



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

February 5, 2020

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

**SUBJECT: U.S. NUCLEAR REGULATORY COMMISSION STAFF REVIEW OF 2019
ANNUAL INSPECTION REPORT FOR URANIUM MILL TAILINGS
RADIATION CONTROL ACT TITLE II SITES**

Dear Mr. Kautsky:

I am writing in response to the U.S. Department of Energy (DOE) report entitled "2019 Annual Site Inspection and Monitoring Report for Uranium Mill Tailings Radiation Control Act Title II Sites" dated December 2018 (Agencywide Documents Access and Management System (ADAMS) Package Accession Number ML19338C822). The U.S. Nuclear Regulatory Commission (NRC) staff reviewed the DOE site inspection reports and has the following comment or question:

1. For the Sherwood site, the inspection report states that the cover system was designed to withstand up to 10 feet of settlement. The inspection report further states that settlement has not exceeded 4.4 feet near the pond since construction of the disposal cell. This appears to be based on information in the report entitled "Settlement Survey and Analysis Sherwood, Washington, Disposal Site" dated June 2018 (ADAMS Accession Number ML18206A479). The June 2018 report states that cell-cover surface settlement at the site was calculated using the 2016 measurement data and adjusted data from the 1997 completion report. The June 2018 settlement report also indicates that settlement near the pond has not increased by visually comparing the extent of the pond shoreline over time (i.e., areal imagery from 2006, 2009, 2011, 2013, and 2015). In that the report relies on a calculated estimate of settlement and expansion of the pond as an indicator of additional settlement it may be useful for DOE to include an actual measurement of the depth of the pond as an indicator of additional settlement during inspections. Documenting the depth of the pond could provide another data point and help verify that the overall settlement of the cover remains less than 10 feet. The inspection report also indicates that DOE will be performing a baseline aerial survey of the site in the near future. The information obtained in the aerial survey could prove useful in further evaluating settlement near the pond.
2. Additionally, for the Sherwood site, the inspection report discusses the containment dam evaluations using the results of the four piezometers at the site that are used to evaluate moisture conditions in the containment dam. Understanding the moisture condition trends in the containment dam is an important aspect of its performance. The inspection report only includes the current piezometer results and it would be useful if the DOE included the results for the piezometers since their installation in 2000 in the 2020 report

(perhaps as a graph similar to the water elevation data presented in Figures 5-5 and 5-6). Presentation of such a graph would enhance the NRC staff's understanding of the moisture conditions in the containment dam.

3. For the Shirley Basin South site, the paragraph on page 6-12 contains misleading or inaccurate information. Specifically, it cites a 2012 letter from NRC regarding suspension of the Alternate Concentration Limit evaluation program at the site. The correct citation for the NRC staff's recommendation is my March 25, 2014, letter to Scott Surovchak in which the NRC staff determined that the ACL evaluation should be suspended due to "uncertainty regarding the source of the radium in the ground water at the site (i.e., whether the radium is naturally-occurring or originating from the tailings impoundment), that the ground water is not a current or potential near-term source of drinking water, and that the source of livestock water at the site is from an aquifer that is not impacted by former milling operations. Because the ground water is not a current or potential future source of drinking water, we do not believe that there is an imminent threat to the public health and safety or the environment." (ADAMS Accession Number ML14017A069). In future reports, DOE should cite the 2014 letter and conclusions stated therein, specifically, that NRC concluded that no imminent threats were likely at this time. This conclusion differs from a "no risk" conclusion in that NRC's concurrence was based on the evaluation program being suspended rather than it being terminated.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) Part 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 Website at <http://www.nrc.gov/reading-rm/adams.html>.

If you have any questions concerning the NRC review of the report, please contact me at 301-415-6749 or by email at Dominick.Orlando@nrc.gov.

Sincerely,



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

Docket Numbers: 40-8902, 40-1341
40-8904, 40-9090
WM-54, 40-6659

Listserve for Sherwood, Shirley Basin South
Bluewater Edgemont L-Bar Maybell West

SUBJECT: U.S. NUCLEAR REGULATORY COMMISSION STAFF REVIEW OF 2019
ANNUAL INSPECTION REPORT FOR URANIUM MILL TAILINGS RADIATION
CONTROL ACT TITLE II SITES **DATE February 5, 2020**

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