NUCLEAR REGULATORY COMMISSION

[Docket No. 40-8907; NRC-2013-0036]

License Amendment for United Nuclear Corporation,

Church Rock Facility, McKinley County, New Mexico

AGENCY: Nuclear Regulatory Commission.

ACTION: Environmental assessment and finding of no significant impact; issuance.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is considering amending Source Materials License SUA-1475 issued to the United Nuclear Corporation (UNC), a subsidiary of General Electric (GE), to revise current ground water protection standards in License Condition 30.B of SUA-1475. The NRC has prepared an environmental assessment (EA) for this proposed action in accordance with its regulations. Based on the EA, the NRC has concluded that a Finding of No Significant Impact (FONSI) is appropriate with respect to the proposed action. The NRC will issue the amended license following the publication of this document.

DATES: The Final EA and FONSI are available as of **[INSERT DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]**.

ADDRESSES: Please refer to Docket ID**:** NRC-2013-0036 when contacting the NRC about the availability of information regarding this document. You may obtain publicly-available information related to this document using any of the following methods:

- **Federal Rulemaking Web Site:** Go to http://www.regulations.gov and search for

Docket ID**:** NRC-2013-0036. Address questions about NRC dockets to Carol Gallagher; telephone: 301-415-3463; e-mail: Carol.Gallagher@nrc.gov. For technical questions, contact the individual listed in the FOR FURTHER INFORMATION CONTACT section of this document.

- **NRC's Agencywide Documents Access and Management System (ADAMS):** You may obtain publicly available documents online in the ADAMS Public Documents collection at http://www.nrc.gov/reading-rm/adams.html. To begin the search, select "ADAMS Public Documents" and then select "Begin Web-based ADAMS Search." For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to pdr.resource@nrc.gov. The ADAMS accession number for each document referenced in this document (if that document is available in ADAMS) is provided the first time that a document is referenced. The EA and FONSI can be found under ADAMS accession no. ML14339A839.
- **NRC's PDR:** You may examine and purchase copies of public documents at the NRC's PDR, Room O1-F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

FOR FURTHER INFORMATION CONTACT: Ashley Waldron, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; telephone: 301-415-7317; e-mail: Ashley.Waldron@nrc.gov.

SUPPLEMENTARY INFORMATION:

I. Introduction.

On April 17, 2012, UNC, a subsidiary of GE, submitted to the NRC an application to

amend Source Materials License SUA-1475 for the former Uranium Church Rock Mill Site (the Mill Site) (ADAMS Accession No. ML12150A146). This proposed amendment would revise current ground water protection standards in License Condition 30.B of SUA-1475 for the following constituents: Arsenic, Cadmium, Gross Alpha, Lead, Lead-210, Nickel, Radium-226 and -228, Selenium, Thorium-230, and Uranium. These proposed standards (values) are derived from a re-calculated background concentration for each constituent. The Mill Site is located approximately 17 miles northeast of Gallup in McKinley County, New Mexico.

The UNC supplemented its request on November 16, 2012, by submitting a three-dimensional ground water flow model for the Mill Site and adjacent down-gradient areas (ADAMS Accession Nos. ML12334A292; ML12305A320; ML12305A309; ML12305A324). On January 10, 2013, the NRC accepted the amendment request for formal review (ADAMS Accession No. ML13007A069). The NRC issued a Request for Additional Information (RAI) on June 4, 2013 (ADAMS Accession No. ML13121A553), and the UNC responded on January 10, 2014 (ADAMS Accession Nos. ML14056A541; ML14059A208). Subsequently, the NRC staff determined that all technical deficiencies had been addressed in the RAIs and requested the UNC to update the ground water flow model report (ADAMS Accession No. ML14063A497). The UNC submitted the revised ground water flow model report by letter dated June 3, 2014 (ADAMS Accession Nos. ML14161A255; ML14161A311).

In accordance with part 40, appendix A, criterion 5, paragraph 5B(5) of Title 10 of the *Code of Federal Regulations* (10 CFR), the NRC may establish ground water protection standards at the point of compliance (POC) either (1) by reference to the background concentrations in the ground water, (2) by assigning the appropriate value found in the table given in paragraph 5C, or (3) by using alternative concentration limits established by the NRC. The POC is defined in appendix A as the site-specific location in the uppermost aquifer where the ground water protection standard must be met. In addition, criterion 5, paragraph 5B(1)

states the objective of the POC location is to provide the earliest practicable warning that the impoundment is releasing hazardous constituents, with the goal that hazardous constituents from a licensed site not exceed the specified concentration limits in the uppermost aquifer beyond the POC during the compliance period. At the Mill Site, POC wells are located in three subsurface hydrostratigraphic units: the Southwest Alluvium, and Zone 1 and Zone 3 of the Upper Gallup Sandstone. The UNC's proposed license amendment would affect ground water protection standards in each of these units. Additionally, paragraph 5B(6) of criterion 5 to 10 CFR part 40, appendix A states that, "[c]onceptually, background concentrations pose no incremental hazards …"

The NRC staff has prepared an EA in support of its review of the proposed license amendment. The staff assessed the potential environmental impacts associated with amending the ground water protection standards and documented the results of the assessment in the EA. The NRC staff performed this assessment in accordance with the requirements of 10 CFR part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions."

