

July 24, 2012

Ms. Deborah Steckley  
Site Manager  
U.S. Department of Energy  
2597 B 3/4 Road  
Grand Junction, CO 81503

SUBJECT: U.S. NUCLEAR REGULATORY COMMISSION STAFF REVIEW OF  
REPORTS FOR THE SHIPROCK, NEW MEXICO URANIUM MILL  
TAILINGS RADIATION CONTROL ACT SITE (DOCKET WM-58)

Dear Ms. Steckley:

I am writing to provide U.S. Nuclear Regulatory Commission (NRC) staff comments on two recent U.S. Department of Energy (DOE) reports on the Shiprock New Mexico Uranium Mill Tailings Radiation Control Act (UMTRCA) sites. These reports are entitled "September 2011 Groundwater and Surface Water Sampling at the Shiprock, New Mexico, Disposal Site (January 2012)" and "Annual Performance Report April 2010 through March 2011 for the Shiprock, New Mexico, Site (January 2012)." The NRC staff does not have any comments or questions on the first report. Our comments on the Annual Performance Report are summarized below:

1. The hot-spot remedial effort, which is currently being considered would enhance the current effort and could provide further efficiency to the overall remediation of mill-impacted groundwater. The NRC recognizes the complexities at the Shiprock site and the need for further site characterization to ensure proper evolution of the remedial system, but the NRC would encourage the DOE to move forward with pilot studies at hot-spot locations.
2. It should be noted that the Environmental Protection Agency risk-based screening level for stable strontium, discussed in Section 1.2.1, was reduced during a subsequent update to the generic screening level tables. The stable strontium screening level of 22 mg/l was accurately reported based on a revision date of June 2011, but was reduced to 9.3 mg/l based on an update done in November 2011. The reduced value is due to a change from the adult to the child for non-cancer tap-water Risk-based screening level equations. Therefore, DOE may wish to consider the 2012 Edition of the Drinking Water Standards and Health Advisories' 20 mg/l Drinking Water Equivalent Level for a lifetime exposure level, assuming 100% exposure from drinking water containing stable strontium as a benchmark.
3. The NRC agrees that the recommendations made in Section 5 will improve the performance and evaluation of the Shiprock remediation system and will help to minimize potential risks to human health and the environment.

D. Steckley

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If you have any questions concerning the NRC staff comments, please contact me at 301-415-6749 or by email at [Dominick.Orlando@nrc.gov](mailto:Dominick.Orlando@nrc.gov).

Sincerely,

*/RA/*

Dominick A. Orlando, Senior Project Manager  
Special Projects Branch  
Decommissioning and Uranium Recovery  
Licensing Directorate  
Division of Waste Management  
and Environmental Protection  
Office of Federal and State Materials  
and Environmental Management Programs

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cc: Shiprock Distribution List

D. Steckley

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Sincerely,

**/RA/**

Dominick A. Orlando, Senior Project Manager  
Special Projects Branch  
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