

R3/D2-34

SEP 5 1991

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

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

Gentlemen:

This letter refers to your application dated November 22, 1989, requesting renewal of Materials License No. SNM-33.

Our review of your application has identified additional information that is needed before the environmental assessment can be completed. The additional information (6 copies), specified in the enclosure, should be provided within 30 days of the date of this letter.

If you have any questions regarding this matter, please contact Elaine Keegan of my staff at (301) 492-3354.

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/encl:

Mr. A. E. Scherer, Vice President  
Nuclear Quality

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

Dr. R. S. Siudek, Vice President  
Nuclear Fuel

Mr. J. F. Conant, Manager  
Nuclear Materials Licensing

Mr. H. E. Eskridge, Manager  
Nuclear Licensing, Safety and  
Accountability

II-7

Distribution w/encl.

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NAME: EKeegan: mh:	VLTharpe:	GBidinger:
DATE: 9/4/91:	9/4/91:	9/5/91:

Request for Additional Information  
Application Dated November 22, 1989  
Combustion Engineering, Inc.  
Docket No. 70-36

Comments:

1. Page 5-1, Section 5.1.2, Air and Gaseous Effluents states that "Lower limit of detection (LLD) shall be no more than 10 percent of 10 CFR 20, Appendix B, limits."
  - a. Indicate which table from 10 CFR 20, Appendix B, is referenced.
  - b. LLD should be lower. Regulatory Guide 4.16 recommends that LLD should be <5 percent of 10 CFR 20, Appendix B, Table II, values.
  - c. Include action to be taken if LLD is not met.
2. Page 5-1, Section 5.1.3, Liquid Effluents - "The lower limit of detection shall be no more than 10 percent of 10 CFR 20, Appendix B, limits."
  - a. Indicate which table from 10 CFR 20, Appendix B, is referenced.
  - b. LLD should be lower. Regulatory Guide 4.16 recommends that LLD should be <5 percent of 10 CFR 20, Appendix B, Table II, values.
  - c. Include action to be taken if LLD is not met.
3. Page 5-3, Table 5-1, Environmental Monitoring Program, Operational Environmental Monitoring Program
  - a. Include action levels for environmental samples.
  - b. In the table, include new ground water wells around the burial site.
4. In Chapter 13, include a description of effluents and the environmental monitoring program. Relate sampling locations from Table 5-1 to data in tables in Chapter 13. In Chapter 5, include map with sampling locations.
5. Page 13-1, Section 13.1, Airborne Releases

Is the form of all uranium released in the gaseous effluents insoluble?  
What isotopes of uranium are present in the effluents?

Please provide:

1. Environmental data for 1989, 1990, and 1991.
2. Lung dose for nearest resident for 1989, 1990, and 1991.
3. Environmental fluoride data for 1989, 1990, and 1991.

4. Amount of HF released to environment during 1989, 1990, and 1991.
5. Average meteorology of site (frequency of direction, speed).
6. Current population estimates for area for 50-mile radius.
7. Reason why control limits for liquid effluents for alpha are  $3 \times 10^{-5}$   $\mu\text{Ci/ml}$  and beta  $2 \times 10^{-5}$   $\mu\text{Ci/ml}$ , while effluents discharged to Joachim Creek are limited to  $3 \times 10^{-6}$   $\mu\text{Ci/ml}$  per alpha and  $2 \times 10^{-6}$   $\mu\text{Ci/ml}$  beta.
8. State or federal permit for gaseous releases.
9. Dose calculations to demonstrate compliance with 40 CFR 190.10 for 1984 through 1990.
10. Height of plant exhaust stacks and amount of time stacks are in use.
11. Verification of location of nearest resident (distance, sector).
12. Are stack effluent samples representative of waste streams?
13. Analysis of environmental and effluent data. Also, address the following questions from Chapter 13 data tables:

Table 13-1

1. Clarify data units.
2. Why was there a decrease in stack monitoring alpha activity in 1983 and 1984 and then increases through 1988?
3. Provide documentation as to how site boundary concentrations are calculated.

Table 13-2

1. Clarify data unit from table - is it  $10^{-13}$  or  $10^{-15}$ ?
2. Why were there elevated results in 1985 and 1986?

Table 13-8

1. Explain reasons for elevated alpha results for:
  - 1985 - Nov, Dec
  - 1986 - Jan, Oct, Nov, Dec
  - 1987 - Jan, Feb, Jun, Jul
  - 1988 - May
2. Explain reason for elevated May 1988 beta results.

Table 13-11

Is sediment at outfall sampled and analyzed for radioactivity?

Table 13-14

1. Why does the level of fluoride always drop for the month of July?
2. What happened in 1988 to account for the increase in the amount of fluoride released?

Table 13-16

Explain reasons for elevated fluoride levels for:

1983 4th quarter - Station 12, 14  
1984 1st and 4th quarters - Station 14  
1986 1st quarter - Station 13  
1987 3rd quarter - Station 12

14. Elevation of the site and buildings where special nuclear material is used.
15. Provide annual Chi/Q for the site.
16. Date ground water sampling well south of the burial site was dug.
17. Include section in Safety Demonstration section regarding U-234 to U-235 ratio for material processed.
18. Amount of spent limestone produced annually.