

October 23, 1989
LD-89-115

Docket No. 70-36
License No. SNM-33

Mr. Leland C. Rouse, Chief
Fuel Cycle Safety Branch
Division of Industrial and
Medical Nuclear Safety
Office of Nuclear Material
Safety and Safeguards
U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D. C. 20555

Subject: License Amendment Request Related to
Start-up and Test of New Pellet Lines

- References: (A) Letter LD-89-031, A. E. Scherer (C-E) to
L. C. Rouse (NRC), dated March 22, 1989
- (B) Letter, L. C. Rouse (NRC) to J. A. Rode (C-E),
dated July 28, 1989
- (C) Letter, LD-89-049, A. E. Scherer (C-E) to
L. C. Rouse (NRC), dated May 1, 1989

Dear Mr. Rouse:

In Reference (A), Combustion Engineering submitted a license amendment request for start-up testing with depleted uranium in the new pellet lines at the fuel manufacturing facilities in Hematite, Missouri. That request was approved by the Nuclear Regulatory Commission, via Reference (B), and we are now proceeding with qualification testing for pellet fabrication in the new Building 254.

Included in the testing is qualification of the blending operation in the new air mix blenders. To properly qualify this operation, two different U-235 enrichments of UO₂ powder are employed with the enrichment values as far apart as practical. The Nuclear Regulatory Commission is still reviewing the amendment requested in Reference (C).

R-29

OCT 27 1989

Mr. Leland C. Rouse
October 23, 1989

LD-89-115
Page 2

In order to accomplish the necessary testing, still without the need for use of materials which would involve criticality considerations, we request that the words "depleted uranium" be changed to "uranium source material," consistent with the definitions in 10CFR40.4(h) so that we may utilize natural uranium powder during these start-up tests.

Enclosure I lists the two license application pages that need to be modified in order to accomplish the stated purpose. Enclosure II provides the replacement pages. Ten (10) copies of the Enclosures I and II are provided for your use.

If I can be of any assistance in this matter, please do not hesitate to call me or Mr. J. F. Conant of my staff at (203) 285-5002.

Very truly yours,

COMBUSTION ENGINEERING, INC.



A. E. Scherer
Director
Nuclear Licensing

AES:jeb

Enclosures: As Stated

cc: G. France (NRC - Region III)
M. Horn (NRC)
D. McCaughey (NRC)
C. Bechhoefer (NRC - ASLB)
M. Dodson
J. Nixon
K. Sisk

COMBUSTION ENGINEERING, INC.
HEMATITE NUCLEAR FUEL MANUFACTURING FACILITY
REQUEST FOR LICENSE AMENDMENT
LIST OF AFFECTED PAGES

OCTOBER 23, 1989

Docket No. 70-36
License No. SNM-33
October 23, 1989

HEMATITE NUCLEAR FUEL MANUFACTURING FACILITY

REQUEST FOR LICENSE AMENDMENT

Combustion Engineering requests that License No. SNM-33 for its Hematite Nuclear Fuel Manufacturing Facility be amended with the pages in Enclosure II. These pages modify the stated utilization of Building 254 by changing the words "Depleted Uranium" to "Uranium Source Material", consistent with the definition in 10CFR40.4(h), to allow the use of natural uranium, as was the original intent, in start-up testing of new pellet fabrication equipment in Building 254.

The license pages affected by this amendment request are listed as follows. The corrected pages are contained in Enclosure II.

LIST OF AFFECTED PAGES

DELETED PAGES

| <u>PAGE NO.</u> | <u>REV.</u> |
|-----------------|-------------|
| I.1-3a | 00 |
| II.1-13 | 02 |

ADDED PAGES

| <u>PAGE NO.</u> | <u>REV.</u> |
|-----------------|-------------|
| I.1-3a | 01 |
| II.1-13 | 03 |

Enclosure II to
LD-89-115

COMBUSTION ENGINEERING, INC.
HEMATITE NUCLEAR FUEL MANUFACTURING FACILITY
REQUEST FOR LICENSE AMENDMENT
PROPOSED LICENSE AMENDMENT PAGES

OCTOBER 23, 1989

| <u>Number</u> | <u>Name</u> | <u>Present Utilization</u> |
|---------------|--------------|---|
| 252 | South Vault | Radioactive waste storage |
| 254 | 254-1 | Uranium source material storage, blending, and pressing |
| | 254-2 | Uranium source material oxidation, reduction, dewaxing, and sintering |
| | 254-3 | Uranium source material grinding and pellet packaging |
| 255 | Pellet Plant | Pellet fabrication, storage, and packaging |
| 256 | 256-1 | Shipping and Receiving |
| | 256-2 | Storage |

1.4 (continued)

The Quality Control Laboratory is located in the southwest corner of Building 240. An area of approximately 2,500 square feet is utilized for testing of the chemical and physical properties of uranium oxide, powders, pellets and other materials.

Building 254 contains two parallel pellet production lines which are comprised of blending, pressing, sintering, grinding, and packaging operations. Additional equipment has been installed to recycle green and hard scrap. At this time only uranium source material will be processed.

Building 254 is surrounded on four sides. It adjoins the existing pelletizing building 255 on the east side, the warehouse building 256 on the south side, the women's locker room on the north side, and eventually the storage/utilities/office building 253 on the west side. The building measures 83 feet wide by 161 feet long. The roof is 23 feet high on the south end and stepped to 36 feet high on the north end. Building 254 is constructed with a free standing steel frame supported on shallow poured concrete spread footings, a concrete slab floor on grade and concrete block walls laterally tied to the steel frame. The block walls are shared where building 254 adjoins other buildings. Metal curtain walls with insulation are used on the exposed exterior walls of the high north end and on the high portions that rise above the block walls shared with adjoining buildings. Roofing is rigid insulating board over metal decking supported on prefabricated trusses carried on the steel building frame.