

July 21, 2006

Mr. Roy Blickwedel
Remedial Project Manager
General Electric Company
640 Freedom Business Center
King of Prussia, PA 19406

SUBJECT: UNITED NUCLEAR CORPORATION - CHURCH ROCK, NEW MEXICO -
MATERIALS LICENSE NO. SUA-1375 - ENVIRONMENTAL ASSESSMENT
(TAC LU0117)

Dear Mr. Blickwedel:

The U.S. Nuclear Regulatory Commission (NRC) has completed its review of the environmental aspects of United Nuclear Corporation's proposed revisions to ground water protection standards for the Church Rock, New Mexico, mill site dated July 14, 2005, and September 30, 2005. We have reviewed your submittals in support of the proposed amendment and have prepared an Environmental Assessment (enclosed) that resulted in a finding of no significant impact. We will publish our findings in the *Federal Register*, after which we will act upon your license amendment request. If you have any questions concerning this letter, please contact me at (301) 415-7612, or via e-mail, to pxm2@nrc.gov.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice for Domestic Licensing Proceedings and Issuance of Orders," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) 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>.

Sincerely,

/RA/

Paul Michalak, Project Manager
Uranium Processing Section
Fuel Cycle Facilities Branch
Division of Fuel Cycle Safety
and Safeguards
Office of Nuclear Material Safety
and Safeguards

Docket No.: 40-8907
License No.: SUA-1375

Enclosure: Environmental Assessment

cc: Adrian Stein, NMED
Mark Purcell, US EPA
Diane Malone, Navajo Nation EPA

Mr. Roy Blickwedel
Remedial Project Manager
General Electric Company
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ENVIRONMENTAL ASSESSMENT
RELATED TO ISSUANCE OF A LICENSE AMENDMENT
FOR UNITED NUCLEAR CORPORATION
CHURCH ROCK, NEW MEXICO PROJECT

SOURCE MATERIALS LICENSE SUA-1475
DOCKET NO. 40-8907

PREPARED BY

THE U.S. NUCLEAR REGULATORY COMMISSION
DIVISION OF FUEL CYCLE SAFETY AND SAFEGUARDS
OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS

July 2006

Enclosure

**ENVIRONMENTAL ASSESSMENT
RELATED TO ISSUANCE OF A LICENSE AMENDMENT FOR
U.S. NUCLEAR REGULATORY COMMISSION
SOURCE MATERIALS LICENSE NO. SUA-1475
UNITED NUCLEAR CORPORATION, GALLUP, NEW MEXICO**

1.0 INTRODUCTION

By letter dated July 14, 2005, General Electric Environmental Programs (GEEP), on behalf of its corporate subsidiary United Nuclear Corporation (UNC), submitted to the U.S. Nuclear Regulatory Commission (NRC) an application to amend License Condition 30.B of Source Materials License No. SUA-1475 for the former Church Rock Uranium Mill (the Site) (GEEP 2005b). This proposed amendment would revise the current chloroform ground water protection standards (GWPSs) of 0.001 milligrams per liter (mg/L) to 0.08 mg/L for total trihalomethanes (THMs).

Additionally, by letters dated February 22 and April 7, 2006, GEEP submitted an amendment request to revise the GWPS for combined radium-226 and -228 in the Southwest Alluvium and Zone 1 saturated units (GEEP 2005c, 2006a and 2006b). This proposed amendment would revise the current combined radium-226 and -228 GWPS from 5 pCi/L to 5.2 pCi/L in the Southwest Alluvium and from 5 pCi/L to 9.4 pCi/L in Zone 1.

In accordance with 10 CFR Part 40, Appendix A, paragraph 5B(5) of Criterion 5, NRC may establish GWPSs at the point of compliance by reference to the background concentrations in the ground water, the appropriate value found in the table given in paragraph 5C, or using alternative concentration limits established by the NRC.

NRC has reviewed UNC's amendment requests and developed this Environmental Assessment (EA) in support of the proposed actions. The EA was developed by NRC in accordance with the requirements of 10 CFR Part 51 and by using the guidance provided in NUREG-1748, "Environmental Review Guidance for Licensing Actions Associated with NMSS Programs." Based on the EA, NRC has determined that a Finding of No Significant Impact (FONSI) is appropriate, and that preparation of an environmental impact statement is not warranted.

