



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
WASHINGTON, D.C. 20555-0001

August 27, 2015

Mr. Mark Kautsky, Site Manager  
U.S. Department of Energy  
Office of Legacy Management  
2597 Legacy Way  
Grand Junction, CO 81503

**SUBJECT:** U.S. NUCLEAR REGULATORY COMMISSION STAFF REVIEW OF THE U.S. DEPARTMENT OF ENERGY REPORT ENTITLED "SEPTEMBER AND OCTOBER 2014 GROUNDWATER AND SURFACE WATER SAMPLING AT THE SHIPROCK, NEW MEXICO, DISPOSAL SITE" DATED JANUARY 2015 (DOCKET WM-00058)

Dear Mr. Kautsky:

I am writing in response to the U.S. Department of Energy (DOE) report entitled "September and October 2014 Groundwater and Surface Water Sampling at the Shiprock, New Mexico Disposal Site" dated January 2015 (Agencywide Document Access and Management System (ADAMS) Accession Number ML15082A047). The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the report and has the following comments:

1. The 2013 report included Tables 2 and 3 that provided background sample information, and Table 4 that provided the results of both filtered and unfiltered samples for the floodplain locations. Tables 2 and 3 in the 2014 report provide "Benchmark" sample information, and the results of the filtered and unfiltered samples for the floodplain are not included. It would be helpful if DOE provided an explanation for this change.
2. In the NRC staff comments on the March and May 2014 sampling report (ML14293A674), the staff had the following comment: "The Time Concentration Graphs cited ammonia as total N while in the previous report, it is cited as NH<sub>4</sub>. Similarly, nitrate is cited as 'Nitrate+Nitrite,' while in the previous report it was cited as nitrate. It is not clear from the report why these changes were done." No explanation has been provided in the current report and the constituents are still reported in this manner. In addition, the report states in footnote A to Table 1, page 4, that the standards are those listed in the 2002 Final Ground Water Compliance Action Plan (GCAP) for the Shiprock, New Mexico UMTRCA site. The standard for nitrate in the GCAP is 44 mg/l but the standard cited in the current report is Nitrate/Nitrite as N 10 mg/l. It would be helpful if the DOE explained why the constituents are reported in this manner.
3. The Background Threshold Values (BTV) in Tables 2 and 3 (page 5) are the same as in the previous report but the text on page 4 says that the BTV is determined by the concentrations at river sampling location 0898. If the analyte values are elevated in all locations including 0898, as indicated in the report, it would seem that the BTV should change. The staff suggests that the DOE evaluate the manner in which the BTVs were determined to ensure that they continue to be up to date.

4. The Water Sampling Field Verification Checklist indicates that locations 0501, 0897, and 1205 were inadequately filtered in the field and were filtered in the laboratory. However, Table 6 does not report the unfiltered value for these locations or any of the other locations where filtered and unfiltered results are reported in the previous report. In addition, the text on page 4 states that both filtered and unfiltered samples were collected. The staff suggests that the DOE determine why the unfiltered sample results were not reported.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390 of the NRC's "Agency Rules of Practice and Procedure" 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 ADAMS. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

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

Sincerely,

/RA/

Dominick Orlando, Senior Project Manager  
Materials Decommissioning Branch  
Division of Decommissioning, Uranium Recovery,  
and Waste Programs  
Office of Nuclear Material Safety  
and Safeguards

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Sincerely,

/RA/

Dominick Orlando, Senior Project Manager  
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