



UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY

Washington, DC 20460

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OFFICE OF
AIR AND
RADIATION

Mr. Mark Bollinger, Manager
Carlsbad Field Office
U.S. Department of Energy
P.O. Box 3090
Carlsbad, New Mexico 88221

Subject: Onsite Technical Review Report

Dear Mr. Bollinger:

Please see the enclosed report documenting the Environmental Protection Agency's observations from an onsite review of Sandia National Laboratories (SNL) technical investigation practices in Carlsbad, NM the week of December 5, 2022. The visit was an extension of EPA's review of the 2019 Waste Isolation Pilot Plant (WIPP) Compliance Recertification Application (CRA-2019) to evaluate how SNL's processes are used to identify and correct technical issues in documentation before it is submitted to EPA. Specifically, the goal of the visit was to understand how SNL applied its internal review processes on work that would ultimately be applied to the WIPP performance assessment (PA). EPA appreciates the cooperation that DOE and SNL provided in facilitating unfettered access to records and staff.

In its review, EPA identified multiple instances of good documentation and review practices (e.g., iron corrosion and waste shear strength experiments) where experimental assumptions and issues were documented candidly. However, the Agency also identified numerous instances of concern, where insufficient document review resulted in the publication of reports that did not adhere to test and analysis plans and cases where data of poor quality were allowed to be reported. For example, superficial document reviews used within SNL's geochemistry database updates for CRA-2019 allowed for the use of a database to calculate actinide solubility that did not assess any downstream consequences to the PA, resulting in an underestimation of calculated +III actinide releases. As a result, a prolonged completeness process ensued in which EPA had to request SNL to perform multiple calculations to determine the effects database errors may have had on the WIPP PA. While EPA was able to reach a successful completeness determination for CRA-2019, EPA's overall conclusion is that SNL Carlsbad needs to better adhere to its established review processes to ensure data quality and integrity of future WIPP calculations.

If EPA can be of further help or answer specific questions, please contact Jay Santillan at (202) 343-9343.

Sincerely,

Lee Ann B. Veal
Director
Radiation Protection Division

Enclosure (1)

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