

U.S. NUCLEAR REGULATORY COMMISSION
FINDING OF NO SIGNIFICANT IMPACT AND
NOTICE OF OPPORTUNITY FOR A HEARING
RENEWAL OF SPECIAL NUCLEAR MATERIAL
LICENSE SNM-33
COMBUSTION ENGINEERING, INC.
HEMATITE, MISSOURI
DOCKET 70-36

The U.S. Nuclear Regulatory Commission is considering the renewal of Special Nuclear Material License SNM-33 for the continued operation of the Combustion Engineering, Inc. (CE), Hematite Nuclear Fuel Manufacturing Facility, for 10 years.

SUMMARY OF THE ENVIRONMENTAL ASSESSMENT

Identification of the Proposed Action: The proposed action is the renewal of License SNM-33, allowing CE to continue manufacturing low-enriched nuclear fuel for 10 years. The current license authorizes CE to receive, possess, use, and transfer special nuclear material in accordance with 10 CFR Part 70 and source material in accordance with 10 CFR Part 40. This license also allows CE to deliver radioactive material to a carrier for transportation in accordance with 10 CFR Part 71. CE produces low-enriched (≤ 5 percent U-235) ceramic nuclear fuel for light-water cooled reactors.

The Need for The Proposed Action: The proposed action is needed for CE to continue to produce low-enriched nuclear fuel pellets which will ultimately be used by commercial nuclear power plants to produce electricity. Since CE is one of only a few facilities that manufacture nuclear fuel in this country, there remains a need for the fuel by the nuclear power industry.

Environmental Impacts of the Proposed Action: Airborne effluents from process areas and process equipment involving uranium in a dispersible form are

subject to air filtering, prior to release to the atmosphere. Effluents from the process areas are continuously collected on a particulate filter and are analyzed for gross alpha activity. The monitoring data for 1982 through September 1993 demonstrates that the levels of gross alpha activity released from the site do not exceed the limits specified in 10 CFR Part 20, Appendix B, Table II, Column 1.

There are no planned releases of radioactive liquid wastes from routine production processes. Liquids with low-uranium content, such as mop water, cleanup water, and grinder coolant water, are collected and then evaporated to recover the uranium. Liquids with higher uranium content are processed to recover the uranium, usually by precipitation and filtration. Process filtrates, including wet recovery system filtrate and spent scrubber solutions, are routed to a calibrated tank, mixed, sampled, and the filtrates are then evaporated, solidified with concrete, and packaged for shipment to a licensed burial site.

A potential source of radioactive liquid waste is from the laundry, sink and shower areas, and the chemistry laboratory. The laundry water is filtered and sampled prior to discharge to the sanitary sewer system. The water from change room sinks and showers is also discharged through the sanitary waste system. Effluents from the sanitary waste system enter the site creek immediately below the site pond dam. A grab sample of the water is taken each week and analyzed for gross alpha and beta activities. The chemistry laboratory discharges to the storm drain system. While analytical residues are recycled to recover the uranium and therefore do not contribute to the effluents, when the laboratory glassware is cleaned, small amounts of liquids wash down the sinks and are discharged to the storm drain system. The storm drain system discharges into the site pond which overflows to form the site creek. The overflow is sampled weekly and analyzed for gross alpha and beta.

Liquid effluent sample data for 1982 through September 1993 was reviewed and indicates that the results are a small fraction of the values set forth in 10 CFR Part 20, Appendix B, Table II, Column 2.

CE conducts an environmental sampling program to determine if site operations are impacting the environment. Air, soil, vegetation, surface water, and ground water samples are collected from various locations on or near the plant site. Review of the data for 1982 through September 1993 indicates there is no significant impact to the environment from manufacturing operations.

