

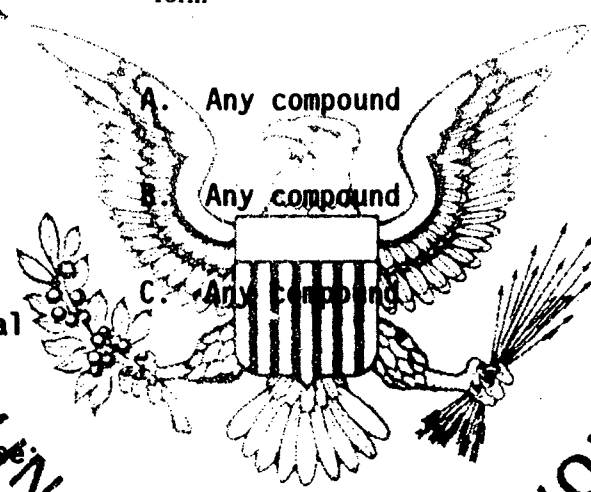
**Enclosure 1**

**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, 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.

<b>Licensee</b>			
1.	Kerr-McGee Corporation	3. License number	SNM-928 Amendment No. 10
2.	Cimarron Uranium Plant Kerr-McGee Center Oklahoma City, Oklahoma	4. Expiration date	June 30, 1995
		5. Docket or Reference No.	070-00925

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. Uranium enriched to $\leq 5.0$ wt. % in U-235	A. Any compound	A. 1200 grams of contained U-235
B. Uranium enriched to $> 5.0$ wt. % in U-235	B. Any compound	B. **100 grams of contained U-235
C. Natural and depleted uranium source material	C. Any compound	C. 2000 kilograms uranium
9. Authorized Place of Use: The licensee's Cimarron Uranium Plant at Crescent City, Oklahoma.		



\*These possession limits were discussed and agreed upon with W. J. Shelley of Kerr-McGee Nuclear Corporation on August 19, 1982.

\*\*If during the decontamination of the facilities and equipment at the Cimarron Plant, uranium solutions or compounds are generated that have a U-235 isotopic content greater than 5.0 wt. %, prompt action shall be taken to degrade these materials to below 5.0 wt. % U-235.

In accordance with letters dated September 4, 1987, March 21, 1988, June 29, 1988, October 9, 1989, February 1, 1990, May 15, 1990, February 25, 1993, April 19, 1994, May 31, 1994, June 15, 1994, July 20, 1994, July 21, 1994, August 8, 1994, September 21, 1994, and November 3, 1994, License Number SNM-928 is amended as follows:

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**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**

License number

SMN-928, Amendment No. 10

Docket or Reference number

070-00925

Condition 10 is amended to read:

- 10. For use in accordance with statements, representations, and conditions contained in Appendix A of the licensee's application dated September 13, 1976; supplements dated September 18, 1979, and March 29, 1982; and letters dated March 28, 1984, September 28, 1984, October 8, 1984, August 6, 1985, November 19, 1985, March 3, 1986, February 19, 1987, November 17, 1988, November 2, 1989; letters dated September 11, 1991, and June 24, 1992; and letters dated September 4, 1987, March 21, 1988, June 29, 1988, October 9, 1988, February 1, 1990, May 15, 1990, February 25, 1993, April 19, 1994, May 31, 1994, June 15, 1994, July 20, 1994, July 21, 1994, August 8, 1994, September 21, 1994, November 3, 1994.

Condition 11 is amended to read:

- 11. The airborne concentration of radioactivity in the worker's breathing zone shall be continuously monitored during operation and analyzed every shift or after each operation, whichever is shorter in time. If all sample data indicates a measured level greater than 40 DAC-hours, the Health and Safety Supervisor shall conduct an investigation of its cause and take corrective action. Furthermore, the permanently mounted air sampling equipment used to determine the concentration in the workers' breathing zone shall be evaluated for sensitivity at least once every 6 months and whenever a 100% test or change is made.

Condition 12 is amended to read:

- 12. Notwithstanding the statements in Appendix A of application dated March 29, 1982, regarding respiratory protection, the licensee shall comply with 10 CFR Part 20, Subpart H-"Respiratory Protection and Controls to Restrict Internal Exposure in Restricted Areas."

- 13. Notwithstanding the statements in subsection 3.2.5 of page 3-5 in Appendix A of the application dated September 13, 1976, the licensee shall calibrate the radiation survey instruments at least every six months.

- 14. The licensee shall not allow an individual whose skin or personal clothing is found contaminated above background radiation level to exit a controlled area without prior approval of the Standby Operation Manager or Health Physics and Safety Supervisor.

Condition 15 is amended to read:

- 15. Notwithstanding the statements in subsection 3.3.1, page 3-7, and Section 3.4 of page 3-14 in Appendix A of the application, release of facilities, equipment, and material from the plant to offsite for unrestricted use or from a controlled

**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**

License number

SMN-928, Amendment No. 10

Docket or Reference number

070-00925

area to an uncontrolled area onsite shall be in accordance with the NRC "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material," August 1987. Record of the decontamination survey and final disposition of any equipment shall be kept for inspection by NRC.

16. The licensee shall conduct routine radiological surface surveys of the facility on a monthly basis. Surface contamination in the controlled areas shall not exceed 5,000 dpm/100 cm<sup>2</sup> (removable alpha).

