UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
612 EAST LAMAR BLVD, SUITE 400
ARLINGTON, TEXAS 76011-4125

October 27, 2011

Mr. Larry Bush, Vice President
United Nuclear Corporation
P.O. Box 3077
Gallup, New Mexico 87305-3077

SUBJECT: NRC INSPECTION REPORT 040-08907/11-001

Dear Mr. Bush:

This refers to the announced, routine inspection conducted on August 18, 2011, at United Nuclear Corporation's Church Rock facility in McKinley County, New Mexico. This inspection was an examination of activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas, the inspection consisted of selected examination of procedures and representative records, observations of activities, and interviews with personnel. The preliminary inspection findings were discussed with you at the end of the onsite inspection. The final inspection findings were postponed until the inspector had the opportunity to review the semi-annual groundwater monitoring report dated August 24, 2011. The final inspection findings were discussed with you by telephone on September 30, 2011. The enclosed report presents the scope and results of the inspection. In summary, the inspector determined that you were conducting licensed activities in accordance with license and the regulatory requirements.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and your response, if you choose to make one, will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC's Web site at http://www.nrc.gov/reading-rm/adams.html. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

Should you have any questions concerning this inspection, please contact Ms. Linda M. Gersey, Health Physicist, at (817) 860-8299, or the undersigned at (817) 860-8191.

Sincerely,

/RA/

D. Blair Spitzberg, Ph.D., Chief
Repository and Spent Fuel Safety Branch
Division of Nuclear Materials Safety

Docket No.: 040-08907
License No.: SUA-1475

Enclosure:
NRC Inspection Report 040-08907/11-001

cc w/Enclosure:
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ADAMS	☑ Yes ☐ No	☑ SUNSI Rev Complete	Reviewer Initials:	LMG
Publicly Avail	☑ Yes ☐ No	Sensitive Value:		

RIV:DNMS:RSFS	C:RSFS
LMGersey	DBSpitzberg
/RA/	***/RA/***
10/26/2011	10/27/2011

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U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket:	040-08907
License:	SUA-1475
Report:	040-08907/11-001
Licensee:	United Nuclear Corporation
. Facility:	Church Rock Facility
Location:	McKinley County, New Mexico
Date:	August 18, 2011
Inspector:	Linda M. Gersey, Health Physicist Repository and Spent Fuel Safety Branch
Approved by:	D. Blair Spitzberg, Ph.D., Chief Repository and Spent Fuel Safety Branch
Attachment:	Supplemental Inspection Information

Enclosure

EXECUTIVE SUMMARY

United Nuclear Corporation - Church Rock Facility
NRC Inspection Report 040-08907/11-001

This inspection included a review of site radiological status, management organization and controls, radiation protection, environmental protection, radioactive waste management, on-site construction, operator training/retraining, and a tour of the site. In summary, the licensee was conducting site decommissioning activities in accordance with regulatory and license requirements.

Management Organization and Controls

- The licensee had maintained adequate staffing to perform site operations and decommissioning activities in accordance with the license and regulatory requirements (Section 1).

Radiation Protection; Operator Training/Retraining

- The licensee was conducting the radiation protection and training programs as required by the license and 10 CFR Part 20 requirements (Section 2).

On-site Construction; Radioactive Waste Management

- On-site construction was maintained in accordance with the license and construction specification requirements. An onsite tour confirmed that both the evaporation ponds and the final radon barrier in the tailings impoundment were in good condition. The inspector determined that the radioactive waste was being maintained in accordance with license and regulatory requirements (Section 3).

- Confirmatory radiological surveys were taken by the inspector and were determined to be comparable with the licensee's survey results (Section 3).

Environmental Protection

- The licensee was conducting the environmental corrective action program as required by the license and regulatory requirements (Section 4).

Report Details

Site Status

United Nuclear Corporation's (UNC's) Church Rock uranium mill operated between 1977 and 1982. Reclamation of the mill commenced in 1984, and the mill was fully decommissioned in 1992.

