

40-8907/PJG/87/01/08/0

- 1 -

JAN 21 1987

Docket File 40-8907
LFMB/DCS/PDR
DBangart, RIV
FGarcia
LLW Branch, WMLU
HPettengill
URFO r/f

URFO: PJG
Docket No. 40-8907

UNC Mining and Milling
ATTN: Mr. Vincent Tonc
P.O. Drawer QQ
Gallup, New Mexico 87301

Gentlemen:

We are in receipt of your letter dated October 28, 1986, providing corrections to the draft existing license transmitted to you by letter dated September 26, 1986. The corrections have been incorporated into Source Material License SUA-1475 for the Churchrock Mill, a copy of which is enclosed for your use.

As discussed in our September 26 letter, we are also enclosing for your review and consideration a staff-prepared upgrade of your license. The upgrade of your license can best be accomplished through a request by UNC Mining and Milling for amendment of your license to incorporate conditions as agreed upon between our staffs. As we would prefer to accomplish the license upgrade prior to considering your forthcoming reclamation plan, we ask that you respond by February 13, 1987. In addition, please feel free to contact Pete Garcia of my staff at your convenience to discuss any of the proposed conditions or to arrange a meeting should you feel one would be beneficial.

8702060155 870121
PDR ADDCK 04008907
C PDR

E : 87/01/08

- 2 - JAN 21 1987

Should you have any questions, please contact Pete Garcia of my staff or me.

Sincerely,

HS

Harry J. Pettengill, Chief
Licensing Branch 2
Uranium Recovery Field Office
Region IV

Enclosures: As stated

cc: Mr. Michael J. Brennan
Holland and Hart
P.O. Box 8749
Denver, CO 80201

Radiation Protection Bureau
New Mexico Environmental Improvement Division

URFO	<i>HS</i>	URFO	<i>HS</i>				
RE	PJGarcia/rs	HPettengill					
RE	87/01/08		<i>1/12/88</i>				

DRAFT

Enclosure No. 2

DRAFT UPGRADED LICENSE

1. UNC Mining and Milling
Division of United Nuclear Corporation
2. P.O. Drawer QQ
Gallup, New Mexico 87301
3. SUA-1475, Amendment No. 1
4. Expiration Date: Until NRC determines site reclamation is adequate
5. Reference Number: 40-8907
6. Uranium byproducts
7. Any
8. 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 USNRC, Uranium Recovery Field Office.
11. Release of equipment or packages from the restricted area shall be in accordance with Attachment No. 1 to SUA-1475, "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 USNRC, Uranium Recovery Field Office. Monitoring data shall be reported in the format shown in the Attachment No. 2 to SUA-1475, "Sample Format for Reporting Monitoring Data."
13. Before engaging in any activity not previously assessed by the USNRC, 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 USNRC in the form of a license amendment.

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 without specific prior approval of the USNRC, Uranium Recovery Field Office, in the form of a license amendment.
16. The licensee shall implement an interim stabilization program 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 reasonably 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.
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 USNRC 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 nonoperational activities to include in-plant and environmental monitoring, bioassay analyses, and instrument

calibrations. An up-to-date copy of each written procedure shall be kept in the mill area to which it applies.

All written procedures for nonoperational activities 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 USNRC 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 USNRC approved surety arrangement adequate to cover tailings stabilization and reclamation, mill decommissioning, mill site reclamation, long term maintenance and monitoring, and ground water restoration as warranted. The licensee shall submit for USNRC review and approval a proposed surety arrangement within three (3) months of USNRC approval of a tailings area reclamation plan or approval of any revision thereto. The revised surety shall be in effect within three (3) months of written USNRC approval. Furthermore, the licensee shall

submit for USNRC 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 submit a detailed mill site decommissioning plan to the USNRC, Uranium Recovery Field Office, by June 1, 1987 for review and approval in the form of a license amendment.
27. The licensee shall immediately comply with the recommendations and requirements for an adequate environmental monitoring program contained in letter dated July 3, 1980, Mr. Thomas E. Baca, NMEID, to Mr. Thomas F. Bailey, United Nuclear Corporation, as subsequently modified by NMEID.