1.1 Background

The former Church Rock Uranium Mill is located approximately 17 miles northeast of Church Rock, McKinley County, New Mexico (Figure 1). The Site operated from May 1977 to May 1982 under Source Materials License No. SUA-1475 issued to UNC. The mill, designed to process 4,000 tons of ore per day, extracted uranium using conventional crushing, grinding, and acid-leach solvent extraction methods. The Northeast Church Rock mine site is located approximately 2,400 feet north of the mill facilities area (Figure 2). Uranium milling and tailings disposal were conducted on-site and an estimated 3.5 million tons of tailings were disposed in the tailings impoundments.

Tailings at the Site are located within three contiguous cells: the North, Central and South Cell disposal areas (Figure 2). Seepage from all three cells and infiltration of pumped mine water appears to have contributed to saturated conditions in three units associated with the Site:

Southwest Alluvium, and Zones 1 and 3 of the Gallup Sandstone (NA WaterSystems 2005). Reportedly, an estimated five million gallons of tailings-derived liquids were previously available to migrate into the Southwest Alluvium and Zone 3 from the North Cell disposal area (U.S. EPA 2003). In addition, infiltration from two Borrow Pits (Nos. 1 and 2) is suspected to be a source of acidic seepage into the Southwest Alluvium, Zone 1 and Zone 3.

1.1.1. Regulatory Oversight

Reclamation and closure activities at the Site have been under the regulatory scrutiny of two Federal agencies: the NRC and the U.S. Environmental Protection Agency (EPA). Between 1979 and 1982, UNC undertook several actions, including tailings neutralization, under its NRC license to address ground water concerns associated with tailings seepage and mine water discharge. In addition, the process for reclamation and ground water remediation was implemented beginning in 1986 under the NRC license. The EPA's involvement at the Site began when the Site was placed on the Interim Priority List under Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) in 1981 and the National Priority List (NPL) in 1983. Under an August 26, 1988 Memorandum of Understanding (MOU) between the EPA and the NRC (53 Fed. Reg. 37887-37889, September 28, 1988), the NRC is the lead agency regulating the reclamation and closure activities completed at the Site pursuant to Source Materials License No. SUA-1475 and the Uranium Mill Tailings Radiation Control Act (UMTRCA) of 1978, 42 U.S.C. 7901 *et seq.* Under the MOU, the NRC-regulated reclamation and source control actions are subject to EPA monitoring and review to ensure that such actions will allow attainment of CERCLA requirements. In addition, the EPA is responsible for ground water remediation outside the tailings disposal site.

In 1989, the NRC established GWPSs for the Site as background concentrations for beryllium, chloroform, chromium, cyanide, lead, lead-210, naphthalene, nickel, radium-226 and -228, silver, thorium-230, uranium, gross alpha, and vanadium. The GWPSs for arsenic, barium, and selenium were derived from 10 CFR 40, Appendix A, Criterion 5C. These GWPSs were not saturated unit-specific values (i.e., they were single values that applied to the Southwest Alluvium, and Zones 1 and 3 of the Gallup Sandstone).

Per Source Materials License No. SUA-1475, Point of Compliance (POC) monitoring wells (i.e., wells where the GWPSs apply) for the Southwest Alluvium are 509D, 632, EPA23, EPA28, GW1, GW2, and GW3. Zone 1 POC wells include 604, 614, EPA4, EPA5, and EPA 6. Zone 3 POC wells include 517, 613, 708, and 711. POC well locations are shown on Figure 2. It should be noted that New Mexico Environment Department (NMED) requires that the entire ground water system must meet any approved Applicable or Relevant and Appropriate Requirements (NMED 2006).

1.1.2 Corrective Action

The EPA selected extraction of contaminated water and evaporation of extracted water as the Site remedy in the CERCLA Record of Decision (ROD) that was signed on September 30, 1988 (U.S. EPA 2003). Ground water extraction from Zone 3 at the Site commenced in 1982; however, by 1989, ground water extraction was ongoing in all three hydrostratigraphic units. For the Southwest Alluvium, the corrective action system has been temporarily shut down while UNC assesses the effectiveness of natural attenuation as a ground water remedial solution. Quarterly

ground water quality monitoring is ongoing in the Southwest Alluvium. For Zone 1, the corrective

action system, which was initiated in 1984, was decommissioned in July 1999, with the approval of the NRC, EPA, and NMED (U.S. EPA 2003). A monitored natural attenuation approach has been proposed for Zone 1.

