



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION IV
URANIUM RECOVERY FIELD OFFICE
BOX 26326
DENVER, COLORADO 80226

JAN -3 1991

URFO:DCW
Docket No. 40-8907
SUA-1475, Amendment No. 8
04008907280E

United Nuclear Corporation
ATTN: Mr. Edward Morales
P.O. Drawer QQ
Gallup, New Mexico 87301

Gentlemen:

Our office is in receipt of your amendment request of December 29, 1988, for the Church Rock Mill decommissioning plan. Based on your submittal and the supporting information submitted on April 10, 1990, we have concluded that the plan is acceptable.

Pursuant to Title 10, Code of Federal Regulations, Part 40, Source Material License SUA-1475 is hereby amended by modifying License Condition No. 26 to read as follows:

26. The licensee shall decommission the Church Rock Uranium Mill in accordance with the decommissioning plan submitted by letter dated December 29, 1988, as revised by submittal dated April 10, 1990. Also, within sixty (60) days of completion of decommissioning activities, the licensee shall submit for NRC review a final report discussing in detail the demolition and disposal activities and radiation safety program utilized during decommissioning work. The submittal shall include summaries of health physics monitoring data, occupational exposure calculations, bioassay results, and worker training activities.

All other conditions of this license shall remain the same. The license is being reissued in its entirety to incorporate the correction specified above.

Public

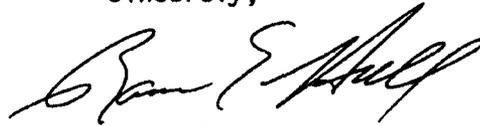
United Nuclear Corporation

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The issuance of this amendment was discussed by telephone between Ed Morales of your staff and Dana Ward of this office on November 26, 1990.

Sincerely,

A handwritten signature in cursive script, appearing to read "Ramon E. Hall".

Ramon E. Hall
Director

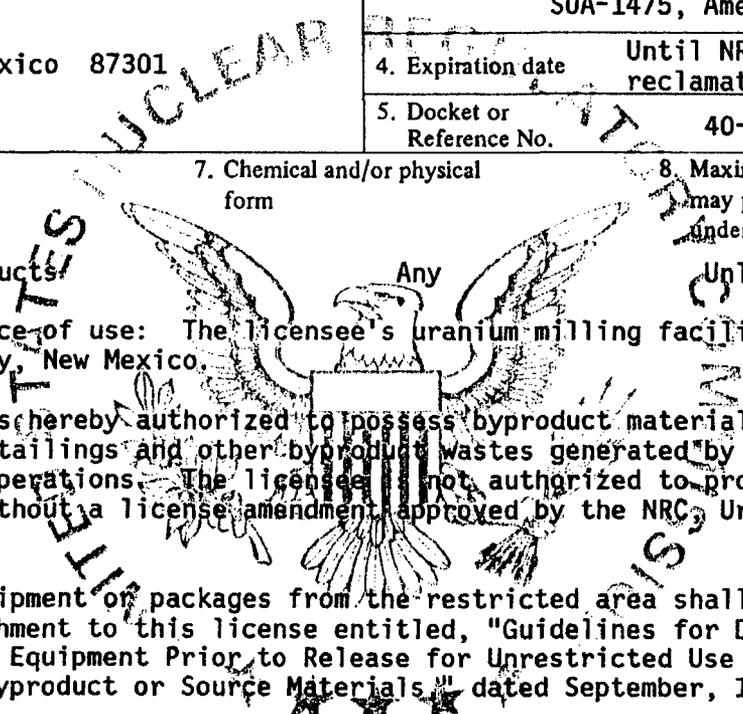
Enclosure:
Source Material License SUA-1475

cc:
Juan Velasquez

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, 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. 8
2.	P.O. Drawer QQ Gallup, New Mexico 87301	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. The licensee is not authorized to produce uranium concentrate without a license amendment approved by the NRC, Uranium Recovery Field Office.			
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 or Source Materials" dated September, 1984.			
12. The results of all effluent and environmental monitoring required by this license shall be reported in accordance with 10 CFR 40, Section 40.65 with copies of the report sent to the NRC, Uranium Recovery Field Office. Monitoring data shall be reported in the format shown in the attachment to this license entitled, "Sample Format for Reporting Monitoring Data."			
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 activities, and obtain prior approval of the NRC in the form of a license amendment.			



