



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

August 23, 1995

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

SUBJECT: REQUEST FOR TEMPORARY CHANGE OF UF_6 SAMPLING PROCEDURE
(TAC. NO. L30802)

Dear Mr. Sharkey:

In accordance with your application dated August 14, 1995, and pursuant to Part 70 to Title 10 of the Code of Federal Regulations, Materials License SNM-33 is hereby amended to grant a one-time exception to a commitment contained in your Fundamental Nuclear Material Control (FNMC) Plan. Accordingly, new Safeguards License Condition SG-1.4 is incorporated into your license, effective immediately, and reads as follows:

SG-1.4 Notwithstanding the commitment in Section 4.3.1 of the Plan identified in Condition SG-1.1 regarding receipt measurements of UF_6 , the licensee may, for the UF_6 shipment specifically identified in its August 14, 1995 letter (from R. W. Sharkey to R. C. Pierson), modify the methodology of determining receiver's values for uranium concentration and U-235 enrichment. In lieu of the measurements normally utilized for UF_6 shipper-receiver comparisons, the licensee may derive its U-235 enrichment measurement from two samples of the UO_2F_2 produced from each UF_6 cylinder in question, and may derive its percent uranium value by using a nominal (historical average) uranium element concentration for UF_6 receipts. The percent uranium and the U-235 isotopic weight fractions thus obtained will be applied to the license's cylinder weight measurements to obtain net weight of uranium element and U-235 isotope for each cylinder in the shipment. If no significant shipper-receiver difference (as defined in Section 7.2.5 of the licensee's FNMC Plan) exists, shipper's values may be booked by the licensee.

This deviation from a commitment in your FNMC Plan was requested and approved pursuant to 10 CFR 70.34. The granting of your request was based on our determination that your substitute measures were acceptable and justified in view of the specific circumstances.

S-26

AUG 28 1995

Mr. Robert W. Sharkey

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All other conditions to this license remain the same.

Enclosed are copies of revised Materials License SNM-33 and the Safeguards 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 8

Enclosures: 1. Materials License SNM-33
2. Safeguards Evaluation Report

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

DISTRIBUTION: w/encls (Control No. 480M)

Docket 70-36	PUBLIC	NRC File Center	FCSS r/f
NMSS r/f	GFrance, RIII	Region III	FCLB r/f
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NAME	DJoy:jm/mh		PShea		MAdams		SSoong		MTokar		RPierson	
DATE	8/23/95		8/23/95		8/23/95		8/23/95		8/23/95		8/23/95	

C = COVER

E = COVER & ENCLOSURE

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Mr. Robert W. Sharkey

2

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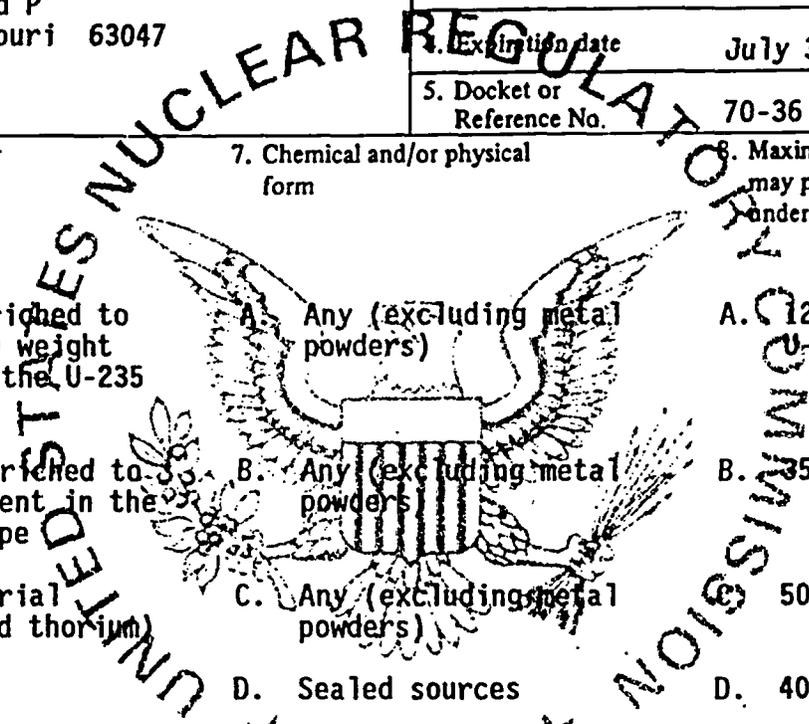
cc w/encls: Mr. M. A. Michelsen
Licensing Engineer
Combustion Engineering, Inc.
1000 Prospect Hill Road
Windsor, CT 06095-0500

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.

Licensee		3. License number	SNM-33 Amendment 8
1. Combustion Engineering, Inc.		4. Expiration date	July 31, 2004
2. 3300 State Road P Hematite, Missouri 63047		5. Docket or Reference No.	70-36