Zone 3's North-East Pump-Back wells and Stage I extraction wells have been decommissioned based on criterion that allow decommissioning of wells that produce less than 1 gallon per minute (gpm) following well redevelopment. Zone 3 Stage II extraction wells have been temporarily shut down due to poor recovery rates, with the approval of EPA, NMED, and NRC (U.S. EPA 2003). With the shut down of the Stage II extraction wells, active remediation of the Zone 3 ground water contaminant plume ceased. UNC has agreed to submit a modified corrective action plan, an application for Alternative Concentration Limits, or an alternative to the specific requirements of 10 CFR Part 40, Appendix A, if the License No. SUA-1475 ground water protection standards are not achievable. Currently, monitoring of the "natural system's" ability to stabilize seepage impacts into Zone 3 is continuing. Reportedly, UNC is conducting an ongoing extended pilot investigation to evaluate the suitability of hydrofracturing to enhance the remedy for cutoff and containment of the migrating seepage-impacted Zone 3 water. Additionally, EPA has approved a second pilot study for testing in-situ alkalinity stabilization to stop further migration of the seepage-impacted Zone 3 water.

1.2 Review Scope

In accordance with 10 CFR Part 51, this EA serves to: (1) present information and analysis for determining whether to issue a Finding of No Significant Impact (FONSI) or to prepare an Environmental Impact Statement (EIS); (2) fulfill the NRC's compliance with the National Environmental Policy Act when no EIS is necessary; and (3) facilitate preparation of an EIS when one is necessary. Should the NRC issue a FONSI, no EIS would be prepared. Since this action relates exclusively to ground water, the focus of the review has centered on potentially significant environmental impacts as they relate to ground water.

2.0 THE PROPOSED ACTIONS

Two proposed license amendments have been submitted by GEEP on the behalf of UNC to amend License Condition 30.B of License SUA-1475. The proposed actions are a revision to the current chloroform GWPS and revisions related to the combined radium-226 and -228 GWPS for the Southwest Alluvium and Zone 1.

The regulatory basis for the UNC license amendment requests is provided in 10 CFR 40, Appendix A, paragraph 5B(5) of Criterion 5, and discussed in Section 4.2.3 (page 4-23) of 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. Three options for establishing GWPSs for hazardous constituents are provided:

- Commission-approved background concentrations in the ground water,
- Concentrations as specified in 10 CFR 40, Appendix A, paragraph 5C of Criterion 5, or
- Alternate concentration limits established by the NRC.

3.0 NEED FOR THE PROPOSED ACTIONS

The proposed actions are needed to provide GWPSs for the Site that are either consistent with Federal and State water quality standards (chloroform) or consistent with background ground water quality (combined radium-226 and -228), and are reasonably achievable (both).

3.1 Total Trihalomethanes

This proposed action is a requested amendment to Source Materials License SUA-1475, License Condition 30.B, that would revise the current chloroform GWPS of 0.001 mg/L to 0.08 mg/L for total THMs. The existing chloroform GWPS of 0.001 mg/L was established by the NRC as a background concentration in 1989 (NRC 1989a and 1989b). In its analysis of existing monitor well data for the Site (circa 1989), the NRC determined that “a majority of the population was below the lower (analytical) limit of detection” for chloroform (i.e., 0.001 mg/L). Consequently, the lower analytical limit of detection for chloroform was utilized as the background GWPS.

By correspondence dated May 26, 2005, GEEP, on behalf of UNC, submitted a request to the NRC to amend SUA-1475, License Condition 30.B, to bring the GWPS for chloroform into agreement with the Safe Drinking Water Act (SDWA) Maximum Contaminant Level (MCL) that has been established by the EPA (GEEP 2005a). Specifically, GEEP requested that the current chloroform GWPS of 0.001 mg/L (License Condition 30.B) be revised to 0.08 mg/L, which GEEP indicated was the MCL for chloroform.

