



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-4005

July 15, 2005

Mr. Steve Cline
Manager, Remediation/Transactions
GE Engine Services
640 Freedom Business Center
King of Prussia, PA 19406

SUBJECT: NRC INSPECTION REPORT 040-08907/05-001

Dear Mr. Cline:

An NRC inspection was completed on July 6, 2005, at your former Church Rock Uranium Mill site located in McKinley County, New Mexico. The enclosed report presents the scope and results of that inspection.

The inspection consisted of a routine review of site status, decommissioning and reclamation activities, management organization and controls, radiation protection, radioactive waste management, and environmental monitoring. The inspection findings were presented to members of your staff at the conclusion of the onsite inspection. The enclosed report presents the results of that inspection.

Based on the results of this inspection, no violations or deviations were identified; therefore, no response to this letter is required.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Should you have any questions concerning this inspection, please contact Ms. Judith Walker at (817) 860-8299 or the undersigned at (817) 860-8197.

Sincerely,

/RA J.D.Cook for/

Jack E. Whitten, Chief
Nuclear Materials Licensing Branch

Docket No.: 40-08907
License No.: SUA-1475
Enclosure:

NRC Inspection Report
040-08907/05-001

cc w/enclosure:

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

Mr. Larry Bush
President & Operations Manager
UNC Mining and Milling
P.O. Box 3077
Gallup, NM 87305-3077

Ms. Diane Malone
Navajo Superfund
P.O. Box 2946
Window Rock, AZ 86515

Mr. Art Keinrath, Program Manager, LTS
U.S. Department of Energy
Grand Junction Project Office
P. O. Box 2567
2597 B 3/4 Road
Grand Junction, CO 81503

Ms. Robin Brown
New Mexico Environmental Department
P.O. Box 26110
1190 St. Francis Drive
Santa Fe, NM 87502

Mr. Mark Purcell
U.S. Environmental Protection Agency
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

Mr. Pat Mackin, Assistant Director
Systems Engineering & Integration
Center for Nuclear Waste Regulatory Analyses
6220 Culebra Road
San Antonio, TX 78238-5166

New Mexico Radiation Control Program Director

bcc w/enclosure to (via ADAMS distrib.):

LDWert

RWVonTill, NMSS/FCSS/URB

JEWhitten

JLWalker

KEGardin

NMLB

RIV Nuclear Materials File - 5th Floor

ADAMS: Yes

Initials: jlw

Publicly Available

Non-Sensitive

DOCUMENT NAME: s:\dnms\nmlb\jlw3\50890701.wpd

Final: r:_dnms\

RIV:DNMS:NMLB	C:NMLB
JLWalker	JEWhitten
/RA/	/RA JDCook for/
07/13/05	07/15/05

OFFICIAL RECORD COPY

T=Telephone

E=E-mail

F=Fax

ENCLOSURE

U. S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket No.: 40-08907
License No.: SUA-1475
Report No.: 40-08907/05-001
Licensee: United Nuclear Corporation
Facility: Former Church Rock Uranium Mill
Location: McKinley County, New Mexico
Date: July 6, 2005
Inspector: Judith Walker, Health Physicist
Accompanied By: Jack E. Whitten, Chief
Nuclear Materials Licensing Branch
Approved By: Jack E. Whitten, Chief
Nuclear Materials Licensing Branch
Attachment: Supplemental Inspection Information

EXECUTIVE SUMMARY

Former Church Rock Uranium Mill NRC Inspection Report 040-08907/05-001

This inspection included a review of site status, decommissioning and reclamation activities, management organization and controls, radiation protection, radioactive waste management and environmental monitoring.

Site Status and Decommissioning for Uranium Mills

- C Site activities and decommissioning programs were being conducted in accordance with the reclamation plan, the license, and applicable NRC regulations for uranium mill sites (Section 1).

Management Organization and Controls Review

- The site organization and staffing were appropriate for the amount of work in progress at the facility and met license requirements (Section 2).

Radiation Protection

- Site fences and gates requiring posting were secure, in good condition and posted with the appropriate radioactive material signs (Section 3).
- The licensee had implemented a radiation protection program that met requirements of 10 CFR Part 20 and the license (Section 3).
- Program areas deemed satisfactory included training and instrument calibrations (Section 3).

