NRC FORM 374

U.S. NUCLEAR REGULATORY COMMISSION

MATERIALS LICENSE

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee	
1. UNC Mining and Milling Division of United Nuclear Corporation	3. License Number SUA-1475, Amendment No. 43
2. P.O. Box 3077 Gallup, New Mexico 87305-3077	4. Expiration Date: Until NRC determines site Reclamation Is Adequate
	5. Docket No. 40-8907 Reference No.

6. Byproduct Source, and/or Special Nuclear Material	7. Chemical and/or Physical Form	8. Maximum amount that Licensee May Possess at Any One Time Under This License
Uranium byproducts	Any	Unlimited

9. Authorized place of use: The licensee's uranium milling facilities located in McKinley County, New Mexico.

10. The licensee is hereby authorized to possess byproduct material in the form of uranium waste tailings and other byproduct wastes generated by the licensee's past milling operations.

    [Applicable Amendment: 17]

11. Release of equipment or packages from the restricted area shall be in accordance with guidance entitled, "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material," dated August 1987.

    The mill site and buildings are released for unrestricted use, and the restricted areas will be limited to the tailings site, as described in UNC's letter dated November 10, 1993.

    [Applicable Amendment: 21]

12. The results of all effluent and environmental monitoring required by this license shall be reported in accordance with Title 10 of the Code of Federal Regulations Part 40, Section 65, with copies of the report sent to the NRC. Monitoring data shall be reported in the format shown in guidance entitled, "Sample Format for Reporting Monitoring Data."

    [Applicable Amendment: 21]

Enclosure

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License Number
SUA-1475

Docket or Reference Number
40-8907

Amendment No. 40

MATERIALS LICENSE SUPPLEMENTARY SHEET

License Number
SUA-1475

Docket or Reference Number
40-8907

Amendment No. 43

13. Before engaging in any activity likely to cause an environmental impact not previously assessed by the NRC, the licensee shall prepare and record an environmental evaluation of such activity. When the evaluation indicates that such activity may result in a significant adverse environmental impact that was not previously assessed or that is greater than that previously assessed, the licensee shall provide a written evaluation of such activities, and obtain prior approval of the NRC in the form of a license amendment.

    [Applicable Amendment: 21]

14. Prior to termination of this license, the licensee shall provide for transfer of title to byproduct material and land, including any interests therein (other than land owned by the United States or the State of New Mexico), which is used for the disposal of such byproduct material or is essential to ensure the long-term stability of such disposal site, to the United States or the State of New Mexico at the State's option.

15. DELETED by Amendment No. 19.

16. DELETED by Amendment No. 29.

17. DELETED by Amendment No. 17.

18. The results of sampling, analyses, surveys and monitoring, the results of calibration of equipment, reports on audits and inspections, all meetings and training courses required by this license and any subsequent reviews, investigations, and corrective actions, shall be documented. Unless otherwise specified in the NRC regulations all such documentation shall be maintained for a period of at least 5 years.

19. The Radiation Safety Officer (RSO) shall possess the minimum qualifications as specified in Section 2.4.1 of Regulatory Guide 8.31, "Information Relevant to Ensuring that Occupational Radiation Exposures at Uranium Mills will be As Low As is Reasonably Achievable."

    [Applicable Amendment: 19]

20. Written procedures shall be established for the radiation safety and environmental monitoring programs, bioassay analyses, instrument calibrations, exposure determinations, ground-water sampling, etc. A current copy of each written procedure shall be maintained on-site.

    [Applicable Amendment: 17]

21. The licensee shall be required to use a Radiation Work Permit (RWP) for all work or non-routine maintenance jobs where the potential for significant exposure to radioactive material exists and for which no standard written procedure already exists. The RWP shall be issued by the RSO or his designate, qualified by way of specialized radiation protection training, and shall at least describe the following:

    A. The scope of the work to be performed.

B. Any precautions necessary to reduce exposure to uranium and its daughters.

C. The supplemental radiological monitoring and sampling necessary prior to, during, and following completion of the work.

22. DELETED by Amendment No. 29.

23. Mill tailings, other than small samples for purposes such as research or analysis, shall not be transferred from the site without specific prior approval of the NRC in the form of a license amendment. The licensee shall maintain a permanent record of all transfers made under the provisions of this condition.

