OCT 19 1989

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

Combustion Engineering, Inc.
ATTN: Mr. J. A. Rode, Plant Manager
Hematite Fuel Manufacturing
P.O. Box 107
Hematite, Missouri 63047

Gentlemen:

We have reviewed your license amendment application dated May 1, 1989, and supplement dated August 18, 1989. The enclosure to this letter identifies several issues which require additional information. Please submit your response to these comments in the form of revised pages to the application within 20 days of the date of this letter.

We will continue our review upon receipt of the information. If there are any questions regarding this matter, please contact Dave McCaughey of my staff at (301) 492-0669.

Sincerely,

Original Signed By

George H. Bidinger, Section Leader
Uranium Fuel Section
Fuel Cycle Safety Branch
Division of Industrial and
Medical Nuclear Safety, NMSS

Enclosure: As stated

cc w/encls:
Mr. A. E. Scherer, Director
Nuclear Licensing

Mr. C. R. Waterman, Vice President
and General Manager
Nuclear Fuel Manufacturing

Mr. C. B. Brinkman, Manager
Washington Nuclear Operations

Mr. H. E. Eskridge, Manager
Licensing, Safety and Accountability
Hematite Fuel Manufacturing

Distribution w/encl.
Docket 70-36
IMUF R/F
GFrance, RIII
SSoong

PDR
IMSB R/F
Region III

NRC File Center
VLTharpe
MHorn

NMSS R/F
DAMcCaughey
GHBidinger

OFC:IMUF:	IMUF:	IMUF: GHB
NAME:DAMcCaughey:mh:	VLTharpe:	GHBidinger:
DATE:10/19/89	10/19/89	10/19/89

OFFICIAL RECORD COPY

1/1

DF03

REQUEST FOR ADDITIONAL INFORMATION
APPLICATION DATED MAY 1, 1989, AND SUPPLEMENT DATED
AUGUST 18, 1989
COMBUSTION ENGINEERING, INC.
70-36

1. In Section 1.7, Part I, the application includes Building 253 as an authorized place of use. However, the NRC review and confirmation of CE's soil survey results for Building 250/253 have not been completed. Therefore, Building 253 should be removed from the application, and Building 250 should be reinstituted as an authorized place of use.

2. In Chapter 8, Part II, describe how dewpoint measurements provide information about the moisture content in the UO_2 powder coming out of the screw cooler. Also, describe the relationship of dewpoints of 15°C and 0°C to weight percent water.

3. In Section 8.3.4.1(d), Part II, the safety evaluation for filling the bulk storage hoppers does not provide for uranium in storage silos or blenders. However, there are no controls in place to assure that these silos and blenders will be empty. Provide these controls in Part I or reanalyze the system with full silos and blenders.

4. Validation of the calculation methods for k_{eff} calculations must be described and demonstrated. Reference to validation efforts by other organizations does not assure (a) that the codes perform the same on CE computers, (b) that the cross-section libraries are the same, (c) that the same calculation methods are used, etc. The validation effort should be done in accordance with ANSI/ANS-8.1-1983.

5. To demonstrate implementation of the double contingency principle criteria, the following must be provided:

   a. In Section 4.2.3, Part I, provide a commitment for calibration at specified maximum intervals of the instruments for moisture content verification. A second commitment should provide for dual, independent verifications of moisture content <u>prior</u> to transfer of material into non-favorable geometry containers.

   b. A commitment should be established in Chapter 4, Part I, of the application requiring that all moderation controlled vessels (e.g., bulk storage hoppers, conveyor storage cans, etc.) will be sealed to ensure maintaining dryness. Provisions to prevent introduction of moderation material when the vessels are open must be provided in Part I and described in Part II.

   c. Section 8.2.1, Part II, establishes that scrap recycle materials, which are to be charged to the Building 255 mill from 5-gallon pails, may contain up to 5 weight percent moisture. However, in Section 8.3.1, Part II, the moisture control criteria on pails of recycle material to be charged to the recycle hopper is 1 weight percent moisture. The use of the same pails with different sets of moisture control criteria is not a recommended nuclear criticality safety practice. Use of uniform criteria should be implemented. Please revise accordingly.

d. Section 8.3.3, Part II, describes the use of moisture detectors in the screw cooler hopper and the plant air supply. However, the application should describe actions to be taken in the event of moisture detector failure and actions to be taken in the event of an alarm of the moisture detector located at the exit of the dryer. Parts I and II should be revised accordingly.

e. Section 8.3.3.2, Part II, does not describe the moderator barrier controls while loading the recycle hopper into the transfer hood. Identify the barrier controls during recycle hopper loading and provide license commitments in Part I.

f. In Section 8.3.3.1, Part II, describe how representative sampling for moderator content in the receiver vessel will be performed and assured.

g. The analysis in Section 8.3.4.3, Part II, limits the storage of buckets of UO_2 on the second and third floors of Building 254 to 1 w/o water, 1 w/o starch, and 1 w/o zinc sterate. License commitments must be established in Chapter 4, Part I, to control the use and storage of hydrogenous materials on the second and third levels.