A dose assessment was performed to evaluate the impact from site operations to the maximally exposed individual who would be the nearest resident. The maximally exposed individual is located 950 feet (290 m), west-northwest of the plant site. The effective whole body dose for the maximally exposed individual is $3.31\text{E-}02$ mrem/year. The critical organ for this exposure would be the lungs, with a dose of $1.90\text{E-}01$ mrem/year. The annual dose received by the nearest resident is below the federal dose limits set forth in 10 CFR Part 20 and 40 CFR Part 190, 500 mrem/year and 25 mrem/year, respectively.

Conclusion: Liquid and airborne effluents released to the environment are well below all regulatory limits. Results of the environmental monitoring program have shown that environmental radiation levels are not increasing as a result of site operations. The total whole body dose received by the maximally exposed individual from site operations is well below federal limits. Therefore, the staff concludes that the impact to the environment and to human health and safety from manufacturing nuclear fuel at this site has been minimal.

Alternatives to the Proposed Action: The alternative to the proposed action would be to deny the license renewal. Not renewing the operating license would cause CE to cease operations and begin decontamination and decommissioning activities at the site. While terminating licensed activities

at CE may create a minimal positive effect on the immediate environment, the socioeconomic impact of denying the license would adversely affect the area because CE is one of the largest employers in the area. This alternative would be considered if there were public health and safety issues that could not be resolved to the satisfaction of the NRC.

Agencies and Persons Consulted: Staff utilized the application dated November 22, 1989, and additional information dated October 11, and December 16, 1991, and December 10, 1993. Staff toured the CE facility on August 18 and 19, 1990. The Region III inspector and CE staff were consulted in preparing this document. The staff also contacted personnel from the State of Missouri, Department of Natural Resources, Air Pollution Control Program.

Finding of No Significant Impact: The Commission has prepared an Environmental Assessment related to the renewal of Special Nuclear Material License SNM-33. On the basis of the assessment, the Commission has concluded that environmental impacts that would be created by the proposed licensing action would not be significant and do not warrant the preparation of an Environmental Impact Statement. Accordingly, it has been determined that a Finding of No Significant Impact is appropriate.

The Environmental Assessment and the above documents related to this proposed action are available for public inspection and copying at the Commission's Public Document Room at the Gelman Building, 2120 L Street NW, Washington, DC, and the Local Public Document Room located at the Jefferson College Library, 1000 Viking Drive, Hillsboro, MO.

OPPORTUNITY FOR A HEARING

Any person whose interest may be affected by the issuance of this renewal may file a request for a hearing. Any request for hearing must be filed with the Office of the Secretary, U.S. Nuclear Regulatory Commission, Washington,

DC 20555, within 30 days of the publication of this notice in the Federal Register; be served on the NRC staff (Executive Director for Operations, One White Flint North, 11555 Rockville Pike, Rockville, MD 20852), and on the licensee (Combustion Engineering, Inc., P.O. Box 107, Hematite, Missouri, 63047); and must comply with the requirements for requesting a hearing set forth in the Commission's regulation, 10 CFR Part 2, Subpart L, "Informal Hearing Procedures for Adjudications in Materials Licensing Proceedings."

These requirements, which the requestor must address in detail, are:

1. The interest of the requestor in the proceeding;
2. How that interest may be affected by the results of the proceeding, including the reasons why the requestor should be permitted a hearing;
3. The requestor's areas of concern about the licensing activity that is the subject matter of the proceeding; and
4. The circumstances establishing that the request for hearing is timely, that is, filed within 30 days of the date of this notice.

In addressing how the requestor's interest may be affected by the proceeding, the request should describe the nature of the requestor's right under the Atomic Energy Act of 1954, as amended, to be made a party to the proceeding; the nature and extent of the requestor's property, financial, or other (i.e., health, safety) interest in the proceeding; and the possible effect of any order that may be entered in the proceeding upon the requestor's interest.

Dated at Rockville, Maryland, this 17th day of March 1994.

FOR THE NUCLEAR REGULATORY COMMISSION

Robert C. Pierson, Chief
Licensing Branch
Division of Fuel Cycle Safety
and Safeguards, NMSS

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