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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. The licensee shall not make any changes to the present tailings retention system which may affect the structural integrity of the tailings dam without specific prior approval of the NRC, Uranium Recovery Field Office, in the form of a license amendment.
16. The licensee shall implement an interim stabilization program for the control of blowing tailings for all tailings not covered by standing water. This program shall include written operating procedures and shall prevent or minimize dispersal of blowing tailings to the extent reasonable achievable and in accordance to Criterion 8 of 10 CFR 40, Appendix A. The effectiveness of the control method used shall be evaluated weekly by means, of a documented tailings area inspection, and corrective actions taken and documented in response to inspection findings. The licensee shall conduct a survey to determine the presence, if any, of windblown tailings in the northwest corner of section 1, T16N, R16W, and submit the results and clean up action proposed, if needed, by December 31, 1988. The licensee shall by December 31, 1988 propose a cleanup program for all areas outside the tailings area that have been impacted by windblown tailings which includes the licensee's action to assure continued compliance with Criterion 8 of 10 CFR 40, Appendix A.
17. The licensee is hereby exempted from the requirements of Section 20.203(e)(2) of 10 CFR 20 for areas within the mill, provided that all entrances to the mill are conspicuously posted in accordance with Section 20.203(e)(2) and with the words, "Any area within this mill may contain radioactive material."
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 five (5) years.
19. The mill Radiation Safety Officer (RSO), who is responsible for radiation safety aspects of mill decommissioning, 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."
20. Written procedures shall be established for activities associated with the in-plant radiation safety and environmental monitoring programs, e.g., bioassay

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analyses, instrument calibrations, exposure determinations, in-plant air sampling, ground-water sampling, etc. An up-to-date copy of each written procedure shall be kept in the mill area to which it applies.

All written procedures shall be reviewed and approved in writing by the RSO before implementation and whenever a change in procedure is proposed to ensure that proper radiation protection principles are being applied. In addition, the RSO shall perform a documented review of all existing site procedures at least annually.

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.
 - C. The supplemental radiological monitoring and sampling necessary prior to, during, and following completion of the work.
22. Occupational exposure calculations shall be performed and documented within one week of the end of each regulatory compliance period as specified in 10 CFR 20.103(a)(2) and 10 CFR 20.103(b)(2). Routine airborne ore dust and yellowcake samples shall be analyzed in a timely manner to allow exposure calculations to be performed in accordance with this condition. Non-routine ore dust and yellowcake samples shall be analyzed and the results reviewed by the RSO within two working days after sample collection.
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. All liquid effluents from mill decommissioning activities, with the exception of sanitary wastes, shall be discharged to the tailings impoundment.
25. The licensee shall maintain a NRC approved surety arrangement adequate to cover tailings stabilization and reclamation, mill decommissioning, mill site reclamation, the charge for long-term surveillance and control required by Criterion 10 of Appendix A to 10 CFR 40, and ground-water restoration as warranted. The licensee shall submit for NRC review and approval a proposed surety arrangement within three (3) months of NRC approval of a tailings area reclamation plan or approval of any revision thereto. The revised surety shall

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be in effect within three (3) months of written NRC approval. Furthermore, the licensee shall submit for NRC review any proposed revision or update to the surety arrangement at least two (2) months prior to the proposed effective date. Along with each proposed revision or update and at least annually, the licensee shall submit documentation showing a breakdown of the costs and the cost basis for tailings stabilization and reclamation, mill decommissioning, mill site reclamation, long term maintenance and monitoring, and ground-water restoration as warranted.

