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April 12, 1999

TO: File

THRU: Joseph C. Helfrich, Permit Supervisor *ORR for*

FROM: Mike Suflita, Reclamation Hydrologist *MS*

RE: Dugout Exploration, Canyon Fuel Company, LLC, Dugout Canyon Mine,
ACT/007/039-EX99B, Folder #2, Carbon County, Utah

SUMMARY:

Canyon Fuel Company (CFC) has proposed to locate up to six exploratory drill holes on the Dugout Mine permit area in Carbon County. There would also be about 7,000 feet of surface seismic studies. All of the activities would be on private land owned by CFC except for a couple hundred feet of the seismic survey which is on State land.

As required, the Applicant has filed a Notice of Intent to Conduct Minor Coal Exploration. The justification for exploration is to better characterize the coal seams in order to plan and develop mine operations. This document is a review of the hydrologic aspects of the notice.

TECHNICAL ANALYSIS:

OPERATION PLAN

Hydrologic Balance

Regulatory Reference R645-202-235

Analysis:

The study area is located in the higher elevations at about 8,000 feet. The majority of the access is on existing roads which were established when the area was logged for timber harvesting. There are two exceptions, namely drill hole H requires about 3,000 feet of added road and drill hole N requires about 2,500 feet of added road. Even these will use existing logging

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roads as much as possible. Typically the roads will need to be upgraded and widened since it's been some time since they were last used. Tree clearing is not anticipated. Topsoil encountered during road construction will be stockpiled for later reclamation. Topsoil piles will have trenches on the downhill side to prevent loss of soil resource. The roads will have water bars, berms, and straw bales installed to prevent erosion. Detailed descriptions for each road segment and drill pad location are provided, however, they all generally follow the above description.

The drill sites are shown in Figure 4, Typical Drill Pad Construction & Layout. The down slope sides of the pad will have silt fence or straw bales and the topsoil storage pile will have a berm and silt fences or straw bales on the down slope sides. Figure 2 shows typical silt fence installation and appears to be adequate. The straw bale installation is shown in Figure 1 and is NOT of the Best Technology Currently Available. Specifically, in Figure 2 (on Figure 1 Typical Straw Bale Installation) the stakes are regarded as optional and to be used "when needed". Stakes need to be used in ALL cases. Similarly, Figure 3 (on Figure 1 Typical Straw Bale Installation) the trenching prior to straw bale installation is regarded as optional. Trenches need to be used in ALL cases and Figure 3 should be eliminated.

The anticipated time frame for the project is from early June to late August which should contribute to successful reclamation and not interfere with the fall hunting season. There are no stream crossings on this project so surface water resources are not affected. Water for the drilling operations will be derived from Pine Creek and Dugout Creek and the Applicant owns water rights on both of these to use the water.

The Applicant has committed to record groundwater levels encountered along with other exploration data. This is desirable to additionally characterize the groundwater in the permit area. It is not expected that any exploration holes will be developed as monitoring wells.

RECLAMATION PLAN

Hydrologic Balance

Regulatory Reference R645-202-235

Analysis:

Reclamation of the drill sites is covered in detail and includes trash removal, filling of the mud pits, redistributing of soil to approximate original contour, removal of sediment control measures, replacing topsoil, roughening, seeding, mulching, and crimping. These methods will also be used on newly created roads and reconstructed logging trails. These are standard reclamation methods and are expected to be successful in this situation. Roads and drill sites will be reclaimed upon completion of their use and reclamation will be done concurrently with