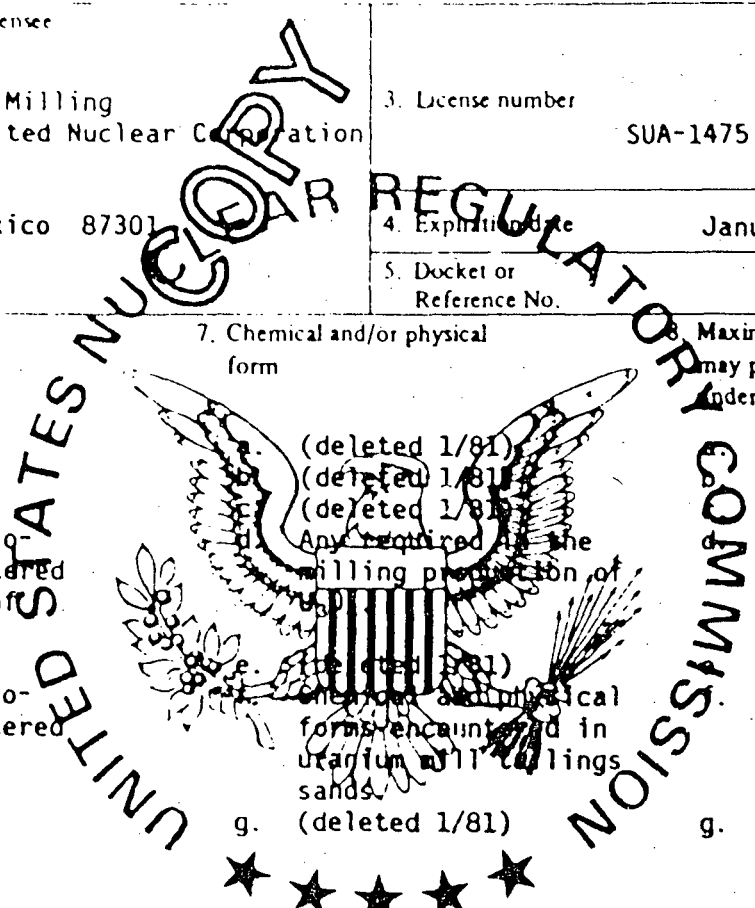
FOR THE NUCLEAR REGULATORY COMMISSION

Date _____
R. Dale Smith, Director
Uranium Recovery Field Office
Region IV

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		3. License number	SUA-1475
1. UNC Mining and Milling Division of United Nuclear Corporation		4. Expiration date	January 31, 1982
2. P.O. Drawer QQ Gallup, New Mexico 87301		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	
a. (deleted 1/81)	(deleted 1/81)	(deleted 1/81)	
b. (deleted 1/81)	(deleted 1/81)	(deleted 1/81)	
c. (deleted 1/81)	(deleted 1/81)	(deleted 1/81)	
d. All natural radio-isotopes encountered in the milling of natural uranium.	Any material required in the milling production of U ₃ O ₈	As necessary for the throughput authorized in Item 9.	
e. (deleted 1/81)	(deleted 1/81)	(deleted 1/81)	
f. All natural radio-isotopes encountered in uranium mill tailings sands.	One or more physical forms encountered in uranium mill tailings sands.	As necessary for the transfer authorized in Item 9F.	
g. (deleted 1/81)	g. (deleted 1/81)	g. (deleted 1/81)	
9. Authorized Use.			
A. (deleted 1/81)			
B. and C. (deleted 1/81)			
D. This license authorizes uranium ore processing at the licensee's Churchrock Uranium mill at a nominal throughput of 4000 tons per day in accordance with statements, representations and conditions of the licensee's application dated July 16, 1975; environmental report submitted August 25, 1975; and letters dated March 12, March 22, March 29, April 2, April 13, April 14, April 19, May 7, May 25, June 28, August 9 and August 25, 1976; and January 20, January 24, February 2, February 28 (two letters), March 11, March 14, and March 22, 1977 signed by H. John Abbiss and letters dated March 24, April 7, and April 25, 1977, signed by N. Savignac.			