In a June 22, 2005, response to this request, the NRC replied that chloroform does not currently have an independent MCL; rather the 0.08 mg/L MCL referred to in GEEP (2005a) is for total THMs (NRC 2005). THMs are a group of four chemicals that are formed, along with other disinfection byproducts, when chlorine or other disinfectants used to control microbial contaminants in drinking water react with naturally occurring organic and inorganic matter in water. The THMs are chloroform, bromodichloromethane, dibromochloromethane, and bromoform. In 1998, EPA published the Stage 1 Disinfectants/Disinfection Byproducts Rule that requires water systems to use treatment methods to reduce the formation of disinfection byproducts and to meet certain disinfection byproducts water quality standards (63 Fed. Reg. 69389-69476, December 16, 1998). Among these water quality standards is 0.08 mg/L for total THMs, which are measured as the sum concentration of chloroform, bromoform, bromodichloromethane, and dibromochloromethane. It is understood that the total THM MCL is based on balancing the hazards of inadequate domestic water supply disinfection versus the potential risks of reproductive and developmental health effects and cancer associated with disinfection byproducts, including THMs. Nevertheless, it represents a thoroughly examined and evaluated maximum allowable drinking water concentration that is considered to be safe by the EPA.

In the June 22, 2005 response, the NRC concluded that amending the License Condition 30.B GWPS for chloroform to 0.08 mg/L would appear to be inconsistent with the SDWA MCL for total THMs. For example, a chloroform concentration of 0.08 mg/L only meets the SDWA MCL for total THMs when the other three THMs (i.e., bromoform, bromodichloromethane, and dibromochloromethane) are absent. Authorizing a limit of 0.08 mg/L for chloroform alone could result in exceeding the THM MCL if any of the other three THM constituents are present.

By correspondence dated July 14, 2005, GEEP submitted a revised request to amend SUA-1475, License Condition 30.B, by changing the current chloroform GWPS of 0.001 mg/L to 0.08 mg/L for total THMs (GEEP 2005b).

Amending the chloroform GWPS, as proposed, would bring consistency between the license condition and related Federal and State water quality standards. The current GWPS for chloroform in Condition 30.B of License SUA-1475 (0.001 mg/L) is significantly lower than the corresponding Federal drinking water or State ground water standards. Although no independent Federal drinking water level exists for chloroform, the SDWA MCL for total THMs, which includes chloroform is, 0.08 mg/L. The current New Mexico Water Quality Control Commission Ground Water Standard for chloroform is 0.1 mg/L. Consequently, with respect to chloroform, Condition 30.B of License SUA-1475 is currently approximately 80 times lower than the SDWA MCL for total THMs and 100 times lower than the respective State ground water standard.

Amending the chloroform GWPS would also likely bring one of the impacted hydrostratigraphic units into compliance with respect to chloroform. In the Southwest Alluvium, chloroform data for 2004 indicates five wells (632, 801, 802, 803, and 808), with chloroform levels ranging from 0.0015 to 0.0084 mg/L, are out of compliance with the current License Condition 30.B chloroform standard. Assuming bromodichloromethane, dibromochloromethane, and bromoform (i.e., the other three THMs) are either absent or present at levels comparable to chloroform, amending the standard to 0.08 mg/L total THMs would likely bring the entire Southwest Alluvium ground water monitoring network into compliance with respect to chloroform.

3.2 Radium-226 and -228

The proposed action involves changing the current combined radium-226 and -228 GWPS from 5 pCi/L to 5.2 pCi/L in the Southwest Alluvium and from 5 pCi/L to 9.4 pCi/L in Zone 1. Both revised values represent the 95th percentile background concentrations in their respective saturated units. The existing combined radium-226 and -228 GWPS of 5 pCi/L was established by the NRC as a background concentration in 1989 (NRC 1989a and 1989b). In its analysis of several site related constituents, including combined radium-226 and -228, the NRC utilized a graphical method to determine background ground water concentrations from up-gradient monitor wells. The graphical method “plotted the water quality analysis values from lowest to highest values, and noted where the plot deflected.” The deflection point was assumed to represent the background concentration.

