**Amendment No. 21**

## MATERIALS LICENSE

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and the applicable parts of Title 10, Code of Federal Regulations, Chapter I, Parts 19, 20, 30, 31, 32, 33, 34, 35, 36, 39, 40, 51, 70, and 71, and in reliance on statements and representations heretofore made by the licensee, a licensee 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 | Cimarron Environmental Response Trust | | 3. | License Number | SNM-928 |
| 2. | c/o Environmental Properties Management, LLC<br>9400 Ward Parkway<br>Kansas City, MO 64114 | | 4. | Expiration Date | Until terminated |
| | | | 5. | Docket or Reference Number | 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 ≤ 5.0 wt. percent in U-235 | A. Any compound | | A. 1200 grams of contained U-235 | |
| | B. Uranium enriched to > 5.0 wt. percent 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 of uranium | |
| | D. Thorium source material | D. Any compound | | D. 6000 kilograms of Thorium | |

* 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. percent, prompt action shall be taken to degrade these materials to below 5.0 wt. percent U-235.

9. Authorized Place of Use:

The licensee's Cimarron Uranium Plant, located 1/2 mile North of the Highway 33 and Highway 74 junction near Crescent, Oklahoma

10. For use in accordance with statements, representations, and conditions contained in letters dated April 12, 1995, July 5, 1995, April 25, 1996, August 28, 1996, and November 20, 1996; letters dated November 19, 1985, March 3, 1986, and November 2, 1989; letter dated June 24, 1992; letters dated September 4, 1987, February 25, 1993, April 19, 1994, May 31, 1994, July 20, 1994, September 21, 1994, and November 3, 1994; letters dated December 16, 1994, and June 5, 1995; letter dated January 23, 1996; letters dated August 9, 1995, and November 13, 1995; letters dated November 15, 1994, September 20, 1996, January 2, 1997, and May 16, 1997; letter dated May 6, 1997; letters dated August 22, 1990, and September 14,

**MATERIALS LICENSE**

License Number: SNM-928

Docket or Reference Number: 070-00925

Amendment No. 21

1990; letters dated April 25, 1996, and June 10, 1996; and letters dated July 25, 1995; January 28, 1997; February 10, 1998; December 5, 1997; June 26, 1998; and July 2, 1998; February 15, 2000; February 20, 2001; April 17, 2002; and May 10, 2002.

11. Deleted.

12. Deleted.

13. Deleted.

14. Deleted.

15. Deleted.

16. Deleted.

17. Deleted.

18. Deleted.

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

20. Deleted.

21. Deleted.

22. Deleted

23. The licensee is authorized to bury up to 14,000 cubic meters ($m^3$) (500,000 cubic feet) of soil contaminated with low-enriched uranium, in the 1981 Branch Technical Position (BTP) Option 2 concentration range, in the location described in the licensee's October 9, 1989, submittal to the NRC. The BTP Option 2 concentration range is up to 100 pCi/g for soluble uranium and up to 250 pCi/g for insoluble uranium.

    a. 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 the problems noted shall be undertaken.

    b. Notification shall be placed on the land title to declare that uranium-contaminated soil has been buried on the site and to record the volume, average uranium concentration, and exact location of the buried

**MATERIALS LICENSE**

| | |
|---|---|
| | License Number: SNM-928 |
| | Docket or Reference Number: 070-00925 |
| | Amendment No. 21 |

soil. This notification is not to be considered a restriction on the sale or future use of the site. Furthermore, cairns (permanent markers) placed at the corners of the disposal cell shall be maintained.

c. 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 ALARA.

24. Deleted.

25. The areas designated as "Phase I" in Drawing No. 95MOST_RF3, from the Licensee's November 13, 1995, letter to NRC, are released for unrestricted use and removed from License No. SNM-928. The Phase I areas are no longer licensed by NRC.

26. The Licensee shall conduct a radiation protection program in accordance with Annex A "Radiation Protection Plan," dated September 20, 1996, and supplements dated January 2, 1997, May 16, 1997, June 30, 1997, January 23, 1998, June 29, 1998, October 26, 1998, and December 11, 1998.

