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United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

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Mr. B. J. Youngblood, Chief
Licensing Branch No. 1
Division of Licensing
Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Youngblood:

Thank you for your letter of May 8, 1981, transmitting copies of the draft environmental impact statement, operating license stage, for the Enrico Fermi Atomic Power Plant, Unit 2, Monroe County, Michigan.

Our comments are presented according to the format of the statement or by subject.

Ecology

Concerns regarding impacts to fish and wildlife resources resulting from plant operation have been expressed previously in our comments on the final environmental statement for the construction permit and subsequent environment report supplements during the Operating License Stage.

Our stated concerns over impacts of transmission line right-of-ways and control of chlorine residuals have been addressed. The proposed preoperational and operational aquatic environmental monitoring should be adequate to determine if further mitigation will be required, especially in regard to intake impingement and entrainment of fish.

Releases to Groundwater

An assessment of the consequences of seven hypothetical accidents on Lake Erie and Lake Ontario is only found under the section "Releases to Ground Water" on page 6-25. Apparently the atmospheric deposition of radionuclides in the lakes was not included in the assessment of atmospheric releases on pages 6-13 to 6-25. Since some of the accident sequences involve the release of substantial quantities of long-lived radionuclides, the importance of assessing not only the health effects but also the environmental, social, and economic consequences of the entry of radionuclides into the lakes should be obvious. The atmospheric deposition of radionuclides

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should receive further study at Great Lake sites where a substantial fraction of radionuclides released could be deposited in the lakes.

The effects on the lakes due to releases to ground water are primarily determined by both the estimate of the rate of movement of the released radionuclides through the 460-foot distance between the reactor and Lake Erie, and by the size of the source terms for the long-lived radionuclides. The rate of movement is dependent on estimates of ground water velocity and so-called retardation factors. Although numerical values for these are given on pages 6-27 and 6-28, the parameters used and assumptions made to arrive at these estimates are not described. Therefore, it is not possible to evaluate whether the estimates are adequately conservative.

The source term for the radionuclides in the ground is apparently that used in the Liquid Pathway Generic Study (NUREG-0440). There it was limited to the prompt release of 15 percent of the sump water; it did not include leaching from the core debris. The uncertainties concerning leaching rates were raised in the generic study, but there is no indication in the present environmental statement that leaching of the core debris was assessed at this site. It is also not clear whether the assumed prompt release of 15 percent of the sump water is an adequate representation of the total release from this source that could occur in the aftermath of an accident.

It is indicated that the consequences in Lake Erie and Lake Ontario due to the releases to ground water would be largely economic or social. It is not clear that these effects have been evaluated and, if so, whether they are included in the estimates of costs shown in tables 6.4 and 6.5 and in figure 6.6.

One of the findings of NRC's Independent Risk Assessment Review Group was that it is very difficult to follow detailed calculations through NRC's Reactor Safety Study. The assessment of severe accident consequences relating to Lakes Erie and Ontario is based in part on that Reactor Safety Study, in part on the Liquid Pathway Generic Study, and in part on subsequent reports. We believe difficulties have been compounded. We recommend that calculations, estimates, and assumptions used to determine the entry into the lakes be made available for review.

Monitoring of ground water during operation should be specifically addressed. Water quality monitoring during operation is discussed on page 5-7 but it is not clear whether this will include monitoring both quality of ground water and water levels. The hydraulic gradients of the principal aquifer are fairly low; thus the gradients could easily become changed and redirected by area development during the life of the plant. We suggest that periodic monitoring of ground water levels and radioactivity should be continued at appropriate intervals in wells properly located to detect any major change in gradients.

We hope these comments will be helpful to you in the preparation of a final statement.

Sincerely,

CECIL S. HOFFMANN
Special Assistant to
Assistant SECRETARY