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

June 26, 2023

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

SUBJECT: U.S. NUCLEAR REGULATORY COMMISSION'S STAFF REVIEW OF 2022 ANNUAL SITE INSPECTION AND MONITORING REPORT FOR URANIUM MILL TAILINGS RADIATION CONTROL ACT TITLE II SITES

Dear Mark Kautsky:

I am writing in response to the U.S. Department of Energy (DOE) report entitled, "2022 Annual Site Inspection and Monitoring Report for Uranium Mill Tailings Radiation Control Act Title II Disposal Sites," dated December 2022, (Agencywide Documents Access and Management System [ADAMS] Package Accession No. ML22339A261). The U.S. Nuclear Regulatory Commission (NRC) staff reviewed the six DOE site inspection reports and have comments on two of the six sites.

Bluewater, New Mexico, Disposal Site

1. In Section 1.7.1 Alluvial Aquifer (page 1-18), DOE states the following: "Although some non-LM alluvial-aquifer private use wells downgradient of the site have uranium concentrations exceeding the EPA standard of 0.03 mg/L, the contaminant plume does not extend to Milan, and there are no known domestic wells within the contaminant plume." The term "non-LM alluvial aquifer private use wells" is confusing and it is unclear to what alluvial wells this may be referring. The 2021 DOE Annual Site Inspection Report has the following statement (page 1-14): "Although some non-LM alluvial-aquifer *monitoring wells* [emphasis added] downgradient of the site have uranium concentrations exceeding the EPA standard of 0.03 mg/L, the contaminant plume does not extend to Milan, and there are no known domestic wells within the contaminant plume." For the next report, DOE should further define "non-LM alluvial-aquifer private use well" or clarify these wells are "non-LM alluvial-aquifer monitoring wells" as stated in the 2021 report, if that is the case.

Shirley Basin South, Wyoming, Disposal Site

2. The Mann-Kendall trend analyses reported in Section 6.7 may be biased by varying minimum detection limits (MDLs) for the contaminants of concern. For the next annual report, it is recommended that DOE provide comment on the impact of MDLs on the trend analyses.

3. In Table 6-7 of Section 6.7 of the report (Page 6-19), increasing trends for radium-226, radium-228, and uranium are reported for well K.G.S. #3, which is used by a rancher to supply water to livestock. The report does state that the levels are below standards. For the next report, it is recommended that DOE more clearly state that the reported concentrations are below the applicable standards (i.e., for livestock versus ACL) and address whether the contaminant trends are sufficiently below the applicable standards such that an exceedance is not expected in the near future. Additionally, a determination as to whether the contaminants should be attributed to the tailings impoundment is also recommended for inclusion in the next annual report.

The NRC staff is not requesting a response to the above comments. These comments should be considered and addressed in the next inspection report submitted to the NRC.

In accordance with Title 10 of the *Code of Federal Regulations* 2.390, "Public inspections, exemptions, requests for withholding," 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 the NRC's ADAMS. ADAMS is accessible from the NRC website at https://www.nrc.gov/reading-rm/adams.html.

If you have any questions concerning the NRC review of the report, please contact me at 301-415-0549 or by email at Kevin.Hayes@nrc.gov.

Sincerely,

Kevin R. Hayes Signed by Hayes, Kevin on 06/26/23

Kevin R. Hayes, Hydrogeologist
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-00054, 40-6659

cc: ListServs for:
Bluewater, NM
Edgemont, SD
L-Bar, NM
Maybell West, CO
Sherwood, WA
Shirley Basin South, WY