24. DELETED by Amendment No. 19.

25. The licensee shall maintain an NRC-approved financial surety arrangement, consistent with 10 CFR 40, Appendix A, Criteria 9 and 10, adequate to cover the estimated costs, if accomplished by a third party, for decommissioning and decontamination of the mill and mill site, reclamation of any tailings or waste disposal areas, ground-water restoration as warranted, and the long-term surveillance fee.

Annual updates to the surety amount, required by 10 CFR 40, Appendix A, Criteria 9 and 10, shall be submitted to the NRC by March 31 of each year. Along with each proposed revision of the surety amount or annual update, the licensee shall submit supporting documentation showing a breakdown of costs and the basis for the cost estimates with adjustments for inflation, maintenance of a minimum 15 percent contingency fee, changes in engineering plans, activities performed, and any other conditions affecting estimated costs for site closure. The basis for the cost estimate is the NRC-approved reclamation/decommissioning plan as identified in License Condition Nos. 30 and 34, or NRC-approved revisions to the plan. NUREG-1620, Rev. 1 (June 2003), Appendix C, outlines the minimum considerations used by the NRC in the review of site closure cost estimates. Reclamation/ decommissioning plans and annual updates should follow this outline.

The licensees currently approved surety, a performance bond issued by the Federal Insurance Company of New Jersey, in favor of the NRC, shall be continuously maintained in an amount of no less than $3,055,040 for the purpose of complying with 10 CFR 40, Appendix A, Criteria 9 and 10, until a replacement is authorized by the NRC. The licensee shall maintain a standby trust for the benefit of the NRC. The current standby trust is administered by the Bank of New York.

The licensee shall also continuously maintain financial assurance in favor of the United States Environmental Protection Agency, in an amount no less than $2,803,663. Such financial assurance may be provided by one or more of the methods set forth in 10 CFR 40 and 40 CFR 264, Subpart H, including use of a Financial Test and Parent Company Guarantee. The licensee shall inform the NRC of any changes to financial assurance within 30 days of such change. The amount of this financial assurance shall not be reduced without prior NRC approval.

[Applicable Amendments: 13, 18, 22, 26, 27, 28, 30, 33, 34, 35, 36, 38, 40, 41, 42]

MATERIALS LICENSE SUPPLEMENTARY SHEET

License Number
SUA-1475

Docket or Reference Number
40-8907

Amendment No. 43

26. DELETED by Amendment No. 17.

27. DELETED by Amendment No. 2.

28. DELETED by Amendment No. 29.

29. The licensee shall comply with the following regarding the bioassay program:

A. The lower limit of detection to be utilized for the analysis of urine samples shall be 5 µg/l uranium or less.

B. In-vivo counting shall be performed in accordance with Section 3 of Regulatory Guide 8.22 dated January 1987.

C. Anytime an action level of 15 µg/l uranium for urinalysis or 9 nCi of natural uranium for in-vivo measurement is reached or exceeded, the licensee shall document the corrective actions which have been performed in accordance with Revision 1 of Regulatory Guide 8.22, dated January 1987. This documentation shall be submitted to the NRC, as part of the semiannual report required by 10 CFR 40.65.

D. Anytime an action level of 35µg/l for two consecutive specimens or 130 µg/l uranium for one specimen for urinalysis or 16 nCi uranium for an in-vivo measurement is reached or exceeded, the licensee shall document the corrective actions which have been performed in accordance with Revision 1 of Regulatory Guide 8.22. This documentation shall be submitted to the NRC, within 30 days of exceeding the action level.

[Applicable Amendments: 2, 21]

30. The licensee shall implement a compliance monitoring program containing the following:

A. Sample wells GW-1-3; EPA Wells 2, 4, 5, 7, 13, 14, 23, 25, and 28, and wells 420, 504-B, 509-D, 515-A, 517, 604, 613, 614, 624, 627, 632, 708, 711, 717, 719, 801, 802, 803, 808, and TWQ-142, on a quarterly frequency for chloride, ammonia, nitrate, sulfate, manganese, calcium, magnesium, sodium, bicarbonate, potassium, field-pH, TDS and water level, arsenic, beryllium, cadmium, chloroform, lead, lead-210, nickel, combined radium-226 and radium-228, selenium, thorium-230, uranium, gross alpha and vanadium. Wells EPA 8, 9, TWQ-143, 402, 412, 424, 446, 501A, 502A, 504A, 505A, 701, 702, 706, 707, 710, 712, 713, 714, 805, and 807, shall be monitored for water level on a quarterly basis.