At the time of the inspection, major site activities included a groundwater monitoring program, a small scale groundwater extraction system, and routine site maintenance activities. In addition, the licensee continues soil cleanup actions resulting from windblown radioactive materials from the UNC's nearby uranium mine site that is not regulated by the NRC.

1 Management Organization and Controls (88005)

1.1 Inspection Scope

Ensure that the licensee had maintained adequate staffing to perform the decommissioning activities in accordance with the license and regulatory requirements.

1.2 Observations and Findings

At the time of the inspection, there were two company employees, UNC's Vice President and Radiation Safety Officer (RSO). Contractors were used by the licensee on an as-needed basis to maintain the facility and site records. Overall, the licensee had maintained sufficient staff for the limited amount of work being conducted and for maintaining compliance with the license and regulatory requirements.

Although not required by the license, the licensee had conducted and documented monthly site inspections to verify the integrity of the restricted areas. The RSO performed monthly inspections of the tailings pile, two evaporation ponds, and site boundaries for the purpose of checking the integrity of fences and postings. Additionally, during the licensee's monthly inspections the condition of the synthetic pond liners was assessed. A review of the licensee inspection logs indicated that on occasions the RSO had observed damage to posting signs due to adverse weather conditions. A brief written summary was included in the written record when any adverse findings were identified and if corrective actions were needed.

1.3 Conclusions

The licensee had maintained adequate staffing to perform site operations and decommissioning activities in accordance with the license and regulatory requirements.

2 Radiation Protection; Operator Training/Retraining (83822/88010)

2.1 Inspection Scope

Determine if the licensee's radiation protection program and training was conducted in

compliance with the conditions of the license and in accordance with the provisions of 10 CFR Part 20.

2.2 Observations and Findings

License Condition 20 requires, in part, that the licensee establish written procedures for the radiation and environmental monitoring programs. The inspector reviewed the written procedures maintained by the licensee for the environmental and personnel monitoring programs. Due to the limited scope of work being conducted on site, the RSO only reviews these procedures prior to issuance of a new radiation work permit, where previously, when the site was active, the procedures were reviewed annually. No radiation work permits were issued by the RSO since the previous NRC inspection, conducted in June 2009.

Various sampling and monitoring instruments were available and properly calibrated. The instruments included alpha probes and microRoentgen meters. Other equipment, such as air monitors, were not routinely used but could be calibrated and placed into service if required.

The inspector determined that the licensee had not performed any bioassays since the previous NRC inspection, although the necessary sampling equipment was available to perform bioassays if required by a radiation work permit. The inspector noted that routine personnel monitoring was no longer required by the licensee; however the licensee had contingency plans to obtain personnel dosimetry, if needed.

The RSO and Vice President attended a certified 40-hour RSO training course in December 2010. Contractors, before beginning licensed work activities, received initial radiation safety training and annual refresher training administered by the RSO. The training provided by the RSO included a written examination and a review of radiation safety topics applicable to the site. Records of all training were kept as required in License Condition 18.

The RSO conducts an As Low As Reasonably Achievable (ALARA) audit annually and submits the results to the NRC. The inspector reviewed the ALARA audits for 2009 and 2010. A review of the licensee's annual ALARA audits did not identify any significant findings related to the radiation safety program.

2.3 Conclusions

The licensee was conducting the radiation protection and training programs as required by the license and 10 CFR Part 20 requirements.

3 On-site Construction; Radioactive Waste Management (88001/88035)

3.1 Inspection Scope

Determine if on-site construction activities and radioactive waste management activities were being maintained in accordance with the license and regulatory requirements.

