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State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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April 10, 1998

TO: File

THRU: Daron Haddock, Permit Supervisor
Joe Helfrich, Permit Supervisor

FROM: Sharon Falvey, Senior Reclamation Specialist

RE: Horizon Mine Temporary Mine Water Discharge, Horizon Mining, LLC, Horizon Mine, ACT/007/020-98D, Folder #2, Carbon County, Utah.

Summary:

The Division held a meeting on April 9, 1998 to assist the operator in meeting Division Regulatory Requirements for a mine water discharge that was not identified within the existing permit. According to Vicky Bailey, Earth Fax Consultant, water is seeping from the face of the workings at a visually estimated rate of 75 gpm. This review discusses those changes made to the document to meet regulatory requirements and to protect the hydrologic balance.

Analysis:

Probable Hydrologic Consequences:

Numerous discussions within the PHC require further updating regarding water encountered within the mine (e.g. Page 7-17, submitted April 1998, still predicts sustained inflow to be minimal). Additional changes to the PHC including: water source identification, water dating, etc. will be necessary to update the PHC.

Ground Water Monitoring:

The permittee will proceed with in-mine monitoring from the region where water is being intercepted. In addition to ground water monitoring parameters identified in the plan selenium will be monitored because high levels were identified in the data from the old workings from a sample collected in December 1997.

The permittee will monitor the quantity of flow discharged from the mine by documenting the rate and time period that water is transferred from the mine to the sedimentation pond. Daily quantities will be summarized for each month and submitted to the Division in the quarterly report. This will continue until a totalizing flow meter and the discharge monitoring report for the direct discharge point are operational.

Surface Water Monitoring:

Water discharged from the pond will be monitored for the required UPDES parameters. Additional monitoring is required while the mine water is discharged to the sedimentation pond. The decant will be monitored along with the following sites; upstream of the UC-2 culvert and, downstream of the UC-1 culvert (where adequate mixing has occurred). The following laboratory and field parameters; TDS, selenium, sulfate, pH, conductivity and flow, will be analyzed from these sites. A sample will be obtained with the initial discharge and then a sample will be obtained from each site within each two week period thereafter. This monitoring will continue until approval of the stream discharge location point 002 is obtained and after it is demonstrated that the sampling is no longer necessary.

Sedimentation Pond

Mine water that is temporarily discharged to the pond will be discharged through the sedimentation pond decant. The plan indicates that the runoff storage volume will be maintained. During a precipitation event the pond should be at the decant level or below and the decant level. The decant must be in the closed position to meet the pond design requirement in a precipitation event to assure the capacity for the 10 year 24 hour event is maintained.

Findings:

The temporary measure, allowing-in minewater discharge to occur through the sedimentation pond at UPDES discharge point 001, are approved and meet the intent of minimizing impact.

Recommendation:

This amendment should be approved and incorporated into the plan. Additional information and updates are necessary. Numerous discussions within the PHC require further updating from the encountered mine water. Additional changes to the PHC including: water source identification, water dating, etc. will be necessary to update the PHC. It is recommended that this amendment be followed up by a request or Division Order from the Division to Horizon mine to obtain the information necessary to fully address the PHC. This update may be coordinated with the approval for UPDES discharge monitoring point 002 and a demonstration that monitoring is no longer necessary.

cc: William Malencik, PFO
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