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State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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August 26, 1999

TO: File

THRU: Daron Haddock, Permit Supervisor DRH

FROM: James D. Smith, Reclamation Specialist JDS

RE: Location of Abandoned Underground Equipment - Response to Division Order 99A Issued July 6, 1999, Canyon Fuel Company, LLC, Soldier Canyon Mine, ACT/007/018-DO99A, File #2, Carbon County, Utah.

SUMMARY

Information on abandoned underground mining machinery has been added to Exhibit 5.22-1 and page 5-12 of the MRP. Potential effects on ground water from the abandoned machinery are discussed in the PHC on page 7-151A. These changes should be approved for incorporation into the MRP. This submittal by Canyon Fuel Company, LLC was in response to Division Order 99A issued July 6, 1999.

TECHNICAL ANALYSIS

ENVIRONMENTAL RESOURCE INFORMATION

HYDROLOGIC RESOURCE INFORMATION

Analysis:

Probable hydrologic consequences determination.

The probable hydrologic consequences (PHC) of underground abandonment of mining equipment is discussed on page 7-151A. Underground mining equipment has been abandoned in place because unsafe conditions precluded removal of the equipment. Fluids were removed from the machinery to the extent possible. No significant impacts to the hydrologic system are anticipated from this abandoned equipment.

The equipment was inspected by a representative of the BLM prior to the sealing of the mine in July 1999 and BLM approved sealing of the mine with the abandoned equipment.

Ground water is not expected to discharge from the mine. Mine water pH is neutral to slightly alkaline. Oxidation of the abandoned equipment and release of iron and other metals into the ground water will likely take several decades. Because of this slow oxidation and the large volume of water that will fill the mine, increases in concentrations of these metals in the ground water system will most likely be very small, except possibly in the immediate vicinity of the equipment.

Only small amounts of lubricants and other fluids remain in the equipment, and there will be probably some oxidation, biodegradation, or other breakdown of these fluids over time. As with the metals, dilution will greatly reduce concentrations of these fluids. It is not likely that the remaining fluids will adversely impact ground water, other than possibly in the immediate vicinity of the equipment.

Findings:

Hydrologic resource information relating to the underground abandonment of mining equipment is considered adequate to meet the requirements of this section.

OPERATION PLAN

HYDROLOGIC INFORMATION

Analysis:

Ground-water monitoring.

No change to ground-water monitoring is proposed.

Surface-water monitoring.

No change to surface-water monitoring is proposed.

Findings:

Surface- and ground-water operational monitoring as described in the current MRP is adequate to meet the requirements of this section.

RECLAMATION PLAN

HYDROLOGIC INFORMATION

No change to the reclamation hydrologic monitoring plan has been submitted.

Findings:

Surface- and ground-water reclamation information and monitoring as described in the current MRP is adequate to meet the requirements of this section.

CUMULATIVE HYDROLOGIC IMPACT ASSESSMENT

The current CHIA does not specifically address underground abandonment of mining equipment; however, degradation of ground water from underground mining operations was assessed. No evidence of material damage from the actual mining operations was found, and no probability of material damage from actual or anticipated mining operations was found. Abandonment of equipment underground has been a common practice and problems arising from this practice have not been manifest.

RECOMMENDATION

These changes should be approved for incorporation into the MRP.