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State of Utah

DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF RADIATION CONTROL

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November 8, 1996

Mr. Myron Fliegel
Uranium Recovery Branch
U.S. Nuclear Regulatory Commission
Washington D.C. 20555-0001

Re: Atlas Uranium Mill Tailings Facility: State Water Quality Data Update; **Evaluation and Recommendation for Additional Water Quality and Hydrogeologic Studies**.

Dear Mr. Fliegel:

The purpose of this letter is to transmit an update report of water quality conditions in the vicinity of the Atlas uranium tailings pile near Moab, Utah. Included in the report are additional water quality data collected in February, April and July, 1996 by the Utah Division of Water Quality (DWQ) at the Atlas Seep, at nearby up and downstream locations in the Colorado River, and at the Arches National Park Headquarters supply well.

This data is provided in order to supplement previous water quality information submitted to NRC in our April 26, 1996 Comments on the Atlas Draft Technical Evaluation Report (DTER).

From the available DWQ data thru July, 1996 it appears that the tailings contaminated groundwater discharge at the Atlas Seep continues to exceed State groundwater quality standards for at least five parameters, including ammonia (as N), manganese (dissolved), molybdenum (dissolved), nitrite + nitrate (as N), and vanadium (dissolved). Relative to river data collected during the same time period, the average total dissolved solids content of the Atlas Seep continues to be high at 8,050 mg/l.

Intensive up and downstream DWQ river sampling conducted in April, 1996 reinforces the previous conclusion that the Atlas Seep is a source of contaminant discharge to the Colorado River. Other points of tailings seepage discharge to the river may also be present. Review of DWQ data for seven (7) mobile tailings contaminants suggests that the interval wherein State water quality numeric criteria are exceeded in the Colorado River is contaminant specific. In the case of gross alpha this zone may extend more than one mile below the Atlas Seep.

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Water quality data from the Arches Headquarter's well suggest apparent increasing trends for chloride and total dissolved solids. Recent apparent increasing trend has also been observed for sulfate, a known tailings contaminant. For reasons yet unknown, recent sampling shows a reversal of historic sulfate and chloride concentration relationships. One explanation for increases in both the sulfate and chloride concentrations may be man-caused sulfate contamination. Although little gross alpha data is available, recent DWQ sampling shows an apparent increasing trend. Gross alpha concentrations in July, 1996 rose up to the State groundwater quality standards. Based on these findings and the expected complexity of fracture controlled groundwater flow systems expected to exist north of the Atlas tailings pile, it is apparent that additional hydrogeologic evaluation is needed to fully and adequately assess local groundwater flow and water quality conditions near the Atlas facility.

After review of the recent DWQ data, it is apparent that additional surface and groundwater quality sampling needs to be conducted at the Atlas facility in order to further evaluate and characterize local water quality conditions. We urge NRC to require Atlas to complete additional water quality studies of the Colorado River, contaminated groundwater near the pile, and fully characterize nearby hydrogeologic conditions, in order to assess current and future potential impact on Utah's water resources.

By way of information, we plan on conducting additional intensive river sampling studies this winter during low-flow conditions. In addition, ongoing groundwater quality sampling will continue for the Arches Headquarters well. As these data are available, we will forward them to you for your consideration.

If you have any questions or comments on the attached report, please contact Loren Morton of my staff at (801) 536-4250. Thank you for your consideration in this matter.

Sincerely,

Craig W Jones, acting for

William J. Sinclair, Director
Division of Radiation Control

LBM:lm

Attachment

cc: Fred Pehrson, DWQ (w/attach)

Bruce Rodgers, Canyonlands & Arches Nat. Park (w/attach)
Roy Irwin, National Park Service - Fort Collins (w/attach)
Ronette Reisenberg, U.S. F&WS
Mike Layton, NRC (w/attach)
Richard Blubaugh, Atlas (w/attach)
Grant Ohland, Harding Lawson (w/attach)

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File: Atlas Water Quality