26. The licensee shall decommission the Church Rock Uranium Mill in accordance with the decommissioning plan submitted by letter dated December 29, 1988, as revised by submittal dated April 10, 1990. Also, within sixty (60) days of completion of decommissioning activities, the licensee shall submit for NRC review a final report discussing in detail the demolition and disposal activities and radiation safety program utilized during decommissioning work. The submittal shall include summaries of health physics monitoring data, occupational exposure calculations, bioassay results, and worker training activities.
27. DELETED by Amendment No. 2.
28. The licensee shall implement the radiation safety and environmental monitoring programs specified in the licensee's submittals dated February 13 and March 16, 1987, with the following modifications or additions:
 - A. A copy of the report documenting the ALARA audit discussed in the February 13, 1987 submittal shall be submitted to the Uranium Recovery Field Office, NRC, within 30 days of completion of the audit.
 - B. Action levels for surface and personnel contamination surveys shall be as specified in Table 1 of the licensee's Procedure EMP-8.
 - C. Instrument alarm points for alpha survey equipment shall be determined based on the efficiency of the instrument and the area of the probe.
 - D. EPA-certified laboratories shall be utilized for all sample analyses.
 - E. Lower limits of detection utilized for analysis of in-plant and environmental samples shall be in accordance with recommendations contained in Table 2 of Regulatory Guide 8.30 and Section 5 of Regulatory Guide 4.14, respectively.
 - F. Notwithstanding the ground-water monitoring specified in the licensee's submittals, the licensee shall perform the compliance monitoring program specified in License Condition No. 30.
29. The licensee shall comply with the following regarding the bioassay program:

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- A. The lower limit of detection to be utilized for the analysis of urine samples shall be 5 ug/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 ug/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, Uranium Recovery Field Office, as part of the semiannual report required by 10 CFR 40.65.
 - D. Anytime an action level of 35 ug/l for two consecutive specimens or 130 ug/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, Uranium Recovery Field Office, within thirty (30) days of exceeding the action level.
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-126, 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, cyanide, lead, lead-210, naphthalene, nickel, combined radium-226 and 228, selenium, thorium-230, uranium, gross alpha and vanadium.
- 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, Uranium Recovery Field Office, promptly.
- B. Comply with the following ground-water 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:

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arsenic = 0.05 mg/l, beryllium = 0.05 mg/l, cadmium = 0.01 mg/l, chloroform = 0.001 mg/l, cyanide = 0.005 mg/l, gross alpha = 15.0 pCi/l, lead = 0.05 mg/l, lead-210 = 1.0 pCi/l, naphthalene = 0.001 mg/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, amendment request, 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, as well as 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, cyanide, gross alpha, lead, lead-210, naphthalene, 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.

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.

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, Uranium Recovery Field Office. 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.
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.
33. The licensee shall adhere to the schedule for cleanup of windblown tailings, interim stabilization and mill decommissioning; and adhere to the schedule for placement of the final reclamation cover and construction of flood diversion structures (pending NRC approval of those designs) in accordance to the document entitled, "Amendment 1, Reclamation Plan, License No. SUA-1475," submitted by letter dated July 26, 1988, as modified by submittal dated October 26, 1989.

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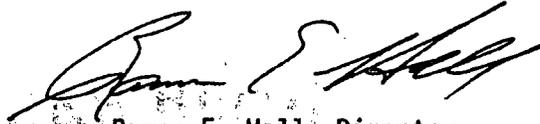
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The licensee shall submit the results of a final gamma survey and soil sampling program to verify cleanup of contaminated areas in accordance with Criterion 6 of Appendix A to 10 CFR 40 within 90 days of completion of cleanup of onsite windblown tailings in 1989 and offsite windblown tailings in 1990.

FOR THE NUCLEAR REGULATORY COMMISSION

Date

1-3-90



Ramon E. Hall, Director
Uranium Recovery Field Office
Region IV

