

February 20, 2007

Mr. Richard Bush  
Site Manager  
U. S. Department of Energy  
Office of Legacy Management  
2597 B3/4 Road  
Grand Junction, CO 81503

SUBJECT: RESOLUTION OF SEEP AND GROUND WATER MONITORING AT THE MEXICAN HAT, UTAH, UMTRCA TITLE 1 DISPOSAL SITE, APPROVAL OF SAMPLING ACTIVITIES AND CHANGE TO LONG TERM SURVEILLANCE PLAN (TAC J51967)

Dear Mr. Bush:

By letter dated July 25, 2006, to the U.S. Nuclear Regulatory Commission (NRC), the U. S. Department of Energy (DOE) submitted a request to make a change in the Long Term Surveillance Plan (LTSP) for the Mexican Hat Title I disposal site. DOE proposes to discontinue seep sampling at the site and only make seep observations during the annual LTSP inspection. DOE further proposes to resume seep sampling activities if water at the seeps is observed to be increased compared to historic observation. The letter also requests that DOE would like to make this minor change to the LTSP by simple letter rather than changing the LTSP itself.

With the request, the DOE included a copy of the Draft Resolution of Seep and Ground Water Monitoring at the Mexican Hat, Utah, UMTRCA Title I Disposal Site Report dated March 2006, and a letter from the Navajo Nation dated July 25, 2007. In the letter, the Navajo Nation conditionally approved the discontinuance of seep monitoring with the requirement that DOE reestablish seep sampling activities should the ground water seeps develop and present surface water flow from the disposal cell. DOE has been performing quarterly monitoring since 1998. DOE recommended discontinuing seep monitoring in April 2002, however, at that time, the Navajo Nation responded that DOE should continue sampling.

As documented in the Draft Resolution of Seep and Ground Water Monitoring at the Mexican Hat, Utah, UMTRCA Title I Disposal Site Report, seep sampling occurs at seeps from the Halgaito Formation Upper Unit that contains perched ground water that is mostly from processing fluids. Only a minor amount of water is from natural recharge. The Halgaito Formation Lower Unit is the uppermost aquifer and is hydraulically isolated from the Halgaito Upper Unit by a lenticular to continuous limestone aquitard. Additionally, an upward ground water gradient precludes downward contaminant migration from the Halgaito Upper Unit to the Lower Unit. Ground water quality in the Halgaito Upper Unit is of poor quality caused by natural and anthropogenic causes. The Halgaito Lower Unit contains hydrogen sulfide gas, naturally occurring petroleum and general poor water quality. Ground water is not a source of drinking water, since the towns of Halchita and Mexican Hat use the San Juan River for drinking water. The seeps do not have enough flow to constitute a water resource and do not present enough volume to present a significant risk to human health, the environment, livestock, or wildlife.

The NRC staff has completed its review of the request and the above referenced report. Discontinuing seep sampling, while continuing to observe seeps during inspections, should not adversely affect public health and safety or the environment. Continued observations of the seeps will allow DOE to use the seeps as a performance indicator of cell performance, since significant increases in seep water may indicate the cell is no longer performing as anticipated. The request to limit seep sampling to only making observations during the annual cell inspection, and if water is observed to be increased compared to historic observations, then sampling will resume, is approved. However, the NRC requests that DOE make the change in the seep monitoring program permanent in the LTSP rather than by a letter to the file. The change to the LTSP should be made within 6 months of the date of this letter. If you have any questions regarding this letter, please contact Ron Linton, the NRC Project Manager for the Mexican Hat UMTRCA Title 1 disposal site, at (301) 415-7777, or by e-mail, to rcl1@nrc.gov.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice for Domestic Licensing Proceedings and Issuance of Orders," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

Sincerely,

**/RA/**

Ron Linton, Project Manager  
Uranium Recovery Licensing Branch  
Decommissioning and Uranium Recovery  
Licensing Directorate  
Division of Waste Management  
and Environmental Protection  
Office of Federal and State Materials  
and Environmental Management Programs

Docket No.: WM-00063

cc: M. Roanhorse (Navajo Nation)

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**/RA/**

Ron Linton, Project Manager  
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