Notwithstanding the above, the licensee is only required to sample EPA wells after receipt of written authorization by the land owner to enter that area for the purpose of sampling ground water from those specified wells. The licensee shall make every reasonable effort to obtain such authorization. If authorization is not obtained, the licensee shall inform the NRC, promptly.

B. Comply with the following ground water protection standards at point of compliance Wells GW-1, GW-2, GW-3, 632, EPA-23, EPA-28, and 509-D in the Southwest Alluvium; 614, 604, EPA-4, EPA-5, and EPA-7 in Zone 1; and 517, 613, 708, and 711 in Zone 3:

arsenic = 0.05 mg/L, beryllium = 0.05 mg/L, cadmium = 0.01 mg/L, gross alpha = 15.0 pCi/L, lead = 0.05 mg/L, lead-210 = 1.0 pCi/L, nickel = 0.05 mg/L, radium-226 and 228 = 5.0 pCi/L in Zone 3, 5.2 pCi/L in the Southwest Alluvium, and 9.4 pCi/L in Zone 1; selenium = 0.01 mg/L, thorium-230 = 5.0 pCi/L; total trihalomethanes = 0.08 mg/L; uranium = 0.3 mg/L and vanadium = 0.1 mg/L. Should the ground water protection standard for radium-226 and -228 in the Southwest Alluvium or in Zone 1 be exceeded in any compliance well, then a verification sample from the well shall be collected and analyzed within 30 days. If the verification sample also exceeds the ground water protection standard, the well shall be out of compliance. If the verification sample is below the ground water protection standard, the well shall be in compliance and shall revert back to normal monitoring.

C. Implement a corrective action program in Zone 1 in accordance with the June 14, 1990, and July 1, 1991, amendment requests, with the addition of EPA-7 as a seepage collection well to achieve the ground water standards in License Condition 30.B.

Implement a corrective action program in Zone 3 to achieve the ground water standards in License Condition 30.B. Ground water pumping in Zone 3 will cease temporarily to determine ground water concentration trends for future remedial action, as determined by the NRC. A Post-Pumping Evaluation Report must be submitted to the NRC by December 1, 2001. This report must use tables, graphs, and iso-contour maps to illustrate ground water quality trends. If necessary, as determined by the NRC, a Post-Pumping Evaluation Report must be submitted to the NRC by June 1, 2002. If NRC standards are still exceeded on June 1, 2002, the licensee must submit either a modified active corrective action plan, an application for alternate concentration limits (ACLs) or an alternative to the specific requirements of 10 CFR Part 40, Appendix A, in accordance with 84.c of the Atomic Energy Act (AEA) by August 1, 2002.

Implement a corrective action program in the Southwest Alluvium in accordance with "Amendment 2, Reclamation Plan, License No. SUA-1475," submitted by letter dated March 29, 1989, to achieve the ground water standards in License Condition 30.B. Ground water pumping in the alluvium will cease temporarily to determine ground water concentration trends for future remedial action for a period of 12 to 18 months, as determined by the NRC. A Post-Pumping Evaluation Report must be submitted to the NRC by December 1, 2001. This report must use tables, graphs, and iso-contour maps to illustrate ground water quality trends. If necessary, as determined by the NRC, a Post-Pumping Evaluation Report must be submitted to the NRC by June 1, 2002. If NRC standards are still exceeded on June 1, 2002, the licensee must submit either a modified active corrective action plan, an application for alternate concentration limits (ACLs) or an alternative to the specific requirements of 10 CFR Part 40, Appendix A, in accordance with 84.c of the Atomic Energy Act (AEA) by August 1, 2002.

