

April 18, 2011

Mr. Richard Bush
UMTRCA Program Manager
U.S. Department of Energy
2597 B 3/4 Road
Grand Junction, CO 81503

SUBJECT: COMMENTS ON 2010 SHIPROCK GROUNDWATER AND SURFACE WATER
SAMPLING REPORTS AND EVALUATION OF REMEDIATION STRATEGY

Dear Mr. Bush

I am writing to provide U.S. Nuclear Regulatory Commission (NRC) staff comments on several U.S. Department of Energy (DOE) reports related to the Shiprock, New Mexico Uranium Mill Tailings Radiation Control Act (UMTRCA) Title I disposal site. These reports are the Data Validation Packages for the March and September 2010 Groundwater and Surface Water Sampling (dated June 2010 and January 2011, respectively) and the 2010 Review and Evaluation of the Shiprock Remediation Strategy, dated January 2011.

Regarding the Data Validation Packages, it appears that DOE conducted the sampling in accordance with the site Groundwater Corrective Action Plan, as amended by the 2005 Refinement of Conceptual Model and Recommendations for Improving Efficiency at the Shiprock, New Mexico Site. However, DOE included an additional "field parameter" of total alkalinity for the September 2010 sampling event without indicating the rationale for its inclusion. If DOE intends to continue to include this parameter in future reports, it may be appropriate to provide the rationale for its inclusion so that future reviewers do not question previous reports (i.e., those that do not include the parameter).

In addition, we note that, during the September 2010 sampling event, several field parameters (primarily temperature, specific conductance and Oxidation Reduction Potential (ORP)) were reported as anomalous. The September report indicates that the ORP anomaly is attributable to malfunctioning field equipment. DOE may wish to re-evaluate the field Quality Assurance/Quality Control procedures as they may not be adequate to detect malfunctioning equipment in the field. Also, given the rejection of the data for ORP, it may be appropriate to consider reviewing the other outlier data as they too may be the result of equipment malfunctions rather than actual environmental anomalies.

Regarding the Review and Evaluation of the Shiprock Remediation Strategy, we agree that the site aquifer model used to develop the compliance plan may be inadequate. However, in developing any new approaches for either evaluating the site or mitigating impacts to site aquifers, we believe that DOE should first establish the role of the existing tailings pile as a continuing source of groundwater contamination at the site.

R. Bush

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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.

Sincerely,

/RA/

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Decommissioning and Uranium Recovery
Licensing Directorate
Division of Waste Management
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Office of Federal and State Materials
and Environmental Management Programs

Docket No: WM-58

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R. Bush

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