Radioactive Waste Management and Environmental Monitoring

- The licensee's implementation of its radioactive waste management and environmental monitoring programs appeared effective and satisfied the applicable regulatory requirements and license conditions (Section 4).
- All reports related to the groundwater and environmental monitoring programs had been submitted to NRC as required. A review of the reports by the inspector revealed that releases of radioactive materials to the environment were within regulatory limits during calendar years 2003 and 2004 (Section 4).

Report Details

1 Decommissioning Inspection Procedure for Uranium Mill Sites (87654), Operations Review (88020) and Site Status

1.1 Inspection Scope

The site status and decommissioning program were reviewed by the inspector to determine if licensee activities were being conducted in accordance with the site reclamation plan, the license, and applicable NRC regulations for uranium mill sites.

1.2 Observations and Findings

Site Status

United Nuclear Corporation's (UNC) Church Rock Uranium Mill operated between 1977 and 1982 and reclamation of the site began in 1984. The mill was decommissioned in 1992, and by License Amendment 21 the NRC released the mill site and buildings in 1995. At the time of the inspection, the site's restricted area was limited only to the remaining evaporation ponds.

Site reclamation activities occurring since the last NRC inspection included groundwater and evaporation pond monitoring. The licensee has two lined evaporation ponds that cover approximately 17 acres used for groundwater remediation and each evaporation pond will hold approximately 7.5 million gallons of water. At the time of the inspection, the licensee's pond evaporation misting system was not in operation, due to low pumping volumes of water from the onsite reclamation wells. Site structures remaining on site consisted only of office buildings. With the exception of the evaporation ponds, the placement of the final radon barrier was complete over the tailings area of approximately 110 acres.

1.3 Conclusion

The inspector concluded that site activities and decommissioning programs were being conducted in accordance with the reclamation plan, the license, and applicable NRC regulations for uranium mill sites.

2 Management Organization and Controls (88005)

2.1 Inspection Scope

The organization structure was reviewed by the inspector to ensure that the licensee had established an organization with defined responsibilities and functions.

2.2 Observations and Findings

The UNC staff consisted of four full-time employees and one part-time employee. Employees onsite include a site manager, technician, secretary and a radiation safety officer (RSO). No changes had been made by the licensee to the organization structure since the last inspection in April 2003. The inspector determined that the site organizational structure met license requirements and was appropriate for the activities being conducted onsite.

2.3 Conclusions

The site organization and staffing were deemed appropriate for the amount of work in progress at the facility and met license requirements.

3 Radiation Protection (83822)

3.1 Inspection Scope

This portion of the inspection determined that the licensee's radiation protection program was conducted in compliance with the license and 10 CFR Part 20. Areas inspected included contamination surveys made by the licensee of equipment released off site, any radiation work conducted at the restricted area, security of licensed material, posting of fence lines, and a review of radiation protection training records.

3.2 Observations and Findings

During the inspector's tour, fences and gates were observed to be in good condition and were properly posted. The inspector determined that licensed material was secured within the site property as required by 10 CFR 20.1801. Tailings area fences were posted with "Caution, Radioactive Material" signs as required by 10 CFR 20.1902. The inspector performed a limited independent radiological survey using an NRC-issued microRoentgen meter, Serial Number 15540 (calibrated with cesium-137,) with a calibration due date of November 10, 2005. Gamma exposure rate measurements obtained by the inspector around the site ranged from 15 to 150 micro Roentgen/hour at the tailings area and the evaporation ponds, respectively.

License Condition 11 requires, in part, that equipment or packages released from any restricted area be surveyed for radioactive contamination. The inspector's review revealed that the licensee had not released equipment from the site restricted area during this inspection interval. The inspector noted that the equipment release survey procedure in place at the time of the inspection was in accordance with the license and satisfied NRC's residual contamination guidelines.

License Condition 18 specifies, in part, that various documents relating to the radiation protection program must be maintained. The inspector reviewed records relating to instrument calibrations, personnel training, and equipment releases.

No problems were noted with records maintained by the licensee. The inspector noted that calibration records for radiological survey instruments were current. Radiological survey instruments observed onsite were currently calibrated and had affixed current instrument calibration stickers.

The inspector confirmed that the licensee had conducted annual training for site employees by reviewing calendar year 2003 and 2004 training records. The inspector also noted that the RSO had recently completed 40 hours of radiation safety training in March 2004. The inspector concluded from the records review that personnel training was sufficient to cover current operations.