No corrective action program component, meeting the abandonment criteria stated in the March 29, 1989, submittal, shall be decommissioned without obtaining prior NRC approval. Additional wells must be installed in Zone 3 and the Southwest Alluvium to determine the extent of

ground water contamination. Once these wells have been installed, they will be sampled in accordance with the ground water monitoring program in License Condition 30.A.

The licensee shall, on a semiannual frequency, submit a ground water monitoring report, as well as submit a corrective action program review, by January 30 of the following calendar year, that describes the progress towards attaining ground water protection standards.

[Applicable Amendments: 2, 4, 5, 7, 11, 19, 21, 32, 37, 39]

31. The licensee shall conduct an annual survey of land use (grazing, residence, wells, etc.) in the area within two miles of the mill and submit a report of this survey annually to the NRC. This report shall indicate any differences in land use from that described in the licensee's previous annual report. The report shall be submitted by March 31 of each year. Notwithstanding the above, if access to private lands is required, the licensee is only required to conduct such survey after receipt of written authorization by the land owner, allowing UNC access for the purpose of conducting said survey.

[Applicable Amendments: 2, 21]

32. The licensee is authorized to construct and operate an enhanced evaporation system in accordance with the system described in the submittal dated June 14, 1990. The southern cell enhanced evaporation system shall be designed as described in the June 29, 1992, submittal and have an operational schedule similar to that of the central cell.

[Applicable Amendments: 2, 7, 15]

33. DELETED by Amendment No. 17.

34. The approved tailings reclamation plan is that submitted by the licensee on August 30, 1991, and modified by licensee submittals dated March 5, April 10, and June 21, 1996.

[Applicable Amendments: 10, 17, 24, 25]

35. The licensee shall complete site reclamation in accordance with the approved reclamation plan and ground water corrective action plan, as authorized by License Condition Nos. 34 and 30, respectively.

A. To ensure timely compliance with target completion dates established in the Memorandum of Understanding with the Environmental Protection Agency (56 FR 55432, October 25, 1991), the licensee shall complete reclamation to control radon emissions as expeditiously as practicable, considering technological feasibility, in accordance with the following schedule:

(1) Windblown tailings retrieval and placement on the pile - complete.

(2) Placement of the interim cover to decrease the potential for tailings dispersal and erosion - complete.

(3) Placement of final radon barrier designed and constructed to limit radon emissions to an average flux of no more than 20 $pCi/m^2/s$ above background - December 31, 2011.

B. Reclamation, to ensure required longevity of the covered tailings and ground water protection, shall be completed as expeditiously as is reasonably achievable, in accordance with the following target

MATERIALS LICENSE SUPPLEMENTARY SHEET

License Number
SUA-1475

Docket or Reference Number
40-8907

Amendment No. 43

dates for completion.

(1) Placement of erosion protection as part of reclamation to comply with Criterion 6 of Appendix A of 10 CFR Part 40 - December 31, 2011.

(2) Projected completion of ground water corrective actions to meet performance objectives specified in the ground water corrective action plan - December 31, 2010.

[Applicable Amendments: 23, 39]

C. Any license amendment request to revise the completion dates specified in Section A must demonstrate that compliance was not technologically feasible (including inclement weather, litigation which compels delay to reclamation, or other factors beyond the control of the licensee).

D. Any license amendment request to change the target dates in Section B above must address added risk to the public health and safety and the environment, with due consideration to the economic costs involved and other factors justifying the request such as delays caused by inclement weather, regulatory delays, litigation, and other factors beyond the control of the licensee.

36. All written notices and reports to NRC required under this license shall be addressed to: ATTN: Document Control Desk, Deputy Director, Decommissioning and Uranium Recovery Licensing Directorate, Division of Waste Management and Environmental Protection, Office of Federal and State Materials and Environmental Management Programs, Mailstop T8-F5, U.S. Nuclear Regulatory Commission, Washington DC 20555-0001. Required telephone notification shall be made to the NRC Operations Center at (301) 816-5100, unless otherwise specified.

[Applicable Amendment: 38, 41]

FOR THE U.S.NUCLEAR REGULATORY COMMISSION

/RA/

Date: **9/23/10**

Keith I. McConnell, Deputy Director
Decommissioning and Uranium Recovery
Licensing Directorate
Division of Waste Management
and Environmental Protection
Office of Federal and State Materials
and Environmental Management Programs