



State of Utah

DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF RADIATION CONTROL

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November 29, 1999

John J. Surmeier, Chief
Uranium Recovery and Low-Level Waste Branch
Division of Waste Management
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington D.C. 20555-0001

SUBJECT: Environmental Assessment For The Shootaring Canyon Mill Reclamation Plan:
State Comments

Dear Mr. Surmeier:

On November 15, 1999 the Utah Department of Environmental Quality (DEQ), Division of Radiation Control (DRC) received the Draft Environmental Assessment (EA) for the Shootaring Canyon Uranium Mill Reclamation Plan under your cover letter dated November 10, 1999. In your cover letter you requested that the Utah DEQ review the EA and provide comments within 30 days of receipt. After a review of the EA by DRC staff, we have prepared the following comments which are listed in the order that they appear in the EA.

1. In Section 2.4, Water Resources, under the paragraph Surface Water, the watershed area of the mill and tailings impoundment areas should be described and quantified with regard to flooding potential. With a location near Lake Powell and the Glen Canyon National Recreation Area, this is a topic that warrants more attention and detail.
2. In Section 2.4, Water Resources, under the paragraph Ground Water, the groundwater mound beneath the tailings impoundment should be described and quantified with regard to risk of groundwater contamination. Because of anisotropy within the Entrada aquifer, a local ground water mound is present in the upper part of the aquifer beneath the tailings impoundment just upstream of the main dam. The top of the ground water mound is located approximately 57 feet below the ground surface while the regional Entrada water table is present at approximately 140 feet below the ground surface (Hydro-Engineering, 1998). To distinguish these two hydraulic conductivity zones, the local groundwater mound is referred to as the Upper Low-Permeability Entrada and the regional water table is referred to as the Lower Main Entrada. The juxtaposition of these two hydraulic conductivity zones has resulted in a complex 3-dimensional anisotropic flow system below the tailings impoundment. The water quality of the Entrada aquifer should be monitored for potential impacts from the tailings impoundment with a network of compliance monitoring wells completed at various depths and locations around the impoundment.

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3. In Section 2.4, Water Resources, in the second paragraph under the paragraph Ground Water, the pristine water quality of the Entrada aquifer is understated and should be better characterized. In accordance with Utah ground water standards defined in UAC R317-6-2, the ground water classes defined in UAC R317-6-3, and based on validated ground water quality data collected from 1979 to 1998, ground water in the Entrada aquifer is classified as Class IA, Pristine Ground Water, which warrants protection to the maximum extent feasible. The site-wide mean for total dissolved solids (TDS) is 237 milligrams per liter (mg/l); TDS values range from a minimum of 185 mg/l in well RM6 to a maximum of 283 mg/l in well RM4, with intermediate values of 237 mg/l and 256 mg/l in wells RM1 and RM5, respectively. In addition, no contaminant concentrations exceed the ground water quality standards in UAC R317-6-2.
4. In the last paragraph of Subsection 4.3, Water Resources, Ground Water, under of Section 4.0, ENVIRONMENTAL IMPACTS, it states, "*Since hazardous constituents from the impoundment have not been detected in the ground water, the reclamation plan does not include plans to clean up the ground water.*" Even without documented groundwater contamination attributed to site operations, groundwater remediation activities should at least be identified as a potential reclamation activity.
5. On March 17, 1999, the Utah DEQ issued a Ground Water Quality Discharge Permit to PRL for Shootaring Canyon Mill. In accordance with compliance item L.H.6 of this Permit, PRL submitted an infiltration modeling report for a closed-cell scenario for Utah DEQ approval prior to commencement of milling operations. The objectives of the infiltration modeling are to demonstrate that the reclamation cover design is compatible with the bottom liner design for minimizing build up of fluid within the impoundment and preventing the "bathtub effect" after reclamation. Utah DEQ approval of the submitted report is pending. The NRC may want to acknowledge this in the subject EA.

We appreciate the opportunity to comment on the subject EA for the Shootaring Canyon Uranium Mill. If you have any questions, please call me or Loren Morton at (801) 536-4250.

Sincerely,


William J. Sinclair, Director
Division of Radiation Control

cc: Fred Craft, PRL

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References

Hydro-Engineering, LLC, 1998. Ground-Water Hydrology of the Shootaring Canyon Tailings Site, prepared for Plateau Resources Limited. May 1998. Revised August 28, 1998.

Utah Department of Environmental Quality, 1995. Administrative Rules for Ground Water Quality Protection, R317-6, Utah Administrative Code. Utah Department of Environmental Quality, Division of Water Quality. Last Revision, March 20, 1995.

Utah Department of Environmental Quality, 1999. Ground Water Quality Discharge Permit for the Plateau Resources Limited Shootaring Canyon Uranium Mill near Ticaboo, Utah. Issue date March 17, 1999.