

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 ² P.O. Box 3077 Gallup, New Mexico 87305-3077	3. License Number SUA-1475, Amendment No. 30
	4. Expiration Date Until NRC determines site Reclamation is adequate
	5. Docket or Reference No. 40-8907

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 the attachment to this license 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 the attachment to this license entitled, "Sample Format for Reporting Monitoring Data." [Applicable Amendment: 21]
- 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 license shall provide

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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 nonroutine 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.

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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. The attachment to this license entitled, "Recommended Outline for Site Specific Reclamation and Stabilization Cost Estimates," 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 licensee's currently approved surety, a performance bond issued by the, American Home Assurance Company of New York, in favor of the NRC, shall be continuously maintained in an amount of no less than \$1,468,787 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 established trust is with the Federal Insurance Company.

The licensee shall also continuously maintain an irrevocable standby letter of credit in favor of the United States Environmental Protection Agency, in an amount no less than \$2,000,000, for the purpose of complying with 10 CFR 40, Appendix A, Criterion 9. The issuing institution shall be an entity which has the authority to issue such instruments and whose operations are regulated and examined by a Federal or State agency. The licensee shall inform the NRC of changes to this letter of credit within 30 days of any such change. The amount of this letter of credit shall not be reduced without prior NRC approval.

[Applicable Amendments: 13, 18, 22, 26, 27, 28, 30]

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- 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 35 µg/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-1-4; EPA Wells 1-28 and EPA-22A (excepting EPA Wells 6, 10, 16, 19, 20, 21, 22, 24 and 26); and Wells 411, 420, 501-B, 502-B, 504-B, 509-D, 515A, 516A, 517, 518, 604, 614, 619, 632, TWQ-90, TWQ-106D, TWQ-29A, TWQ-141, TWQ-142 and TWQ-143, on a quarterly frequency for chloride, nitrate, sulfate ammonia, manganese, calcium, magnesium, sodium, bicarbonate, potassium, field-pH, TDS and water level, and on a semiannual frequency for arsenic, beryllium, cadmium, chloroform, lead, lead-210, nickel, combined radium-226 and 228, selenium, thorium-230, uranium, gross alpha and vanadium. Well TWQ-126 shall be monitored for water level quarterly.

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 groundwater 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.

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- B. Comply with the following groundwater protection standards at point of compliance Wells GW-1, GW-2, 632, EPA-23, EPA-28, 509-D and EPA-22A in the alluvium; 614, 604, EPA-4, EPA-7 and 516-A in Zone 1; and 517, 518, EPA-3, 501-B and EPA-18 in Zone 3:

arsenic = 0.05 mg/l, beryllium = 0.05 mg/l, cadmium = 0.01 mg/l, chloroform = 0.001 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, selenium = 0.01 mg/l, thorium-230 = 5.0 pCi/l, uranium = 0.3 mg/l and vanadium = 0.1 mg/l.

- 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. Implement a corrective action program in Zone 3 in accordance with "Amendment 1, Reclamation Plan, License No. SUA-1475" submitted by letter dated July 26, 1988, with the exception that wells 608, 702, 720, 712, 713, 714 and 715 may be utilized as water level monitor wells rather than seepage collection wells. Implement a corrective action program in the alluvium in accordance with "Amendment 2, Reclamation Plan, License No. SUA-1475" submitted by letter dated March 29, 1989, with the objective of returning the concentrations of arsenic, beryllium, cadmium, chloroform, gross alpha, lead, lead-210, nickel, radium-226 and 228, selenium, thorium-230, uranium and vanadium to the concentration limits specified in Subsection (B). No corrective action program component, meeting the abandonment criteria stated in the March 29, 1989, submittal, shall be decommissioned without obtaining prior NRC approval. Additionally, a fourth seepage collection well shall be installed and operated in the alluvial aquifer as stated in the April 1, 1991, submittal.

The licensee shall on a semiannual frequency, submit a ground-water monitoring report as well as submit a corrective action program review, by December 31 of each year, that describes the progress towards attaining ground-water protection standards. In the 1994 corrective action program review, the effects of the modified seepage recovery efforts in Zone 3 shall be evaluated.

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

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]

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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 groundwater corrective action plan, as authorized by license Condition Nos. 34 and 30, respectively, in accordance with the following schedules.

- 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/m²/s above background - December 31, 1997.
- B. Reclamation, to ensure required longevity of the covered tailings and groundwater protection, shall be completed as expeditiously as is reasonably achievable, in accordance with the following target 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, 1997.
 - (2) Projected completion of groundwater corrective actions to meet performance objectives specified in the groundwater corrective action plan - December 31, 1997.

[Applicable Amendment: 23]

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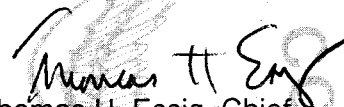
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- C. Any license amendment request to revise the completion dates specified in Section A must demonstrate that compliance was not technologically feasible (including inclement weather, litigation which compels delay to reclamation, or other factors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

FOR THE NUCLEAR REGULATORY
COMMISSION



Thomas H. Essig, Chief
Uranium Recovery and
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Division of Waste Management
Office of Nuclear Material Safety
and Safeguards

Date: May 9, 2000