License Condition 21 requires, in part, that the licensee use radiation work permits (RWPs) for work not covered by standard operating procedures for conducting work in restricted areas or areas where the significant potential for exposure to radioactive materials exists. The inspector determined that no RWPs were issued during this inspection interval, and this assessment made by the licensee was appropriate for the licensed activities at the UNC site. The licensee's radiation monitoring program under the RWP is still in effect, but is currently in standby status awaiting the final pond closure reclamation activity. The inspector's review of the licensee's operations concluded that no significant potential for exposure to radioactivity existed onsite at the present time.

3.3 Conclusions

The inspector determined that the licensee had implemented a radiation protection program that satisfied the requirements established in 10 CFR Part 20 and the license. Site fences and gates were secure, in good condition and had appropriate radioactive material postings. Program areas deemed satisfactory included the personnel training, equipment releases, instrument calibrations, and the licensee's use of RWPs.

4 Radioactive Waste Management (88035) and Environmental Protection (88045)

4.1 Inspection Scope

The radioactive waste management and environmental monitoring programs were reviewed by the inspector to assess the effectiveness of the licensee's programs and to evaluate the site's effects, if any, on the local environment.

4.2 Observations and Findings

Radioactive Effluents and Environmental Monitoring

License Conditions 12 and 30 require, in part, that effluent and environmental monitoring results be reported to the NRC semiannually. The inspector reviewed the semiannual effluent reports for calendar years 2002 and 2003. The licensee's environmental monitoring program consisted of groundwater sampling results.

Since the last inspection, groundwater remediation continues as the primary activity at the Church Rock site. License Condition 30 requires, in part, that a groundwater compliance monitoring program and corrective action program be implemented. The groundwater compliance program consisted, in part, of sampling at compliance wells for a number of chemical and radiological constituents. A review of documents provided by the licensee's contract laboratory revealed that the licensee had obtained the groundwater samples required by the license. The inspector noted that the licensee had used a contract laboratory for both its radiological and non-radiological sample analyses.

License Condition 30.C requires, in part, that the licensee implement a groundwater corrective action program in Zone 3 to achieve the groundwater standards listed in License Condition 30.B. The licensee is currently reviewing techniques to remediate the underground seepage impacted water (Zone 3 plume). At the time of the inspection the licensee had determined that the plume in Zone 3 was migrating at a rate of approximately 80 feet per year. The nearest land boundary was located approximately 800 feet north of the estimated plume location.

The inspector concluded that the licensee had effectively implemented the radioactive waste management and environmental monitoring programs in accordance with the license. The environmental monitoring data results and site activities indicated that potential doses to the nearest member of the public were maintained well below the 100 millirem/year dose limit.

License Condition 31 requires, in part, that the licensee submit an "Annual Land Use Survey Report," which describes any significant land use changes by private owners of property located within 5 miles of the site. The licensee's reports dated March 1, 2004, and March 23, 2005, identified differences in land use from that of the previous year report. The inspector determined that the licensee's reports satisfied the license requirement.

4.3 Conclusions

All reports related to the groundwater and environmental monitoring programs had been submitted to the NRC as required. Also the licensee is implementing a groundwater corrective action program that is consistent with its license. A review of the environmental report data covering the inspection period revealed that releases of radioactive materials to the environment were within regulatory limits.

5 Exit Meeting Summary

An exit meeting was conducted at the conclusion of the inspection on July 6, 2005 and the inspector reviewed the scope and findings of the inspection. Licensee representatives acknowledged the findings as presented. The licensee did not identify as proprietary any information provided to, or reviewed by, the inspector.

ATTACHMENT

PARTIAL LIST OF PERSONS CONTACTED

Licensee

Larry Bush, President & General Manager
Max Chischilly, Radiation Safety Officer

New Mexico Environmental Department (NMED)

Louis Baca, Radiation Specialist, NMED
Dave Baggett, Radiation Specialist, NMED

INSPECTION PROCEDURES USED

IP 83822: Radiation Protection
IP 87654: Decommissioning Procedure for Uranium Mill Sites
IP 88005: Management Organization and Controls
IP 88020: Operations Review
IP 88035: Radioactive Waste Management
IP 88045: Environmental Protection

ITEMS OPENED, CLOSED AND DISCUSSED

Opened:
None

Closed:
None

Discussed:
None

LIST OF ACRONYMS USED

RSO	Radiation Safety Officer
RWP	Radiation Work Permits