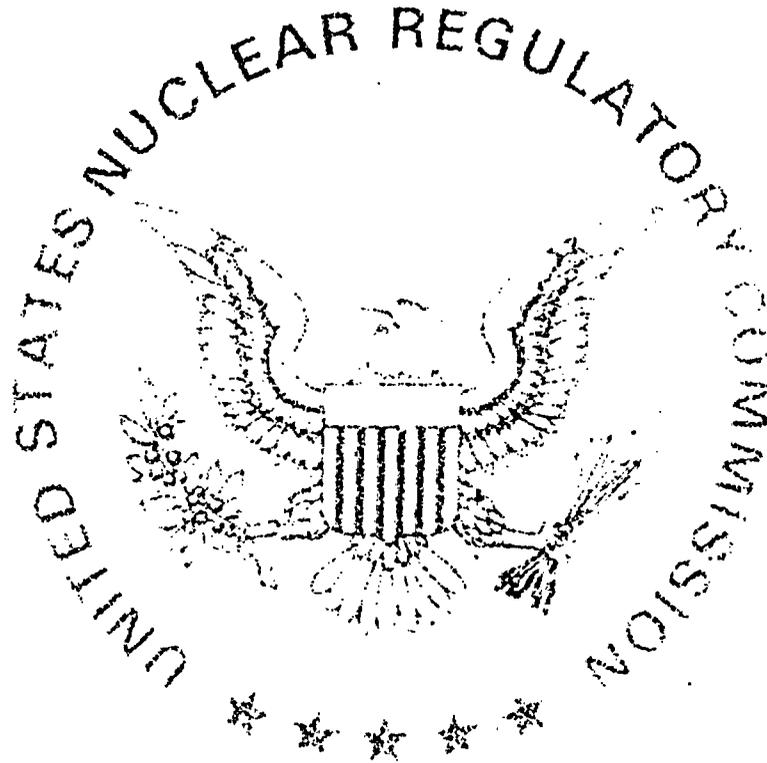
6. Byproduct, source, and/or special nuclear material	7. Chemical and/or physical form	8. Maximum amount that licensee may possess at any one time under this license
A. Uranium enriched to maximum 5.0 weight percent in the U-235 isotope	A. Any (excluding metal powders)	A. 12,000 kilograms U-235
B. Uranium, enriched to any enrichment in the U-235 isotope	B. Any (excluding metal powders)	B. 50 grams 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
9. 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 8
Docket or Reference number
70-36

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 T. Shear
for

Date: August 23, 1995

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

**MATERIALS LICENSE
SUPPLEMENTARY SHEET**

License number
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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, February 27, March 10, and April 24, 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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SAFEGUARDS CONDITIONS

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Section 1.0 - Material Control & Accounting

- SG-1.1 The licensee shall follow Sections 1.0 through 9.0 of its Fundamental Nuclear Material Control Plan dated April 28, 1995. Any revisions to this Plan shall be made only in accordance with the provisions of either 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.
- SG-1.3 Notwithstanding the requirement of 10 CFR 74.31(c)(8) to independently assess the effectiveness of the material control and accounting system at least every 24 months, the latest due date for issuance of the assessment team report for the next required assessment may be delayed from May 21, 1995, to July 21, 1995.
- SG-1.4 Notwithstanding the commitment in Section 4.3.1 of the Plan identified in Condition SG-1.1 regarding receipt measurements of UF₆, the licensee may, for the UF₆ shipment specifically identified in its August 14, 1995, letter (from R. W. Sharkey to R. C. Pierson), modify the methodology of determining receiver's values for uranium concentration and U-235 enrichment. In lieu of the measurements normally utilized for UF₆ shipper-receiver comparisons, the licensee may derive its U-235 enrichment measurement from two samples of the UO₂F₂ produced from each UF₆ cylinder in question, and may derive its percent uranium value by using a nominal (historical average) uranium element concentration for UF₆ receipts. The percent uranium and the U-235 isotopic weight fractions thus obtained will be applied to the licensee's cylinder weight measurements to obtain net weight of uranium element and U-235 isotope for each cylinder in the shipment. If no significant shipper-receiver difference (as defined in Section 7.2.5 of the licensee's FNMC Plan) exists, shipper's values may be booked by the licensee.

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

August 23, 1995

DOCKET: 70-36

LICENSEE: Combustion Engineering
Hematite, Missouri

SUBJECT: SAFEGUARDS EVALUATION REPORT: APPLICATION DATED AUGUST 14, 1995,
REQUEST FOR TEMPORARY CHANGE OF UF_6 SAMPLING PROCEDURE

BACKGROUND

By letter dated August 14, 1995, Combustion Engineering-Hematite (CEH) requested permission to change the means for establishing receiver's values for uranium concentration and U-235 enrichment relative to a single, specifically identified shipment of UF_6 expected to be received on September 5, 1995. The necessity for deviating from its normal procedure is due to the fact that no sample of the incoming UF_6 is available, and CEH (like other LEU fuel fabricators) does not have the means for sampling UF_6 cylinders. The shipment will consist of one, or perhaps two, cylinders.

DISCUSSION

In order to meet a certain customer's requirements (on short notice), CEH needs to obtain a limited quantity of UF_6 at a particular enrichment level that it can cross blend (after conversion to UO_2 powder) with UO_2 powder already on hand to obtain the customer's specified enrichment. The only UF_6 at the appropriate enrichment level and currently available for shipment is a batch of UF_6 of Russian origin located at Oak Ridge, Tennessee (and owned by the U.S. Enrichment Corporation).

Based on a commitment in its Fundamental Nuclear Material Control (FNMC) Plan, CEH derives its receipt measurements (for quantity of U and U-235) of all incoming UF_6 on the combination of:

- (1) its weighing of each cylinder received (CEH's gross weight minus certified tare weight equals net weight UF_6);
- (2) analysis for percent uranium by an outside laboratory (contracted by CEH) of a sample of the UF_6 taken by the supplier, and witnessed during the sampling operation by someone independent of the supplier; and
- (3) an additional analysis of the above sample for U-235 isotopic abundance (enrichment) by the same outside laboratory.

In this particular situation, of having no sample of the incoming UF_6 receipt, the licensee has proposed to weigh the cylinders and obtain an U-235 enrichment measurement on two samples of the UO_2F_2 powder generated from each