On September 30, 2005, UNC submitted an amendment request to revise the method by which compliance with the current combined radium-226 and -228 GWPS is evaluated in the Southwest Alluvium and Zone 1 (GEEP 2005c). Based on a meeting between NRC staff and representatives of UNC (NRC 2006), UNC submitted revisions to the amendment request on February 22 and April 7, 2006 (GEEP 2006a and 2006b).

The combined radium-226 and -228 GWPS added to the license in 1989 was a single value applied to all three saturated units at the Site. Recent background ground water quality statistical analyses indicates that, although the 1989 value is still essentially valid for the Southwest Alluvium (5 pCi/L from the graphical method versus 5.2 pCi/L as the 95th percentile

background concentration), the proposed Zone 1 value is almost twice the current concentration

(5 pCi/L from the graphical method versus 9.4 pCi/l as the 95th percentile background concentration). Consequently, updating the combined radium-226 and -228 GWPS to saturated unit-specific background values appears appropriate.

4.0 SITE DESCRIPTION

4.1 Hydrogeology

The Southwest Alluvium is composed of Quaternary Age unconsolidated materials located along Pipeline Canyon. Effluent from the Northeast Church Rock mine site was discharged to the Pipeline Arroyo, which infiltrated into the Southwest Alluvium (EPA 2003). This mine-discharge water is referred to as post-mining, pretailings water. In addition, seepage from tailings disposal cells and associated borrow pits (May 1977 through May 1982) also appears to have recharged the Southwest Alluvium. Ground water flows in the Southwest Alluvium to the southwest along the Pipeline Arroyo.

Zones 1 and 3 are the lower and upper hydrostratigraphic units of the Cretaceous Age Upper Gallup Sandstone. Ground water in both zones flows to the northeast. Like the Southwest Alluvium, the source of water in Zones 1 and 3 is, in large measure, historical infiltration of Northeast Church Rock mine-discharge water (EPA 2003). The source of contamination appears to be either infiltration from the Southwest Alluvium or tailings disposal cell (Zone 3) or seepage from a borrow pit (Zone 1).

4.2 Water Quality

The affected environment at the Site is impacted ground water. Contamination, associated with historical mining and milling operations, has been identified in three hydrostratigraphic units at the Site: the Southwest Alluvium, and Zones 1 and 3 of the Gallup Sandstone. Recent remedial efforts at the Site have focused on addressing ground water contamination in the Southwest Alluvium, Zone 1 and Zone 3. The goal of the remedy was to restore ground water outside the tailings disposal area to Federal and State standards, or background levels. The selected remedial action consisted of ground water extraction and evaporation systems. Surface water monitoring or remediation was not a component of the selected remedial strategy.

Contaminants of concern identified in the ROD include antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, iron, lead, manganese, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium, zinc, chloride, sulfate, nitrate, total dissolved solids, uranium, combined radium-226 and -228, thorium-230, and gross alpha (EPA 2003). Chloroform was not identified as a contaminant of concern in the ROD.

For the Southwest Alluvium, beginning in July 1989, almost all combined radium-226 and -228 concentrations have been below 5 pCi/L (i.e., its present GWPS). Combined radium-226 and -228 levels above the current GWPS have occasionally been detected in Southwest Alluvium compliance and monitor wells (e.g., well 632); however, these hits have been inconsistent and do not appear to represent an underlying water quality problem with respect to radium. In the most recent Southwest Alluvium ground water quality results (i.e., 2005 sampling data), combined radium-226 and -228 levels were all below 5 pCi/L. Chloroform in the southwest Alluvium is currently present at levels ranging from 0.0015 to 0.0084 mg/L.

Zone 1 combined radium-226 and -228 concentrations over the current 5 pCi/L GWPS have been detected relatively frequently in monitor well 515A, and compliance wells 604, 614, EPA4, and EPA7. In 2005, three wells (515A, 604, and 614) contained combined radium-226 and -228 over the current GWPS; however none of these exceedances were above the proposed Zone 1 GWPS of 9.4 pCi/L. In Zone 1, elevated levels of chloroform are restricted to a small area on site. Chloroform concentrations range from 0.0023 to 0.167 mg/L and are found immediately down-gradient of former Burrow Pit No. 2.

