



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

February 3, 2025

Nicole M. Olin, 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, U.S. DEPARTMENT OF ENERGY NOTIFICATION OF SAMPLING FREQUENCY REDUCTION IN CONFORMANCE WITH THE LONG-TERM SURVEILLANCE PLAN FOR THE BLUEWATER, NEW MEXICO, DISPOSAL SITE, DOCKET NO. 04008902

Dear Nicole Olin:

By letter dated August 25, 2023,¹ the United States Department of Energy (DOE) – Office of Legacy Management (LM) submitted a notification of sampling frequency reduction for groundwater monitoring wells at the DOE-LM Bluewater site. Specifically, DOE is proposing to reduce the sampling frequency from semiannually to annually for all wells. Current spring sampling events would be discontinued and fall sampling events would continue exclusively.

In the August 25, 2023, letter, DOE-LM discussed that the 1997 *Long-Term Surveillance Plan for the DOE Bluewater (UMTRCA Title II) Disposal Site Near Grants, New Mexico* requires sampling of point of compliance (POC) wells every three years and point of exposure wells, if the alternate concentration limits (ACL) are exceeded at a POC well. In 2010, alluvial well T(M) exceeded the ACL for uranium. In 2011, DOE-LM proposed an Evaluative Monitoring Work Plan for the site, which increased the well sampling frequency to semiannually. In 2011, the Nuclear Regulatory Commission (NRC) concurred with the Work Plan. In the August 25, 2023, letter, DOE-LM also discussed the following:

- In response to the exceedance at well T(M), DOE-LM installed downgradient wells 21(M) and 22(M) in 2011.
- In 2012, well T(M) went dry. However, wells 21(M) and 22(M) have not shown increasing trends and have remained below the uranium ACL since their installation.
- Although semiannual sampling is not required by the Long-Term Surveillance Plan (LTSP),² DOE-LM has continued to sample wells semiannually.
- There is no statistically significant seasonal variability in groundwater analyte concentrations.
- Annual concentration data will continue to provide a representative dataset for groundwater analysis.

¹ Agencywide Documents Access and Management System (ADAMS) Accession No. ML23241B004

² ADAMS Accession No. ML12263A274

The NRC staff reviewed the notification letter to verify compliance with the LTSP and protection of public health and the environment. NRC staff found that the DOE's proposal does comply with the sampling frequency provided in Table 3-3 of the LTSP.

NRC staff also reviewed DOE's groundwater monitoring data and analysis. The NRC staff concurs with the results and conclusions of that analysis, which showed that annual sampling yields similar trends and results to semiannual sampling.³ Accordingly, NRC staff expects that annual sampling would detect any groundwater trends in the contaminant plumes. Also, the contaminant plumes are relatively stable with no nearby receptors, so the potential for slightly earlier detection with semi-annual versus annual sampling is not risk significant. Therefore, the NRC agrees with the DOE's determination that annual sampling is sufficient for monitoring groundwater trends and future groundwater investigations.

If you have any questions regarding this matter, please contact me at 301-415-7777, or via email at Ron.Linton@nrc.gov.

Sincerely,



Signed by Linton, Ron
on 02/03/25

Ron C. Linton, Project Manager
Uranium Recovery and Materials
Decommissioning Branch
Division of Decommissioning, Uranium Recovery
and Waste Programs
Office of Nuclear Material Safety
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Docket No. 040-08902

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³ ADAMS Accession No. ML23241B006

Bluewater, NM, Disposal Site. NRC concurrence - DOE Notification of Sampling Frequency Reduction in Conformance with Long Term Surveillance Plan DATE February 3, 2025

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ADAMS Accession No.: ML24200A237; Ltr ML24200A237

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