8702060186 870121
PDR ADOCK 04008907
C PDR

**MATERIALS LICENSE
SUPPLEMENTARY SHEET**

License number
SUA-1475

Docket or Reference number
40-8907

COPY

- E. (deleted 1/81)
- F. This license authorizes the use of coarse tailing sands from United Nuclear Churchrock mill located at Section 2 T16N R16W for backfilling excavated mine stopes in the UNC Northeast Churchrock Mine and in the UNC Old Churchrock mine located at Section 35 T17N R16W - Section 17 T16N R16W, respectively, using approximately 700,000 tons on an operational test basis in accordance with the statements, representations, and conditions in the licensee's letter dated January 12, 1979, signed by H. J. Abbiss, and meeting agreements January 12, 1979 concerning license conditions between the Division and UNC.

G. (deleted 1/81)

10. Radioactive materials shall be used in the licensee's Churchrock mill northeast of Gallup, New Mexico.

11. (deleted 8/80)

12. Radioactive materials shall be used by, or under the supervision of, E. Morales, UNC Mining and Milling's authorized Radiation Safety Officer.

13. (deleted 1/81)

14. (deleted 1/81)

15. (deleted 1/81)

16. (deleted 1/81)

17. A. (deleted 1/81)

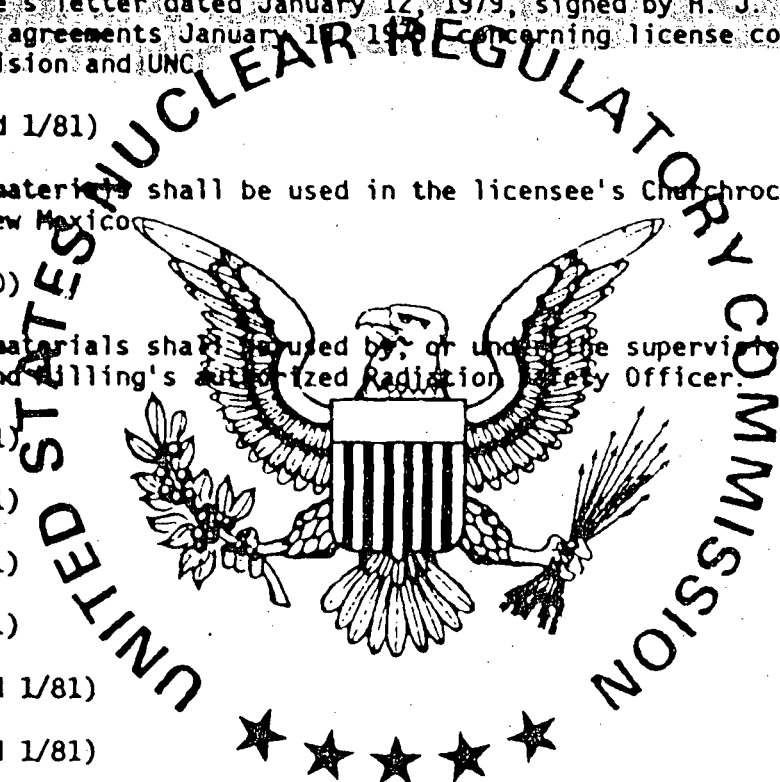
B. (deleted 1/81)

C. (deleted 1/81)

D. (deleted 1/81)

18. The licensee is hereby exempt from the requirement of 4-220.E.2. of the Radiation Protection Regulations for areas within the mill provided all entrances to the mill are conspicuously posted in accordance with 4-220.E.2. and with the words "ANY AREA WITHIN THIS MILL MAY CONTAIN RADIOACTIVE MATERIAL."

19. The licensee shall immediately notify the Program Manager, Radiation Protection Section, Environmental Improvement Agency, P.O. Box 2348, Santa Fe, New Mexico 87503, by telephone and in writing of any failure in an earth dam retention



MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number

SUA-1475

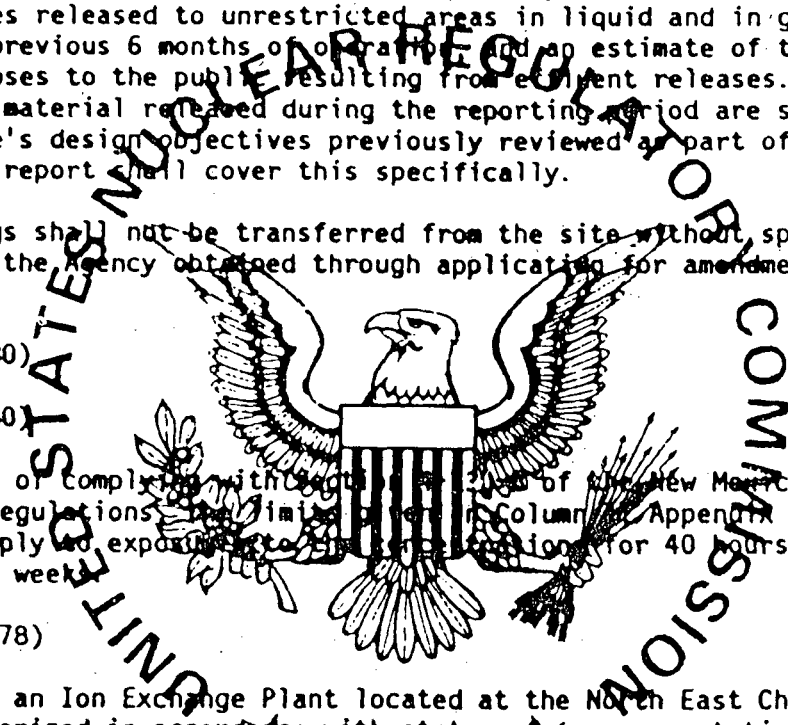
Docket or Reference number

40-8907

COPY

system which results in a release of radioactive material into unrestricted areas. This requirement is in addition to the requirements of Part 4, New Mexico Radiation Protection Regulations.

20. (deleted 8/80)
21. The licensee shall submit a report to the Agency within 60 days after January 1 and July 1 of each year, specifying the quantity of each of the principal radionuclides released to unrestricted areas in liquid and in gaseous effluents during the previous 6 months of operation, and an estimate of the maximum annual radiation doses to the public resulting from effluent releases. If quantities of radioactive material released during the reporting period are significantly above the licensee's design objectives previously reviewed as part of the licensing action, the report shall cover this specifically.
22. Mill tailings shall not be transferred from the site without specific prior approval of the Agency obtained through application for amendment of this license.
23. (deleted 6/80)
24. (deleted 8/80)
25. For purposes of compliance with the provisions of the New Mexico Radiation Protection Regulations, the limits in Column 1, Appendix A of Part 4 may be deemed to apply to exposure to radiation for 40 hours per week for a period of 13 weeks.
26. (deleted 12/78)
27. Operation of an Ion Exchange Plant located at the North East Church Rock Mine site is authorized in accordance with statements, representations, and conditions in letters dated November 30, 1977 signed by H. J. Abbiss and June 6, 1977 signed by N. Savignac.
28. (deleted 12/78)
29. (deleted 12/78)
30. Construction and operation of the tailings management system is authorized in accordance with statements, conditions and representations contained in the licensee's letters dated October 15, November 13, and November 30, 1978 signed by H. J. Abbiss and November 22, 1978 signed by N. Savignac and the report dated July 26, 1978, titled "Geotechnical and Design Development Investigation Report."
31. (deleted 8/80)



MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number

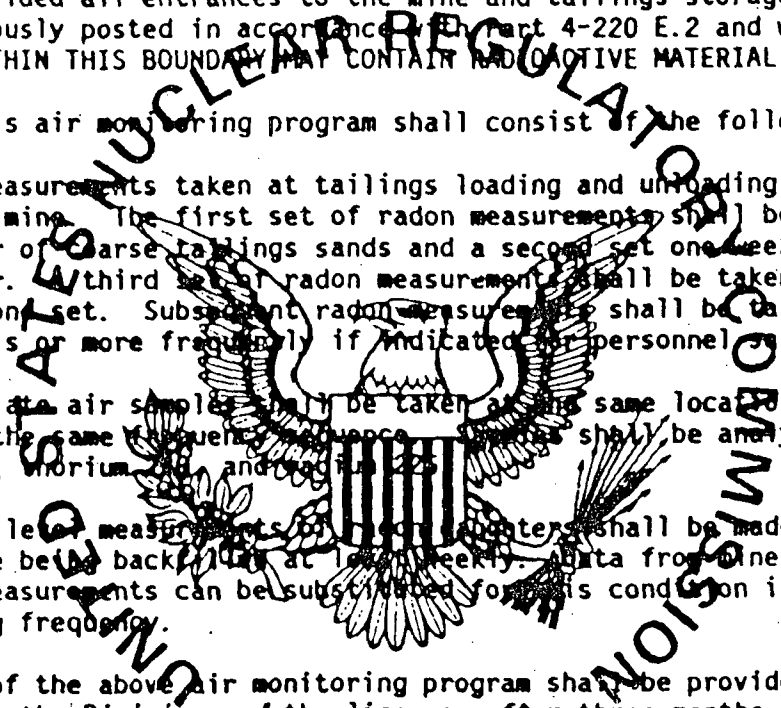
SUA-1475

Docket or Reference number

40-8907

COPY

32. Operation of an Ion Exchange Plant (IX) located adjacent to the Old Church Rock Mine is approved. Except as specifically provided otherwise by the license, the licensee shall comply with all statements, representations and procedures set forth in letters dated November 23, 1977 and May 5, 1978 signed by Mr. N. Savignac.
33. The licensee is hereby exempt from the requirements of NMEID Radiation Protection Regulations Part 4-220 E.2 for areas within the mine and tailings storage area at the mine provided all entrances to the mine and tailings storage area at the mine are conspicuously posted in accordance with Part 4-220 E.2 and with the words, "ANY AREA WITHIN THIS BOUNDARY MAY CONTAIN RADIOACTIVE MATERIAL."
34. The licensee's air monitoring program shall consist of the following:
 - A. Radon measurements taken at tailings loading and unloading areas and storage area at mine. The first set of radon measurements shall be taken prior to transfer of coarse tailings sands and a second set one week after start of transfer. A third set of radon measurements shall be taken two weeks after the second set. Subsequent radon measurements shall be taken at monthly intervals or more frequently if indicated for personnel safety.
 - B. Particulate air samples shall be taken at the same location as in 34A above and at the same frequency. Samples shall be analyzed for natural uranium, thorium, and radon-222.
 - C. Working level measurements of respirable dusts shall be made in the area of the mine being backfilled at least weekly. Data from mine safety working level measurements can be substituted for this condition if it meets the sampling frequency.
35. The results of the above air monitoring program shall be provided to the Division for review by the Division and the licensee after three months of operation. The above air monitoring program may be modified as a result of this review. Sampling should be keyed as near as possible to actual backfilling operation. The above air monitoring program shall be executed by the licensee instead of the program described in paragraph 4 of the licensee's January 12, 1979 letter.
36. Personnel at the loading, unloading and storage areas where the coarse tailings sands are handled shall wear personnel dosimeter badges.
37. Notwithstanding the original license expiration date, license authority for items 6F, 7F, 8F and 9F shall expire June 30, 1980.
38. Backfilling operations under this amendment may not proceed unless the operations are conducted in full compliance with New Mexico Water Quality Control Commission Regulations.



MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number

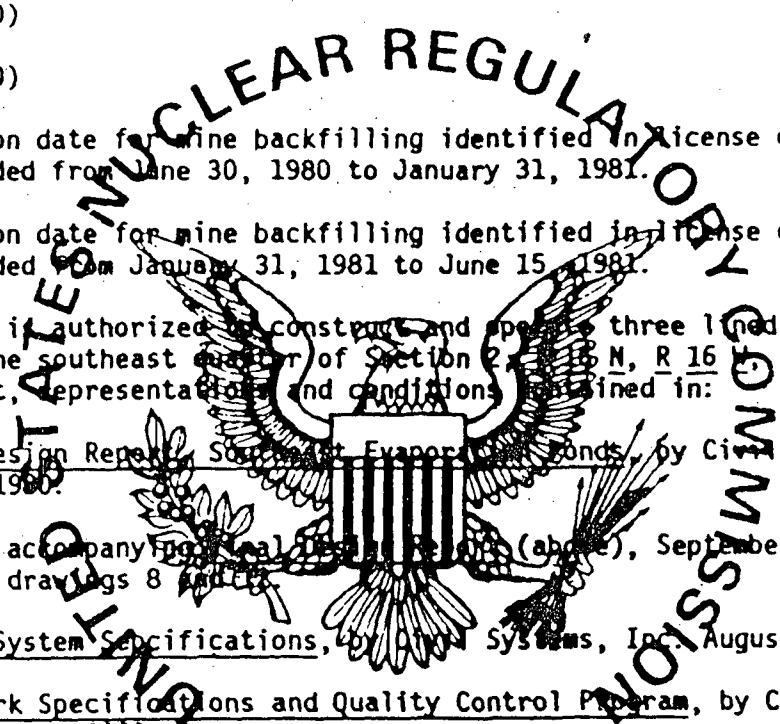
SUA-1475

Docket or Reference number

40-8907

COPY

39. Ground water sampling shall be as specified by NREID letter dated January 23, 1979, signed by Mr. Tom E. Baca, or as specified by an approved ground water discharge plan.
40. Drainage and runoff from coarse tailings sands prior to backfilling shall be collected and returned to tailings pond or coarse tailings sands shall be stored where seepage drains directly to the tailings pond.
41. (deleted 8/80)
42. (deleted 8/80)
43. The expiration date for mine backfilling identified in license condition 37 is hereby extended from June 30, 1980 to January 31, 1981.
44. The expiration date for mine backfilling identified in license condition 37 is hereby extended from January 31, 1981 to June 15, 1981.
45. The licensee is authorized to construct and operate three lined evaporation ponds located in the southeast quarter of Section 2, T. 18 N., R. 16 W. in accordance with the statement, representation, and conditions contained in:
 - a. Final Design Report, Southeast Evaporation Ponds, by Civil Systems, Inc., August 1980.
 - b. Drawing accompanying Final Design Report (above), September 1980, and revised drawings 8/11/80.
 - c. Lining System Specifications, by Civil Systems, Inc., August 1980.
 - d. Earthwork Specifications and Quality Control Program, by Civil Systems, Inc., August 1980.
 - e. Discharge Plan for the Southeast Evaporation Ponds, by Science Applications, Inc., October 1980.
 - f. Environmental Report, Southeast Evaporation Ponds, by Science Applications, Inc., November 4, 1980.
 - g. Letter, January 9, 1981, Thomas M. Hill of UNC to Kent Breese, EID.
 - h. Letter, February 13, 1981, Thomas M. Hill of UNC to Gerald Stewart of EID.
 - i. Letter, May 8, 1981, Thomas M. Hill of UNC to Maxine Goad, EID.



MATERIALS LICENSE
SUPPLEMENTARY SHEET

Licenses number

SUA-1475

Docket or Reference number

40-8907

COPY

- j. Letter, June 3, 1981, Thomas M. Hill of UNC to Maxine Goad, EID, with attached letter, May 12, 1981, Donald G. Silva of Science Applications, Inc., to Thomas M. Hill of UNC.

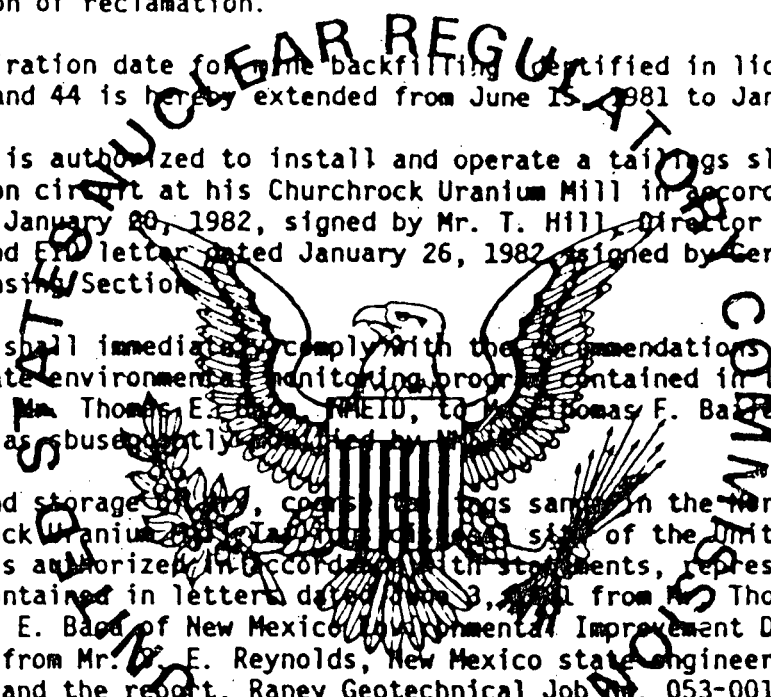
Design, construction and operation of the evaporation ponds shall be in accordance with approval by the New Mexico State Engineer. Operation shall be in accordance with an approved ground water discharge plan. Final detailed reclamation plans must be furnished to and approved by the Division prior to implementation of reclamation.