3.2 Observations and Findings

A site tour was conducted by the inspector to observe the integrity of the two evaporation ponds and the tailings impoundment. During the tour, the inspector conducted confirmatory radiological surveys using a Ludlum Model 19 survey meter (NRC No. 015546, calibration due date of February 21, 2012, calibrated to radium-226). With a background of approximately 0.015 millirem per hour, the general area radiation exposure rates ranged up to 0.15 millirem per hour near the impoundment of the evaporation ponds. These exposure rates were comparable to the licensee's measurements. All exposure rate measurements were below the NRC criteria for a radiation area (5 millirem per hour)

The 110-acre tailings impoundment consisted of the north, central, and south cells. Located within the south cell were two evaporation ponds that covered approximately 5 acres of the cell. The licensee uses the two evaporation ponds to support groundwater remediation. With the exception of the area of the evaporation ponds, the placement of the final radon barrier was complete on the remainder of the tailings impoundment. During the tour, the inspector noted that vegetation was present on the covered impoundment and the barrier appeared to be in good condition. During the inspection, the two evaporation ponds had small amounts of remedial water and the hypalon liners in the ponds appeared in good condition. At the time of the inspection, no bubbles were noted in the hypalon liner of the evaporation ponds.

3.3 Conclusions

On-site construction was maintained in accordance with the license and construction specification requirements. An onsite tour confirmed that both the evaporation ponds and the final radon barrier in the tailings impoundment were in good condition. The inspector determined that the radioactive waste was being maintained in accordance with license and regulatory requirements. Confirmatory radiological surveys were taken by the inspector and were determined to be comparable with the licensee's survey results.

4 Environmental Protection (88045)

4.1 Inspection Scope

Determine if the licensee had conducted environmental monitoring in accordance with the license and regulatory requirements.

4.2 Observations and Findings

The licensee is required to implement the groundwater compliance monitoring and corrective action programs in accordance with License Condition 30. Thirty-two wells are sampled quarterly for constituents and water levels. Well NBL-1 is also monitored monthly to determine the extent groundwater is impacted by the moving underground contaminated water plume. Twenty-one wells are monitored for water levels on a quarterly basis. The inspector reviewed the corrective action program documentation for 2009 and 2010 and found that all monitoring had been completed as required by the license.

Three groundwater areas (Zone 1, Zone 3, and Southwest Alluvial) continue to be monitored to determine the extent of contaminated water plumes. Zone 3 is actively in remediation and contaminated water is sent to the two evaporation ponds on the tailings for treatment. Three pumping wells and two monitoring wells were installed in September 2008 in Zone 3 to intercept and recover water impacted by the migrating contaminant plume. In accordance with the U.S EPA's groundwater corrective action program for the site in which the NRC reviewed , the two monitoring wells are monitored for water levels weekly and the three pumping wells are monitored daily to assess the amount of water being extracted and these wells are monitored on a weekly basis to determined water levels.

License Condition 31 requires, in part, that the licensee conduct an annual land use survey. The land use survey conducted by the licensee assesses the area within two miles of the mill. The licensee is required to submit the land use survey report to the NRC annually. Significant changes in land use are noted in the licensee's land use survey report that includes specific changes in residential home sites and water uses. The inspector reviewed the licensee's land use surveys for 2009 and 2010 and found them to be complete and current.

4.3 Conclusions

The licensee was conducting the environmental corrective action program as required by the license and regulatory requirements.

SUPPLEMENTAL INSPECTION INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

L. Bush, Vice President
M. Chischilly, Radiation Safety Officer

INSPECTION PROCEDURES USED

IP 88005	Management Organization and Controls
IP 83822	Radiation Protection
IP 88010	Operator Training/Retraining
IP 88001	On-site Construction
IP 88035	Radioactive Waste Management
IP 88045	Effluent Control and Environmental Protection

ITEMS OPENED, CLOSED, AND DISCUSSED

Open

None

Closed

None

Discussed

None

LIST OF ACRONYMS USED

ALARA	as low as reasonably achievable
CFR	Code of Federal Regulations
IP	inspection procedure
RSO	Radiation Safety Officer

Attachment