

May 4, 1995

Mr. Robert W. Sharkey, manager
Regulatory Compliance
Hematite Nuclear Fuel Manufacturing
Combustion Engineering, Inc.
3300 State Road P
Hematite, MO 63047

J. JACOBSON _____
FILE _____

SUBJECT: EVAPORATION PONDS DECOMMISSIONING (TAC NO. L30728)

Dear Mr. Sharkey:

In accordance with your application dated October 26, 1994, and supplement dated March 10, 1995, and pursuant to Part 70 to Title 10 of the Code of Federal Regulations, Materials License SNM-33 is hereby amended to incorporate the Hematite Evaporation Ponds Decommissioning Plan. Accordingly, Safety Condition S-1 is revised to include the dates of October 26, 1994, and March 10, 1995, and Safety Condition S-3 is deleted.

All other conditions of the license shall remain the same.

Enclosed are copies of the revised Materials License SNM-33 and the Safety Evaluation Report, which includes the Categorical Exclusion determination.

Sincerely,
Original signed by M. Tokar
for Robert C. Pierson, Chief
Licensing Branch
Division of Fuel Cycle Safety
and Safeguards, NMSS

Docket 70-36
License SNM-33
Amendment 4

Enclosures: 1. License SNM-33
2. Safety Evaluation Report

cc w/encls: Mr. M. A. Michelsen
Licensing Engineering
Combustion Engineering, Inc.
1000 Prospect Hill Road
Windsor, CT 06095-0500

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Docket 70-36 PUBLIC NRC File Center FCSS R/F
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NAME	SSoong	SS	VTharpe		MAdams	MYA	JParrott	MTokar		RPierson
DATE	5/3/95		5/3/95		5/2/95		5/4/95	5/4/95		5/04/95

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S-21

MATERIALS LICENSE

uant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, : of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 39, 40 and 70, and in reliance on statements and representations heretofore : by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special ar material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material rsons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions fied 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 latory Commission now or hereafter in effect and to any conditions specified below.

Licensee Combustion Engineering, Inc. 3300 State Road P Hematite, Missouri 63047	3. License number	SNM-33 Amendment 4
	4. Expiration date	July 31, 2004
	5. Docket or Reference No	70-36

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 maximum 5.0 weight percent in the U-235 isotope	A. Any (excluding metal powders)	A. 8,000 kilograms contained U-235
B. Uranium, enriched to any enrichment in the U-235 isotope	B. Any (excluding metal powders)	B. 350 grams contained U-235
C. Source material (uranium and thorium)	C. Any (excluding metal powders)	C. 50,000 kilograms
D. Cobalt-60	D. Sealed sources	D. 40 millicuries,
E. Cesium-137	E. Sealed sources	E. 500 millicuries
F. Mixed activation and fission product calibration sources including Am-241	F. Solid sources	F. 200 microcuries
G. Californium-252	G. Sealed sources	G. 4 milligrams

Authorized place of use: The licensee's existing facilities in Hematite, Missouri, as described in the license renewal application.

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License Number	SNM-33, Amendment 4
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10. The license shall be deemed to contain two sections: Safety Conditions and Safeguards Conditions. These sections are part of the license, and the licensee is subject to compliance with all listed conditions in each section.

FOR THE NUCLEAR REGULATORY COMMISSION

Michael Tohar
for

Date: May 4, 1955

By: Robert C. Pierson
Division of Fuel Cycle Safety
and Safeguards, NMSS
Washington, DC 20555

**MATERIALS LICENSE
SUPPLEMENTARY SHEET**

License Number

SNM-33, Amendment 4

Docket or Reference Number

70-36

SAFETY CONDITIONS

SAFETY CONDITIONS

- S-1. Authorized use: For use in accordance with the statements, representations, and conditions in Chapters 1 through 8 of the application dated October 29, 1993, and supplements dated November 24, 1993; January 14, January 28, March 21, April 20, June 14, October 24, and October 26, 1994; and January 28, and March 10, 1995.
- S-2. The licensee shall conduct an evaluation to determine the source of the contamination to burial site well #4, as shown in Figure 13-2 of the application dated March 21, 1994, and shall identify the contaminants in the groundwater. The findings of the evaluation shall be submitted to the NRC within 180 days of the issuance of this renewed license.
- S-3. Deleted - Hematite Evaporation Ponds Decommissioning Plan approved by Amendment 4 dated May 1995.
- S-4. The licensee is hereby granted the special authorizations in Chapter 1, Section 1.6(a) through 1.6(g) of the renewal application.

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License Number

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SAFEGUARDS CONDITIONS

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Section 1.0 - Material Control & Accounting

SG-1.1 The licensee shall adhere to the commitments in Part I, Chapters 1.0 through 9.0, and Part II, Chapters 1 through 5, of its Fundamental Nuclear Material Control Plan dated January 1986, as revised by pages dated June 1987, May 1990, and April, May, September, and December 1993.