- 45. a. The expiration date for mine backfilling identified in license conditions 37, 43 and 44 is hereby extended from June 15, 1981 to January 31, 1982.

- 46. The licensee is authorized to install and operate a tailings slurry neutralization circuit at his Churchrock Uranium Mill in accordance with the UNC letter dated January 20, 1982, signed by Mr. T. Hill, Director of Tailings Management and EID letter dated January 26, 1982 signed by Gerald W. Stewart, Uranium Licensing Section.

- 47. The licensee shall immediately comply with the recommendations and requirements for an adequate environmental monitoring program contained in letter dated July 3, 1980, Mr. Thomas E. Baggett, EID, to Mr. Thomas F. Bailey, United Nuclear Corporation, as subsequently amended by Mr. ...

- 48. Deposition and storage of ... in the North Pond area of the Church Rock Uranium Mill ... of the United Nuclear Corporation is authorized in accordance with statements, representations and conditions contained in letters dated ... from Mr. Thomas M. Hill of UNC to Mr. Thomas E. Baggett of New Mexico Environmental Improvement Division and June 8, 1981 from Mr. E. Reynolds, New Mexico state engineer, to Mr. Thomas M. Hill of UNC, and the report, Raney Geotechnical Job No. 053-001.



FOR THE NUCLEAR REGULATORY COMMISSION

R. Dale Smith
 R. Dale Smith, Director
 Uranium Recovery Field Office
 Region IV

Date JAN 21 1987

- j. Letter, June 3, 1981, Thomas M. Hill of UNC to Maxine Goad, EID, with attached letter, May 12, 1981, Donald G. Silva of Science Applications, Inc., to Thomas M. Hill of UNC.

Design, construction and operation of the evaporation ponds shall be in accordance with approval by the New Mexico State Engineer. Operation shall be in accordance with an approved ground water discharge plan. Final detailed reclamation plans must be furnished to and approved by the Division prior to implementation of reclamation.

- 45. a. The expiration date for mine backfilling identified in license conditions 37, 43 and 44 is hereby extended from June 15, 1981 to January 31, 1982.
- 46. The licensee is authorized to install and operate a tailings slurry neutralization circuit at his Churchrock Uranium Mill in accordance with the UNC letter dated January 20, 1982, signed by Mr. T. Hill, Director of Tailings Management and EID letter dated January 26, 1982, signed by Gerald W. Stewart, Uranium Licensing Section.
- 47. The licensee shall immediately comply with the recommendations and requirements for an adequate environmental monitoring program contained in letter dated July 3, 1980, Mr. Thomas E. Baca, NMEID, to Mr. Thomas F. Bailey, United Nuclear Corporation, as subsequently modified by NMEID.
- 48. Deposition and storage of dry, coarse tailings sands in the North Pond area of the Church Rock Uranium Mill Tailings disposal site of the United Nuclear Corporation is authorized in accordance with statements, representations and conditions contained in letters dated June 3, 1981 from Mr. Thomas M. Hill of UNC to Mr. Thomas E. Baca of New Mexico Environmental Improvement Division and June 8, 1981 from Mr. S. E. Reynolds, New Mexico state engineer, to Mr. Thomas M. Hill of UNC, and the report, Raney Geotechnical Job No. 053-001.

FOR THE NUCLEAR REGULATORY COMMISSION

RS

Date JAN 21 1987

R. Dale Smith, Director
Uranium Recovery Field Office
Region IV

OFFICE	URFO <i>PJG</i>	URFO <i>HP</i>	URFO <i>RDS</i>				
NAME	PJGarcia/rs	HPettengill	RDSmith				
DATE	87/01/12	<i>82/01/01</i>	<i>1/31/87</i>				