



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

March 7, 2019

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

**SUBJECT: U.S. NUCLEAR REGULATORY COMMISSION STAFF ACKNOWLEDGEMENT
OF U.S. DEPARTMENT OF ENERGY RESTORATION REPORT FOR THE
DISPOSAL CELL COVER STUDY AT THE SHIRLEY BASIN SOUTH,
WYOMING, DISPOSAL CELL (Docket Number: 040-06659)**

Dear Mr. Kautsky:

By letter dated January 23, 2019, the U.S. Department of Energy (DOE), Office of Legacy Management submitted to the U.S. Nuclear Regulatory Commission (NRC) the report entitled "Effects of Soil-Forming Processes on Cover Engineering Properties, Study Restoration Report, Shirley Basin South, Wyoming, and Disposal Site" (Agencywide Documents Access and Management System (ADAMS) Package Accession Number ML19025A219). The report was submitted to fulfill the NRC's request in an email dated August 4, 2015 (ML15324A354).¹

Based upon the data presented in the report, the NRC is satisfied that DOE's restoration of the study pits met the design criteria for the original cover and that, based on four of the five test pits performed at the Shirley Basin South site, the post-restoration radon flux was approximately equal to the pre-excavation radon flux and significantly below the as-built radon flux. DOE reports that the post-restoration flux data were not available for one test pit because the measuring device was not received at the laboratory.

Although the post-restoration data were missing for one pit, the NRC has reasonable assurance that all pits have been restored to the pre-excavation conditions based on the post-restoration radon flux measurements for the four other pits and that post-restoration cover at all pits met the pre-excavation and as-built design compaction for the various layers in the cover. Therefore, the NRC considers this study of the cover at the Shirley Basin South site to be complete.

In accordance with 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 Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

¹ DOE's cover letter has the date of August 17, 2015, for the NRC's request.

M. Kautsky

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If you have any questions, please contact me at 301-415-0697 or by email at John.Saxton@nrc.gov.

Sincerely,

//RA//

John L Saxton, Hydrogeologist
Uranium Recovery and Materials
Decommissioning Branch
Division of Decommissioning, Uranium Recovery
and Waste Programs
Office of Nuclear Material Safety
and Safeguards

Docket 040-06659

Cc: R. Evans, RIV
L. Gersey, RIV
R. Linton, NMSS

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ADAMS Accession No.: ML 19064A713

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