27. Release Criteria

a. The licensee is authorized to remediate the Licensee facility in accordance with the "Decommissioning Plan for Cimarron Corporation's Former Nuclear Fuel Fabrication Facility at Crescent, Oklahoma" dated April 19, 1995, with supplemental correspondence dated September 10, 1996, May 6, 1997, August 26, 1997, March 10, 1998, March 12, 1998, June 15, 1998, October 6, 1998, and March 4, 1999.

b. The release criteria for groundwater at the Cimarron site is 6.7 Bq/l (180 pCi/l) total uranium. NRC will not terminate Radioactive Material License SNM-928 until the licensee demonstrates that the total uranium concentrations in all wells have been below the groundwater release criteria for eight consecutive quarterly samples (the past 2 years). The Licensee will retain control of the property licensed under NRC Radioactive Material License SNM-928 until the groundwater release criteria are met. The Oklahoma Department of Environmental Quality may require continued groundwater monitoring of non-radioactive components under its authority.

c. The Licensee shall use the unrestricted use criteria listed in the August 1987 "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of License for Byproduct, Source or Special Nuclear Material" for surfaces of buildings and equipment, and the October 23, 1981, BTP "Disposal or Onsite Storage of Thorium or Uranium Wastes from Past Operations," for soils or soil-like material.

Specific values are as follow:

Surfaces of buildings and equipment -

5,000 dpm alpha/100 $cm^2$ (15.5 $in^2$), averaged over 1 $m^2$ (10.8 $ft^2$);
5,000 dpm beta-gamma/100 $cm^2$ (15.5 $in^2$), averaged over 1 $m^2$ (10.8 $ft^2$);
15,000 dpm alpha/100 $cm^2$ (15.5 $in^2$), maximum over 1 $m^2$ (10.8 $ft^2$);

**MATERIALS LICENSE**

License Number: SNM-928

Docket or Reference Number: 070-00925

Amendment No. 21

15,000 dpm beta-gamma/100 $cm^2$ (15.5 $in^2$), maximum over 1 $m^2$ (10.8 $ft^2$);
1,000 dpm alpha/100 $cm^2$ (15.5 $in^2$), removable;
1,000 dpm beta-gamma/100 $cm^2$ (15.5 $in^2$), removable

Soils -

| | |
|---|---|
| Natural uranium | 0.37 Bq/g (10 pCi/g) total uranium |
| Enriched uranium | 1.1 Bq/g (30 pCi/g) total uranium |
| Depleted uranium | 1.3 Bq/g (35 pCi/g) total uranium |
| Natural thorium | 0.37 Bq/g (10 pCi/g) total thorium |

Exposure rates are as follow:

Surfaces of buildings and equipment -

1.3 pC/kg (5 $\mu$R/hr) above background at 1 m (3.3 ft)

Soils -

2.6 pC/kg (10 $\mu$R/hr) average above background at 1 m (3.3 ft)
5.2 pC/kg (20 $\mu$R/hr) maximum above background at 1 m (3.3 ft)

Soils and soil-like material with concentration exceeding the 1981 BTP Option 1 limits, but less than the Option 2 limits may be disposed in the onsite disposal cell in accordance with License Condition 23.

The licensee shall conduct a final survey and sampling program to ensure that residual contamination meets the unrestricted use criteria in this license. Buildings, equipment, and outdoor areas shall be surveyed in accordance with NUREG/CR-5849, "Manual for Conducting Radiological Surveys in Support of License Termination." Radioactivity levels shall not exceed the averaging criteria in NUREG/CR-5849. Soils and soil-like materials with elevated activities exceeding the unrestricted use criteria shall be investigated to determine compliance with the averaging criteria in NUREG/CR-5849. These criteria address averaging concentrations over any 100 $m^2$ (1070 $ft^2$) area and use the $(100/A)^{1/2}$ elevated area method.

For areas surveyed prior to the issuance of NUREG/CR-5849, in the applicable final survey report, the licensee shall describe the survey methods used and provide the applicable references.

For Waste Ponds 1 and 2 in Phase III Subarea O, the licensee may use the "Method for Surveying and Averaging Concentrations of Thorium in Contaminated Subsurface Soils" (reference NRC letter dated February 25, 1997) for volumetric concentration averaging of enriched uranium in soils.
For concrete rubble located in Phase II and Phase III subareas, the licensee may use the concentration averaging for concrete rubble as described in submittals dated March 10, 1998, June 15, 1998, and October 6, 1998.

**MATERIALS LICENSE**

License Number: SNM-928

Docket or Reference Number: 070-00925

Amendment No. 21

Material that exceeds the above averaging criteria shall be removed and shipped off-site to a licensed low-level radioactive waste disposal site.

d. Access gates to the Cimarron facility shall be locked and secured when no personnel are onsite and fences and locks will be maintained.

e. The licensee is authorized to make certain changes to the NRC-approved Decommissioning Plan (DP) and Radiation Protection Plan (RPP) without NRC's approval, if these changes are consistent with the ALARA principle and the decommissioning process. All changes shall be approved by the Cimarron ALARA Committee, subject to the following:

1. The licensee may, without prior NRC approval, and subject to the specified in Parts 2 and 3 of this condition:

   a. Make changes in the facility or process, as presented in the NRC-approved DP and RPP;

   b. Conduct tests or experiments not present in the NRC-approved DP applicable license conditions.

