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State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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015/019

July 11, 1988

TO: John Whitehead, Permit Supervisor
FROM: Richard V. Smith, Geologist *RVS*
RE: Mine Inflow Monitoring Program, Utah Power and Light Company,
Deer Creek Mine, ACT/015/018 and Wilberg/Cottonwood Mine,
ACT/015/019, Folder #2, Emery County, Utah

Summary

As part of the water monitoring programs for the approved permits for the Wilberg/Cottonwood and Deer Creek Mines, Utah Power and Light Company (UP&L) monitors certain mine inflows. Review of the Annual Water Monitoring Report for 1987 indicates mine inflows were monitored at the following locations:

<u>Deer Creek Mine</u>	<u>Flow (gpm)</u>
3rd N, XC-41	5.0
3rd Sb, XC-21	0.6
EM-3	2.8
<u>Wilberg/Cottonwood</u>	
4th E, XC-24	1.0
2nd S, XC-11	<u>0.0</u>
 Total	 9.4 gpm

Total inflow to both mines is estimated to be approximately 740 gpm with over 90 percent of the inflow occurring in the Deer Creek Mine.

Utah Power and Light Company is currently monitoring 1.3 percent of the total mine inflow at five locations. Inflow increased 42 percent in the Deer Creek Mine from 1986 to 1987.

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Conclusions

The mine inflow monitoring programs at the Wilberg/Cottonwood Mine and more particularly, the Deer Creek Mine are currently not adequate to identify and characterize major inflow sources. Future permit renewals will require the development of Probably Hydrologic Consequence (PHC) statements and attendant Cumulative Hydrologic Impact Assessments (CHIA). Both PHCs and CHIAs must necessarily discuss potential impacts resulting from the interception of ground water by mine workings. Inflow data derived during the current permit terms are especially applicable to projecting inflow rates and water quality impacts during future permit terms. Accordingly, the mine inflow monitoring program must encompass major inflow sources to acquire a useful data suite for future permit renewals.

The mine inflow monitoring program must also be flexible so that it accommodates both areas of new development and inaccessibility in areas that have been completely developed. Inflow surveys should be conducted periodically and the inflow monitoring program should be changed, through the formal amendment process, as necessary.

Recommendations

1. Inform the operator that the current mine inflow monitoring programs are not adequately providing data to identify and characterize major inflow sources.
2. Encourage the operator to meet with Division technical staff to develop a flexible and adequate mine inflow monitoring program.

djh
cc: T. Munson
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