Uranium mill tailings at the Mill Site are located onsite, within the tailings impoundment area comprising three contiguous cells differentiated as the North, Central and South Cells (see Figure 1, ADAMS Accession No. ML12150A146). The Central Cell also has two borrow pits. Borrow Pit No. 1 was used to dispose of tailings and Borrow Pit No. 2 was used to retain tailings liquids (ADAMS Accession No. ML063630443).

Seepage from the three tailings disposal cells and the borrow pits, as well as infiltration of mine effluent water during dewatering operations of the nearby Northeast Church Rock and Quivira mines, have contributed to the saturated conditions found in the Southwest Alluvium and in Zones 1 and 3 of the Upper Gallup Sandstone (ADAMS Accession Nos. ML050070220; ML050070233; ML050070242; ML050070245.).

II. Environmental Assessment Summary.

Description of the Proposed Action

The UNC is requesting a license amendment for the Mill Site to revise License Condition 30.B of Source Materials License SUA-1475. The UNC requests revisions to the current ground water protection standards in the license condition for the following constituents: Arsenic, Cadmium, Gross Alpha, Lead and Lead-210, Nickel, Radium-226 and -228, Selenium, Thorium-230, and Uranium for the Southwest Alluvium, Zone 1, and Zone 3. No changes are proposed for the other constituents in License Condition 30.B (i.e., Beryllium, Total Trihalomethanes, and Vanadium).

Need for the Proposed Action

The proposed action is needed to provide ground water protection standards for the Mill Site that are consistent with 10 CFR part 40, appendix A, paragraph 5B(1) and background ground water quality that is protective of public health and safety.

Environmental Impacts of the Proposed Action

The NRC staff determined that, due to the nature of the proposed action, environmental impacts would be limited to subsurface ground water resources, and that such impacts would be small and not significant. Staff expects no impacts to public health and safety, ecological resources, or historical and cultural resources. Therefore, the NRC staff does not expect significant impacts to result from the proposed modification to the ground water protection standards in SUA-1475 and considers that impacts from the proposed action would be protective of public health and safety and the environment.

In conducting its assessment, the NRC staff considered the following:

- information in the license application and supporting documentation;
- information in modeling reports and NRC staff review reports;
- information in land use and environmental monitoring reports;
- information from NRC staff site visits and inspections;
- 10 CFR part 40, appendix A, "Criteria Relating to the Operation of Uranium Mills and the Disposition of Tailings or Wastes Produced by the Extraction or Concentration of Source Material From Ores Processed Primarily for Their Source Material Content;"
- NUREG-1620, Rev. 1, "Standard Review Plan for the Review of a Reclamation Plan for Mill Tailings Sites Under Title II of the Uranium Mill Tailings Radiation Control Act of 1978" (ADAMS Accession No. ML031550522); and
- NUREG-1748, "Environmental Review Guidance for Licensing Actions Associated with NMSS Programs, Final Report" (ADAMS Accession No. ML032540811).

Environmental Impacts of the Alternatives to the Proposed Action

As an alternative to the proposed action, the NRC staff considered denial of the proposed action (i.e., the "no-action alternative"). Denial of the proposed license amendment would result in no change in the currently approved ground water protection standards. The proposed action is needed to revise the ground water protection standards to more accurately reflect current background conditions. Both the No-Action alternative and the Proposed Action for the Mill Site are consistent with appendix A, criterion 5, paragraph 5B(1) and background ground water quality that is protective of public health and safety.

Agencies and Persons Consulted

The NRC staff determined that the proposed action would be limited to impacts to subsurface ground water resources and therefore is not expected to affect listed endangered and threatened species or their critical habitat. As well, the proposed action is not expected to impact potential or identified cultural or historical resources. Therefore, no further consultation was completed under Section 7 of the Endangered Species Act or under Section 106 of the National Historic Preservation Act.

During preparation of the EA, the NRC staff consulted with the following federal, tribal, and state agencies: the U.S. Environmental Protection Agency (EPA) Regions 6 and 9, the U.S. Department of Energy, the Navajo Nation EPA, and the New Mexico Environment Department. The purpose of this consultation was to request comments on the proposed action; however, none of the agencies identified concerns with the proposed action.

III. Finding of No Significant Impact.

Based on its review of the UNC's license amendment request to revise License Condition 30.B of SUA-1475, the NRC staff expects there to be no significant environmental

impacts in connection with the proposed action as the proposed ground water protection standard values, conceptually, pose no incremental hazards to public health and safety. Therefore, a Finding of No Significant Impact (FONSI) is appropriate and preparation of an Environmental Impact Statement is not warranted.

Dated at Rockville, Maryland, this 9th day of April 2015.

For the Nuclear Regulatory Commission.

Craig G. Erlanger, Deputy Director,
Division of Fuel Cycle Safety, Safeguards
and Environmental Review,
Office of Nuclear Material Safety
and Safeguards.

[7590-01-P]

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