Combined radium-226 and -228 in Zone 3 ground water are significantly over the current GWPS of 5 pCi/L. In 2005, all four active POC wells (517, 613, 708, and 711), as well as several monitor wells (420, 504B, EPA 13, EPA14, EPA15, EPA18, and NBL-10), contained combined radium-226 and -228 between two to almost six times the current GWPS. It should be noted that the Zone 3 combined radium-226 and -228 GWPS is not addressed in the proposed license amendments covered in this EA. Chloroform, has a narrow spatial range in Zone 3 which is located in an area immediately down- gradient of the former north tailings cell (i.e., vicinity of well 613).

5.0 ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION

The NRC staff has reviewed the following proposed amendments to Source Materials License SUA-1475 and has examined the impacts of these requests. The impacts of the proposed actions are limited to ground water quality/use. Other environmental impacts (e.g., surface water, air quality, land use and biotic resources) are not considered in the scope of this EA because the contamination at the Site is limited to the subsurface.

5.1 Monitoring

Only minor changes in monitoring requirements have been proposed as part of the proposed license amendments. Ground water monitoring, including sampling and analysis for chloroform , radium-226 and radium-228, will continue in accordance with the current requirements of SUA-1475. In the event of a radium-226 and radium-228 GWPS exceedance in the Southwest Alluvium or Zone 1, it is proposed that a verification sample be collected and analyzed to confirm the exceedance within 30 days.

5.2 Cumulative and Health Effects

As stated above, the environmental impacts identified with implementing the proposed ground water protection standards for THMs and combined radium-226 and -228 are limited to ground water quality/use. Ground water is not used as a potable source at, or in, the immediate vicinity of the Site. Reportedly, the closest down-gradient public-use well is about 2,700 meters (8,860 feet) to the northeast (EPA 2003). With exception of the historical mill and mine activity, land use is primarily grazing for sheep, cattle and horses (EPA 2003). The area around the Site is still sparsely populated and includes Indian Tribal Land as well as UNC-owned property. The primary use of the Indian Tribal Land is grazing. Consequently, although the allowable level of chloroform in ground water would increase, the proposed total THM ground water protection standard of 0.08 mg/L is a standard established by the EPA, under the SDWA. As an MCL, it represents a thoroughly examined and evaluated maximum allowable drinking water

concentration that is considered to be safe by the EPA. With respect to combined radium-226 and 228, the proposed standard of 5.2 pCi/L in the Southwest Alluvium and 9.4 pCi/L in Zone 1 are both below the New Mexico Ground Water Protection Standard of 30 pCi/L (NMED 2006).

5.3 Cultural, Ecological, and Historical Resources

NRC staff has determined that because the proposed actions are ground water related, they are not expected to affect listed species or critical habitat. Therefore, no further consultation is required under Section 7 of the Endangered Species Act. Approval of the proposed amendments is not expected to impact any potential or identified cultural or historical resource areas. Consequently, NRC staff has determined that the proposed actions are not the type of activities that have the potential to cause effects on cultural or historic resources. Therefore, no further consultation is required under Section 106 of the National Historic Preservation Act.

6.0 ALTERNATIVES TO THE PROPOSED ACTION

As an alternative to the proposed actions, the staff considered denial of the proposed actions (i.e., this is the "no-action alternative"). Denial of the application would result in little change in current environmental impacts. For the THM GWPS, the impacts to ground water quality of the proposed action and the alternative action are small and are actually similar since both alternatives result in potable water with respect to chloroform. With respect to combined radium-226 and -228, even though the proposed action results in a higher GWPS for radium-226 and -228, these concentrations represent background water quality conditions up-gradient of the Site and are based on detailed analytical and statistical studies. Consequently, the impact to ground water quality between the proposed action and the alternative action is small since the background water quality is an ambient condition independent of any historical or current impact from the uranium mill.