Future revisions to this Plan shall be made in accordance with 10 CFR 70.32(c) or 70.34.

SG-1.2 Notwithstanding the requirements of 10 CFR 74.31(c)(5) and section 5.3.1 of the Plan identified in Condition SG-1.1, the licensee may delay the start of its 1995 physical inventory beyond the currently scheduled deadline of August 15, 1995, so as to start on or before October 25, 1995. To compensate for this delay, the licensee's 1996 physical inventory shall be initiated no later than July 15, 1996.

Section 2.0 - Physical Protection for SNM of Low Strategic Significance

SG-2.1 The licensee shall follow the security plan entitled "Physical Security Plan for Protection of Nuclear Material of Low Strategic Significance" dated May 1980, as revised by Revision 3 dated November 1992 (letter dated November 12, 1992), and as revised in accordance with the provisions of 10 CFR 70.32(e).

SG-2.2 The licensee shall ensure that the surveillance tour, conducted by the guards or authorized person in accordance with Section 3.1.1, includes surveillance over the UF₆ outdoor storage area.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

DOCKET: 70-36

LICENSEE: Combustion Engineering (CE)
Hematite, Missouri

SUBJECT: SAFETY EVALUATION REPORT: APPLICATION DATED OCTOBER 26, 1994,
HEMATITE EVAPORATION PONDS DECOMMISSIONING PLAN

BACKGROUND

Condition S-3 of License SNM-33 requires CE to submit for Nuclear Regulatory Commission approval, a decommissioning plan (Plan) for the evaporation ponds. By letter dated October 26, 1994, CE submitted a Plan to satisfy this license requirement. On February 8, 1995, the staff requested additional information. In response to the staff's comments, CE provided supplemental information on March 10, 1995. Since CE has met Condition S-3 requirement, it should be deleted.

DISCUSSION

From 1958 to 1978, the CE Hematite facility used two evaporation ponds for low-level liquid waste containing uranium-bearing precipitates. These two ponds consisted of a primary pond and a secondary pond. Since that time, CE has initiated several remediation efforts and removed most of the sludge and rocks from the ponds. CE's 1987 and 1988 status reports indicated that the average uranium contamination in the primary pond was about 60 pCi/gm (max 674 pCi/gm) and 173 pCi/gm (max 745 pCi/gm) for the secondary pond. In 1992, CE conducted a comprehensive assessment of the remaining contamination in the two ponds. The result of this assessment is not in total agreement with previous analyses. The source of this difference cannot be definitively determined. In the subject Plan, CE proposes conducting additional characterization surveys on the ponds to better define the magnitude of contamination, prior to further remediation.

CE's Plan proposes that the target decontamination levels be consistent with Option 2 of the NRC's Branch Technical Position (BTP), "Disposal or Onsite Storage of Thorium or Uranium Wastes from Past Operation," (46 FR 52061, October 23, 1981). Specifically, the limits are 250 pCi/gm for insoluble uranium and 100 pCi/gm for soluble uranium, and exposure rates 1 meter above the surface will be less than 5 μ R/hr above background. After decontamination work is completed, CE will conduct a radiological survey to demonstrate that levels of contamination satisfy the BTP guidelines, as described above. The methodology of the survey will follow the guidelines in NUREG/CR 5849, "Manual for Conducting Radiological Surveys in Support of License Termination."

CE indicates that they are not seeking a release for unrestricted use of the pond areas. CE plans to maintain the ponds within the fenced controlled area of the Hematite facility. Well water in the vicinity of the ponds will be routinely sampled and analyzed to detect any sign of migration of uranium into the groundwater. CE's Plan includes an estimated completion date of August 1997 for the decontamination work.

CE's Plan was reviewed by the staff of the Licensing Branch and the Low Level Waste and Decommissioning Project Branch. The Plan is considered acceptable.

ENVIRONMENTAL REVIEW

The decontamination activities constitute a change in process operations. However, since CE has committed to use the NRC limits for both external exposure and soil, the staff has determined that CE's request meets the following conditions:

1. There are no significant change in the types or significant increase in the amounts of any effluents that may be released offsite,
2. There is no significant increase in individual or cumulative occupational radiation exposure,
3. There is no significant construction impact, and
4. There is no significant increase in the potential for or consequences from radiological accidents.

Accordingly, pursuant to 10 CFR 51.22(c)(11), neither an environmental assessment nor an environmental impact statement is warranted for this action.

CONCLUSION

The staff concludes that the proposed activities will have no significant adverse effect on the public health and safety or the environment. Approval of the amendment application is recommended.

The Region III staff has no objection to this proposed action.

Principal Contributors

Sean Soong
Mary Adams