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UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION V
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

REPLY TO ATTENTION OF:

26 JUN 1981

Mr. B. J. Youngblood, Chief
Licensing Branch N..1
Division of Licensing
Nuclear Regulator Commission
Washington, D.C. 20555

RE: 81-060-703
D-NRC-F06011-MI

Dear Mr. Youngblood:

We have completed our review of the Draft Environmental Impact Statement (EIS) for the Enrico Fermi Unit 2 Operating License. It is planned that fuel-loading of the Fermi plant will begin in November of 1982. The impacts associated with the application for an operating license are those related to the generation of electricity at this facility and not from construction activities. Our comments on this EIS deal with the impacts related to the plant's normal operation.

Based upon our review of the Draft Environmental Impact Statement, we have rated the project as LO (Lack of Objection) and classified the EIS as Category 1 (Sufficient Information). The date and classification of our comments will be published in the Federal Register in accordance with our responsibility to inform the public of our views on other agencies' projects.

We appreciate the opportunity to review this Draft EIS. When the Final EIS is available, please forward three copies to us. If you or your staff has any questions in regard to our comments, please contact Bill Franz at 886-6687 or commercially at 312/886-6687.

Sincerely yours,

William D. Franz

for Barbara Taylor Backley, Chief
Environmental Impact Review Staff
Office of Environmental Review

Attachment

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S1/1

Office of Environmental Review, U.S. Environmental Protection Agency
Region V's Comments on the Draft Environmental Impact Statement
for the Enrico Fermi Unit 2 Operating License

This Draft Environmental Impact Statement (EIS) has been written to assess the affects fuel-loading and power generation at this nuclear plant will have upon the environment. Enrico Fermi Unit 2 is a 3,428 megawatt thermal, 1150 megawatt electric boiling - water reactor. Exhaust steam will be condensed by circulating water through wet natural draft cooling towers; makeup water for the cooling system will be withdrawn from Lake Erie.

Water Quality Impacts

One of the most significant areas of potential environmental impact related to the operation of a power plant is the design and location of the intake structure. The intake structure for the Enrico Fermi plant is composed of an intake canal and flat traveling screens outside the pumphouse. The design of the intake structure has been approved by the Michigan Department of Natural Resources pending additional fish studies. These studies are to determine the fish loses at Fermi Unit 2 once the plant begins operation. The intake canal is a dike which extends into Lake Erie with its mouth open to the lake. The Final EIS should discuss whether or not consideration has ever been given to closing the mouth opening to the lake with a porous dike. A porous dike would act as a filter to aquatic organisms while permiting water to pass through the opening. The Final EIS should assess the benefits which could result from such a intake design modification and whether or not this modification is feasble.

The EIS has indicated the intake canal must be dredged periodically to maintain optimal depth within the canal. There is a need to determine the pollutional characterization of these sediments. The pollutional characterization will determine if special handling is required for disposal. The applicant should evaluate the sediments, using the E.P. Toxicity method described in the May 19, 1980 Federal Register, to determine if the material is hazardous, and a bulk sediment analysis should also be provided. From information in the Draft EIS, it appears that dredging has taken place periodically in the intake canal. The Final EIS should indicate the frequency of dredging, quantity of material, past pollutional characterization, and an environmental description of disposal site location. Information on previous dredging operations can provide an indication of future needs at the Fermi site.

Our Agency has recently published Effluent Guidelines for Steam Electric Generating Stations. These guidelines require the minimization of chlorine levels in the cooling water to control condenser fouling. Information should be provided on the ability of Detroit Edison to comply with these new Effluent Guidelines, and the levels of chlorine expected in the discharge. The EIS has indicated that there is the potential to have zero chlorine discharge. The Final EIS should indicate whether or not Detroit Edison will implement this program of zero discharge of chlorine.

The discussion on chlorination also indicates that the use of sodium sulfite as a dechlorinating agent has a tendency to reduce oxygen levels in the discharge water. To minimize this impact, consideration should be given to aerating the discharge prior to release to Lake Erie.

The discussion on dechlorination indicated another agent (sodium thiosulfate) could be substituted for sodium sulfite. Sodium thiosulfate has a longer reaction time, and does impart odors and tastes to the water. If sodium thiosulfate is used as a dechlorination agent, the discharge should be contained until the reaction has been completed.

The Michigan Water Quality Standards has established a mixing zone for the cooling tower blowdown as the area within the 1.67 C isotherm. This is discussed in Section 4.3.1.4 and Table 4.2. of the Draft EIS. Table 4.2 provides Nuclear Regulatory Commission and Detroit Edison Staff predictions on the size of the heated effluent plume. The plume sizes provided in Table 4.2 all exceed the State of Michigan's maximum plume size 1.67 C isotherm. However, the conclusion in the text indicates that the estimated plumes will be from 2 to 50 times smaller in area than the State Water Quality limits, and therefore, the impacts should not be adverse. We concur with your conclusion but find the text in Section 4.3.1.4 to be in error. Our calculations indicate the size of the 1.67 C isotherm to be 2.9x10 square meters not 2.91x10 square meters.

Radiation Impacts

The Draft EIS indicates the Enrico Fermi Unit 2 Nuclear Reactor meets the requirements of 10 CFR 50 Appendix I. The annual dose commitment to the general public in the unrestricted area for liquid effluent does not exceed 5 millirem to the whole body. Radiation dose commitment to the population from release of radioactivity to the biosphere is minimal and within established limits.

Reference was made to Table S-3 with regard to transportation dose to workers and the public, and for low-level waste disposal at land burial facilities. The Nuclear Regulatory Commission indicates there will be no significant radioactive releases to the environment." It should be noted that 3 of 6 commercial low-level nuclear waste disposal sites have been closed because of serious seepage of radioactive contaminants from those sites. The impact of the additional waste disposal that will be imposed on the three remaining sites need to be addressed in terms of land use and the effect on the environment.