7.0 AGENCIES AND PERSONS CONSULTED

Mark Purcell, EPA, Region 6 Project Manager for the Site, was contacted through correspondence dated May 10, 2006. EPA considers that current proposed revisions to the Site's ground water protection standards are "reasonable." EPA further indicated that "concurrent with the NRC effort, EPA is also reassessing the appropriateness of several Site cleanup levels originally established by EPA in the ROD since EPA has promulgated new Maximum Contaminant Levels (MCLs) under the Safe Drinking Water Act (SDWA) and there are new ground water standards for the State of New Mexico" and "has directed UNC to implement a Sitewide Supplemental Feasibility Study" which shall contain an assessment of the appropriateness of the new MCLs and State of New Mexico standards for the Site (EPA 2006).

Adrian Stein, NMED Project Manager for the Site was contacted through correspondence dated May 10, 2006. NMED indicated that the findings of the EA did not "supersede actions being taken under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) for the United Nuclear Corporation Superfund Site (EPA ID# NMD030443303) and that clean up levels set forth in the (1988) Record of Decision ... are in effect unless modified through CERCLA process, and in consultations with NMED and the Navajo Nation." (NMED 2006).

Diane Malone (Navajo Nation EPA, Superfund Program) and Patrick Antonio (Navajo Nation

EPA, NPDES/Water Quality Program) were contacted through correspondence dated May 10, 2006 and did not provide comments.

8.0 CONCLUSION

The NRC staff has prepared this EA in support of the proposed actions to amend License Condition 30.B of License SUA-1475 by changing the current chloroform ground water protection standard of 0.001 mg/L to 0.08 mg/L for total THMs, revising the current combined radium-226 and -228 GWPS from 5.0 pCi/L to 5.2 pCi/L in the Southwest Alluvium and 9.4 pCi/L in Zone 1. On the basis of this EA, NRC has concluded that a FONSI is appropriate because there are no significant environmental impacts in connection with the proposed action.

8.0 SOURCES USED

Federal Register 53, No. 188 (28 September 1988): 37887-37889 – Memorandum of Understanding between U.S. Nuclear Regulatory Commission and U.S. Environmental Protection Agency.

Federal Register 63, no. 241 (16 December 1998): 69389-69476 - National Primary Drinking Water Regulations: Disinfectants and Disinfection.

GEEP. 2005a. License Amendment Request, Source Materials License SUA-1475, Groundwater Corrective Action Program. Letter to Mr. Gary Janosko, NRC, Fuel Cycle Licensing Branch. King of Prussia, Pennsylvania: General Electric Corporate Environmental Programs. May 26. [Adams Accession No. ML0523101510]

GEEP. 2005b. Letter from Roy Blickwedel to Gary Janosko, NRC, Fuel Cycle Licensing Branch containing a Revised License Amendment Request for Changing the Chloroform Ground Water Protection Standard in Source Materials License SUA-1475. July 14. [Adams Accession No. ML052100367]

GEEP. 2005c. Letter from Roy Blickwedel to Gary Janosko, NRC, Fuel Cycle Licensing Branch containing License Amendment Request for Changing the Method of Determining Exceedances of the Combined Radium Groundwater Protection Standard in Source Materials License No. SUA-1475. September 30. [Adams Accession No. ML053010019]

GEEP. 2006a. Letter from Roy Blickwedel to Gary Janosko, NRC, Fuel Cycle Licensing Branch containing Revised License Amendment Request for Changing the Method of Determining Exceedances of the Combined Radium Groundwater Protection Standard in Source Materials License SUA-1475. February 22. [Adams Accession No. ML060730043]

GEEP. 2006b. Letter from Roy Blickwedel to Gary Janosko, NRC, Fuel Cycle Licensing Branch concerning Revised License Amendment Request for Changing the Method of Determining Exceedances of the Combined Radium Groundwater Protection Standard in Source Materials License SUA-1475. April 7. [Adams Accession No. ML061220286]

NA WaterSystems. 2005. Annual Review Report - 2005 Groundwater Corrective Action, Church Rock Site, Church, New Mexico. December 2005 [ADAMS Accession Nos. ML053640340, ML053640342, ML053640345, ML053640349]

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NMED 2006. Letter from Adrian Stein to Paul Michalak, NRC containing comments on Draft Environmental Assessment for United Nuclear Corporation's Church Rock, New Mexico Project Site (TAC No. LU0117) June 23. [ADAMS Accession No. ML061880023]

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