

JUN 13 1984

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Docket No. 50-341

MEMORANDUM FOR: Frank G. Pagano, Chief
Emergency Preparedness Branch
Division of Emergency Preparedness & Emergency Response, IE

FROM: William P. Gammill, Chief
Meteorology and Effluent Treatment Branch
Division of Systems Integration, NRR

SUBJECT: FERMI-2 LAKE BREEZE STUDY FOR EMERGENCY PREPAREDNESS

The results of a short-term meteorological study at the Fermi-2 site were reviewed by J. Levine (x29433), Meteorology Section, who has provided the following comments.

The study undertaken by Detroit Edison was designed to characterize effects of Lake Erie on gaseous effluent plume transport from the Fermi-2 plant. An effect that is expected at a lakeside location is the development of a Thermal Internal Boundary Layer (TIBL) on shore. The presence of the TIBL can affect the diffusion and transport of gaseous effluents released at lakeside locations.

In an attempt to define the characteristics of the TIBL at the Fermi-2 site, the applicant compared the results of short-term TIBL measurements with three empirical models to potentially develop a means by which accidental releases could be diffused and transported from the site. The study demonstrated that none of the models adequately predicted the TIBL characteristics for the Fermi site. The applicant has proposed to continue to study the relationship between onsite meteorological measurements and the TIBL to develop a relationship that can be utilized by the applicant in the development of an emergency preparedness dose model that will take account of the TIBL. We agree with the applicant's findings and also agree that the study should be continued. The results of this study should be provided to the Staff when available to permit Staff review and comment. The results of these studies would provide a significant contribution to the knowledge available on coastal meteorology if they were published in the open literature.

Original signed by

I. Spickler for

William P. Gammill, Chief
Meteorology and Effluent Treatment Branch
Division of Systems Integration

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F. G. Pagano

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cc: R. Mattson
D. Muller
F. Kantor
K. Perkins
C. Paperiello
I. Spickler
J. Levine

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