



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

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November 16, 1999

TO: File

THRU: Daron Haddock, Permit Supervisor *DRH*

FROM: Michael Suflita, Senior Reclamation Specialist *MS*

RE: Midterm Review with Emphasis on Hydrology, Canyon Fuel Company, LLC, Skyline Mine, ACT/007/005-MT99, File #2, Carbon County, Utah

Summary:

The Skyline Permit is at it's midterm and Division review is required. This review emphasizes the Hydrology aspects of the Mining and Reclamation Plan (MRP) and includes a review of past monthly inspections, submitted water monitoring data, and correspondence.

TECHNICAL ANALYSIS

HYDROLOGIC INFORMATION

Regulatory Reference: R645-300-730

Analysis:

As part of the midterm review the following documents were read to determine their applicability to the Skyline Mine using the Best Technology Currently Available (BTCA) to prevent additional contributions of suspended solids, or other contaminants, to stream flows outside of the permit area.

- MRP Section 2.3 Groundwater Hydrology.
- MRP Section 2.4 Surface Water Hydrology.
- MRP Section 2.5 Hydrologic Impacts of Mining Activities.
- MRP Appendix A-1, Hydrology.
- Correspondence Folder #2 for the Skyline Mine, spot checking for the last two years.
- Inspections Folder #5 for the Skyline Mine for the past two years.
- Water monitoring data in the DOGM database.

The MRP contains appropriate provisions for diversion ditches and culverts and these have all been installed. Several Alternate Sediment Control Areas are in place. Also, numerous plan amendments have modified the basic plan over the life of the current permit. The inspection reports indicate the diversions have been performing adequately and they have been regularly maintained as needed to maintain their capacity. Sediment control measures at the minesite consist of straw bales, silt fences, gravel cover, berms, and vegetative cover. Inspection reports, and personal inspections, indicate these are performing as intended and adequately reduce sediment loss. These too have been maintained as needed to retain their capacity.

A spot check of the water monitoring data submitted by the mine, and regular inspection reports, shows the water monitoring data are being sent to DOGM as required by the MRP.

The sediment ponds at the waste rock site and loadout appear to have been adequately designed and have been performing as intended. They rarely discharge. However, the sediment pond at the main minesite has a record of problems. Correspondence indicates ten instances of the pond discharges have exceeded the NPDES permit maximum limits. More significantly, there have been three instances of spills of longwall emulsion fluid that have reached the pond. One instance, 09/06/95, resulted in fluid entering Eccles Creek and killing many fish. A Notice of Violation was issued and the mine paid a \$17,000 fine. The latest instance, 08/04/99, resulted in the fluid being pumped back underground after drawing down the pond. As expressed in a 03/25/99 letter to the mine, the Division is worried about recurrence of the same problem. Quoting from that letter:

"We are however, very concerned about this type of situation. This is the third situation dealing with longwall emulsion fluids in the recent past that comes to mind. A few years ago a fish kill resulted from an emulsion fluid spill. A few months ago an emulsion fluid spill prompted pumping of the sediment pond water underground. This scenario seems to be repeating itself again. We feel that it is time to implement some additional methods for containing this type of situation. We look forward to hearing of your solution to this problem and encourage you to discuss this with our technical staff."

On 05/19/98 Division Staff met with Mine Personnel to discuss the main minesite sediment pond. The numerous inputs and outputs were discussed and five specific actions were developed to reduce or eliminate problem inputs to the pond. One option was a pair of sediment traps to remove coal fines before they enter the pond. An amendment to the MRP has been approved for these traps, but they have not been installed. Another option was to construct a single, central underground sump to contain and treat all water discharged from the mine and have it bypass the sediment pond and go directly to Eccles Creek. This would reduce the hydraulic loading on the pond. In addition, the water stream was to be monitored for emulsion fluid with automatic controls to divert the water to prevent the emulsion from

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entering the creek. The pond would have to be located in an area of the mine where there is no gypsum rock dust as that has contributed to Total Dissolved Solids problems with pond effluent in the past. This underground sump has also not been implemented.

A third option was to install a series of well-designed baffles in the sediment pond. They would be attached to the entire bottom of the pond and have provisions to bring about the maximum settlement of coal fines and sediment. This too has not been implemented. These three options were believed to be the most significant in improving the sediment pond performance and none of them have been implemented.

It appears that despite repeated occurrences of serious emulsion spills and repeated NPDES exceedances, and despite mutual development of viable solutions to these problems, Skyline Mine is not willing to implement the solutions. As indicated in the 03/25/99 letter, it's time for the mine to act upon these problems and bring them to resolution. Repeat occurrences of the same problems which result in offsite impacts cannot continue. The Division is willing to work with the mine as indicated by past cooperation and the extended time that these problems have occurred. We remain willing to assist in implementation of solutions to these problems.

As a reminder, the Division has indicated to all coal mines that Electronic Data Input will be mandatory when mine permits are renewed. Midterm review of the permit seemed a good time to reemphasize that point.

Findings:

The current operation of the Skyline Mine is not considered adequate to meet this regulation. Accordingly, the Permittee must address those deficiencies as found within this Technical Analysis and provide the following in accordance with the requirements of:

R645-301-730, a plan to change the main minesite sediment pond to eliminate NPDES discharge violations and stop discharges of longwall emulsion fluid to the pond and/or Eccles Creek.

cc: Mike Herkimer, DWQ
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