



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

July 15, 2019

Ms. Angelita Denny, Site Manager  
U.S. Department of Energy  
Office of Legacy Management  
2597 Legacy Way  
Grand Junction, CO 81503

**SUBJECT: INTERIM COVER PROTECTION COMPACTION VARIANCE AT THE U.S. DEPARTMENT OF ENERGY'S MEXICAN HAT, UTAH, URANIUM MILL TAILINGS RADIATION CONTROL ACT SITE (Docket Number WM-00063)**

Dear Ms. Denny:

I am writing in response to the U.S. Department of Energy (DOE) letter and supporting information, dated June 26, 2019, in which you discuss the rationale for the reduced compaction for the radon barrier at the Mexican Hat, Utah, Uranium Mill Tailings Radiation Control Act (UMTRCA) site from 100 percent (100%) of the standard proctor to 95% of the standard proctor (Agencywide Documents Access and Management System [ADAMS] Accession Number ML19183A183). This action is related to ongoing maintenance of the site due to the identification of depressions on the cell cover and the DOE actions to identify the cause, and address, the depressions.

In your letter you explain that the area on the radon barrier is much smaller than the original area of the radon barrier, that the shape of the area being addressed by the maintenance is irregular in shape and that the equipment available to perform the compaction within the work area limits the ability to achieve 100% compaction. You also provide a discussion that it is possible to achieve the hydraulic conductivity of the original radon cover with 95% compaction.

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed DOE's explanation for compaction of the radon barrier to 95 percent of the standard proctor value and agrees that the overall hydraulic conductivity goal for the radon barrier can be reached at a lower compaction value. Additionally, the NRC staff recognizes that the limited work area will necessitate the use of smaller construction equipment. Use of small construction equipment will make it more challenging to reach 100 percent compaction. For these reasons, the NRC staff has no comments on DOE's plans to conduct the maintenance/repair at the Mexican Hat site at this time. We would expect that, once the maintenance of the site is completed, DOE will perform radon flux measurements to ensure that the cover meets the requirements in 10 *Code of Federal Regulations* Part 40, Appendix A.

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

Docket No. WM-00063

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