-731.212; -301-731.213;
-301-731.214; -301-731.214.1; -301-731.214.2; -301-731.215;
-301-731.220; -301-731.221; -301-731.222

Analysis:

Surface Water Monitoring Requirements
Ground Water Monitoring Plan
Quarterly Monitoring Reports
Division Approval Requirements
Ground Water Monitoring through Bond Release
Minimizing Disturbance to Post Mining Land Use
Monitoring No Longer Necessary
Maintenance of Water Quality/Quantity Monitoring Equipment Required
Surface Water Monitoring
Implementation of Plan According to PHC
Identification of Surface Monitoring Parameters, Frequency, and Locations

This minor coal exploration application will be conducted on land whose surface is managed by the U. S. Forest Service, Manti La-Sal National Forest. The coal resource lies within the SITLA Muddy Tract, which is as yet, an unleased coal resource. The Division approved surface water monitoring plan, as it exists within the mining and reclamation plan, adequately addresses the aforementioned R645 requirements.

Findings:

The aforementioned R645 rules, as they relate to surface and ground water monitoring regimes, have already been adequately addressed by the SUFCO Mine mining and reclamation plan. They do not need to be addressed in this minor coal exploration application.

Regulatory Reference: R645-301-731.800.

Analysis:

Water Rights and Replacement Relative to Surface Coal Mining

This regulation is not applicable to this minor coal exploration application. Geologic data which will be obtained is relative to an underground extraction process.

Findings:

This regulation is not applicable to this minor coal exploration application.

SILTATION STRUCTURES

Regulatory Reference: R645-301-742.200 through -742.214.

Analysis:

Siltation Structures

The construction of siltation structures is irrelevant to this minor coal exploration application.

Findings:

These regulations have been adequately addressed in a previous section of this submittal.

SEDIMENTATION PONDS

Regulatory Reference: R645-301-742.220; -301-742.221 through -742.240

Analysis:

Sedimentation Ponds

There are no sedimentation ponds in close proximity to, nor will there be any constructed in association with, this minor coal exploration application.

Findings:

These regulations are not applicable to this minor coal exploration application.

Regulatory Reference: R645-301-742.300.

Analysis:

Diversions

These requirements have already been addressed within this submittal.

Findings:

These requirements have already been addressed within this submittal.

Regulatory Reference: R645-301-763-.100 and -763.200.

Analysis:

Siltation Structures

There are no siltation structures associated with this minor coal exploration application. These regulations are not applicable.

Findings:

R645-301-763.100 and -763.200 are not applicable to this minor coal exploration application.

ACID/TOXIC MATERIALS

Regulatory Reference: R645-202-236.

Analysis:

Handling/Disposal of Acid-Toxic Forming Materials

The requirements of R645-202-236 are not felt to be applicable as acid and toxic forming materials have never been encountered during previous exploration activities in this area.

Findings:

This submittal adequately addresses the requirements of R645-202-236.

RECLAMATION STANDARDS

Regulatory Reference: R645-202-240;-202-241; -202-242; -202-242.100; -202-242.200

Analysis:

**Return of Exploration Site to Approximate Original Contour
Revegetation of Exploration Sites
Revegetation/Utilization of Native Species
Control of Erosion by Vegetation**

Page 5 of of the submittal and page 16 of Appendix B commits the applicant to the back filling of the associated mud pits during the reclamation process; approximate original contour will thus be achieved. The area will then be scarified and reseeded using a seed mix which is endorsed by the U. S. Forest Service. This will occur during week four of the exploration activities (approximately mid-August, 2001).

Findings:

ACT/041/002-99F adequately addresses the requirements of R645-202-241 thru -242.200.

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Regulatory Reference: R645-202-242.

Analysis:

Sealing of Exploration Boreholes

Page 16 of Appendix B of the submittal commits the applicant to cementing the three exploration holes for their entire depth by the licensed driller. The machinery associated with the exploration will then be removed from the pad so that the remaining reclamation requirements (which have been previously addressed) can be initiated.

Findings:

The submittal adequately addresses the requirements of R645-202-243.

Regulatory Reference: R645-202-244; -202-244.100; -202-244.200; -202-244.300

Analysis:

**Removal of Drilling Apparatus
Providing Additional Environmental Data
Reduce or Control Impacts Due to Exploration
Facilitate Future Mining and Reclamation**

All equipment associated with the exploration activities will be removed from the site(s) as soon as compilation of the geologic data is completed. Reclamation activities (as they have been previously addressed within this submittal) can then commence. As the exploration boreholes will be cemented for their entire depth, it will not be feasible to obtain additional environmental data. The reduction of impacts due to exploration will not be necessary. The submittal adequately addresses the requirements of R645-202-244. through -244.300.

Findings:

ACT/041/002-99F adequately addresses the requirements of R645-202-244 thru -244.300.

Regulatory Reference: R645-301-830.

Analysis:

Determination of Bond Amount

The applicant currently holds \$3, 988,000 worth of bond for the SUFCO Mine permit area. Based on the Division's 5% rule, there is sufficient bond in place for the reclamation of the

disturbance associated with the three exploration boreholes.

Findings:

The current bond is adequate.

CONCLUSIONS AND RECOMMENDATIONS

ACT/041/002-99F adequately addresses the requirements of R645-201-100., -201-200., and R645-202.

It is recommended that the U. S. Forest Service review and determine the adequacy of the seed mix which the applicant has submitted on page 5.

Should water be used for exploration and dust suppression activities, it will be taken from the north fork of Quitchupah Creek where the North Fork flows under FDR 007, following proper procedure for obtainment through State water laws. The U. S. Forest Service, Manti La-Sal National Forest Service should initiate the arrangements for obtaining the drilling water estimated for this exploration project.

It is recommended that all water usage approvals from the Utah State Engineer be in place for the applicant prior to the approval of this minor coal exploration application by Utah SITLA.

The transfer of water from the North Fork of Quitchupah Creek to the drills sites will be accomplished by pumping through a two inch plastic line laid along NFT 025. However, based on the review of Map 3 of this submittal, approximately 5400 feet of the line must be hand drug (or drug by ATV???????) across surface where no road exists. The USFS may have a problem with this aspect of the submittal and may feel that a specific stipulation be implemented here.

Based on this UDNR/OGM review, it is recommended that the aforementioned Notice of Intent to Conduct Minor Coal Exploration, ACT/041/002-99F be approved, pending receipt of proper endorsements from the State of Utah, School and Institutional Trust Lands Administration and the United States Forest Service, Manti-LaSal National Forest.

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