17. DELETED

Condition 18 is amended to read:

18. The licensee shall dispose of the radioactive contaminated solid waste generated by licensed activities at a licensed low-level waste disposal site.

19. The licensee is exempt from the provisions of 10 CFR 70.24 insofar as this section applies to materials held under this license.

Condition 20 is amended to

20. By May 1, 1995, the licensee shall submit a remediation plan for the remaining contaminated soil and structures on the site.

21. The licensee shall periodically inspect the area for inadvertent intrusion. The outer protected area fence must remain intact whenever a segment of inner area controlled area fence is removed. A temporary barrier consisting of rope, barbed wire, or other suitable materials shall be used to replace the segmented portions of the inner controlled area fence. The inner controlled area fence shall be reconstructed upon completion of the remediation process.

22. This condition deletes the restriction to backfill the two settling ponds (sanitary lagoons) as prohibited by License Condition 17, and authorizes the licensee to proceed with the breaching of the berms and the closure of the two sewage lagoons.

The settling ponds are described as the east and west sanitary lagoons occupying an area of approximately 6,600 square meters, located just east of the Plutonium Plant and northeast of the Uranium Plant.

This condition also authorizes the licensee to backfill the former burial ground. The former burial ground occupies approximately 8,600 square meters and is located at the northeast edge of the site. The former burial ground includes four trenches located within a fenced area.

**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**

License number

SMN-928, Amendment No. 10

Docket or Reference number

070-00925

- a. In collecting soil for backfill and cover of the lagoons and the former burial trenches, additional measurements will be made, including walkover surveys with a gamma scintillation instrument. An isotopic analyses of soil samples shall also be conducted. Both the lagoons and the burial trenches will be gridded on a 10 meter basis and evaluated for concentration of uranium not greater than 30 microcuries per gram, and concentrations of thorium not greater than 10 picocuries per gram.
- b. The soil used for fill material and cover material shall be compacted to minimize subsidence, and the cover material shall be contoured to the minimum slope that provides adequate drainage consistent with conforming to the original shape of the land.
- c. Cimarron Corporation (Kerr-McGee) shall provide to the Oklahoma State Department of Health whatever information is required to satisfy state requirements on the presence/absence of potential toxic substances and any other nonradioactive constituents of the fill and cover soil.
- d. The licensee shall reseed revegetate the bare soil cover of both remediated sites with vegetation designed to stabilize the soil cover consistent with preventing erosional gullyng of the protective cover.
- e. The licensee shall insure that the site-specific standards are applied in a manner that is consistent with the practices that are ALARA.

Condition 23 is added:

The licensee is authorized to bury up to 14,000 cubic meters (500,000 cubic feet) of soil contaminated with low-enriched uranium, in the Branch Technical Position Option 2 concentration range, in the location described in the licensee's October 9, 1989, submittal to the NRC. The Branch Technical Position Option 2 concentration range is up to 100 pCi/g for soluble uranium, and up to 250 pCi/g for insoluble uranium.

- a. If the average concentration of soil earmarked for disposal is determined to be above 100 pCi/g, the solubility of the uranium compounds in the soil in question must be determined using a method approved by the NRC. The acceptability of the soil for disposal as Option 2 material shall be ascertained by the formula:

Enriched Uranium Limit (pCi/g) =  $170 / [(F1)(0.68) - (1-F1)(2.0)]$  where F1 is the insoluble fraction.

For cases where the above equation results in a limit that is less than 100 pCi/g (i.e., when the soluble fraction exceeds 75 percent), the limit will be equal to 100 pCi/g.

**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**

License number

SMN-928, Amendment No. 10

Docket or Reference number

070-00925

- b. The average concentrations of thorium and plutonium in the soil earmarked for disposal shall not exceed 10 pCi/g and 1 pCi/g, respectively.
- c. A relatively impermeable barrier, such as a clay dam, shall be placed across the access road cut at the northwest corner of the soil disposal cell at project completion.
- d. Both the soil placed in the disposal cell and the cover material shall be compacted, in lifts not to exceed 0.3 meter (1 foot), to 95 percent of maximum dry density as determined by the Standard Compaction Test, ASTM D698. Density testing shall be performed over the entire lift thickness. The cell cover shall be contoured to the minimum slope that provides adequate drainage consistent with conforming to the original shape of the ridge and, nowhere shall exceed 6 percent slope. A permanent vegetative cover shall be promptly reestablished to help minimize erosion potential. The licensee shall periodically monitor the disposal area for subsidence, erosion, and status of the vegetative cover for at least 5 years, and promptly repair any problems noted. Any additional measures necessary to prevent recurrence of determined problems shall be undertaken.
- e. Notification shall be provided on the site to declare that uranium-contaminated soil has been buried on the site and record the volume, average uranium concentration, and exact location of the burial. This notification is not to be considered a restriction on the site's future use of the site. Furthermore, cairns (permanent markers) shall be placed at the corners of the disposal cell when the burial is complete.
- f. Licensee shall maintain and implement procedures and engineering controls, to the extent practicable, to achieve occupational doses and doses to members of the public that are as low as reasonably achievable.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

BY:

*John H. Austin* November 4, 1994  
 John H. Austin, Chief  
 Low-Level Waste and Decommissioning  
 Projects Branch  
 Division of Waste Management  
 Office of Nuclear Material Safety  
 and Safeguards

**Enclosure 2**

**Enclosure 3**