2. The licensee shall not be required to file an application for an amendment to the license when the following conditions are satisfied;

   a. The change, test, or experiment does not conflict with requirements specifically stated in the license (excluding those aspects addressed in Part 1 of this condition), or impair the licensee's ability to meet all applicable NRC regulations;

   b. There is no degradation in safety or environmental commitments addressed in the NRC-approved DP or RPP, or have a significant adverse effect on the quality of the work, the remediation objectives, or health and safety; and

   c. The change, test, or experiment is consistent with the conclusions of actions analyzed in the Environmental Assessment (dated July 29,1999) and Safety Evaluation Report (dated August 20, 1999).

3. If any of these conditions are not met for the change, test, or experiment under consideration, the licensee is required to submit a license amendment application for NRC review and approval. The licensee's determinations as to whether the above conditions are met will be made by the facility's ALARA committee. All such determinations shall be documented. The licensee shall provide in

an annual report to NRC, a description of all changes, tests, and experiments made or conducted pursuant to this condition, including a summary of the safety and environmental evaluation of each such action. As part of this annual report, the licensee shall include any DP or RPP pages revised pursuant to this condition. The records shall be retained until license termination. The retained records shall include written safety and environmental evaluations, made by the ALARA committee, that provide the basis for determining whether or not the conditions are met.

The ALARA Committee shall consist of a minimum of three individuals, one of whom shall be designated as the ALARA Committee chairman. Of these three designees, one shall have expertise in management and shall have managerial and financial responsibility for the decommissioning of the site; one shall have expertise in decommissioning and shall be responsible for site decommissioning, and one shall be the site Radiation Safety Officer or equivalent, and shall ensure conformance to radiation safety and environmental requirements. The designee with managerial and financial responsibility shall be employed by the licensee's Trustee. The designees for decommissioning of the site and the Radiation Safety Officer or equivalent, shall be retained by the Trustee. Except for the representative of management, ALARA Committee members may be consultants.

The Radiation Safety Officer shall be named in the licensee's Radiation Protection Plan

4. Radiation protection program procedures or revisions to these procedures do not require review and approval by the ALARA Committee, but do require review and approval by the Radiation Safety Officer.

f. During the remediation operations, liquid and airborne effluents shall be sampled and analyzed to ensure that releases meet the requirements of 10 CFR Part 20, Appendix B.

28. The areas designated as Phase II Subarea J and Phase III Subarea O are released for unrestricted use and removed from License No. SNM-928. They are no longer licensed by NRC. Phase II Subarea J is delineated on Drawing No. MOST_RF3 (Revision 8) in the Subarea J FSSR dated September 5, 1997. Phase III Subarea O is delineated on Drawing No. MOST_RF3 (Revision 9) in the Subarea O FSSR (Subsurface) dated March 12, 1998, [which is the same as in or Drawing No. MOST_RF3 (Revision 13) in the Subarea O FSSR (Surface) FSSR dated February 9, 1999].

29. The areas designated as Phase II Subareas H and I and Phase III Subareas L and M are released for unrestricted use and removed from License No. SNM-928. They are no longer licensed by NRC. Phase II Subarea H is delineated on Drawing No. MOST-RF3 (Revision 12) in the Subarea H FSSR dated November 16, 1998. Phase II Subarea I is delineated on Drawing No. MOST-RF3 (Revision 15) in the Subarea I FSSR dated June 29, 1999. Phase III Subarea L is delineated on Drawing No. MOST-RF3 (Revision 10) in the Subarea L FSSR (Surface) dated July 27, 1998, [which is the same as Drawing No. 96MOST-RF15LS in the Subarea L FSSR (Subsurface) FSSR dated May 29, 1996]. Phase III Subarea M is delineated on Drawing No. MOST-RF3 (Revision 12) in the Subarea M FSSR dated December 31, 1998.

**MATERIALS LICENSE**

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|---|---|
| | License Number: SNM-928 |
| | Docket or Reference Number: 070-00925 |
| | Amendment No. 21 |

30. The area designated as Phase III Subarea K is released for unrestricted use and removed from License No. SNM-928. It is no longer licensed by NRC. Phase III Subarea K is delineated on Drawing No. MOST-RF3 (Revision 17), in the Subarea K FSSR, dated February 15, 2000.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date: February 14, 2011

**/RA/**
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