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 ALEXICH, M. P. Indiana & Michigan Electric Co.
 RECIP. NAME RECIPIENT AFFILIATION
 DENTON, H. R. Office of Nuclear Reactor Regulation, Director (post 851125)

SUBJECT: Submits followup to 860813 ltr re NRC technical evaluation
 rept concerning meteorological data. Meteorological
 measurement program will be enhanced. Mods include
 relocation of primary tower to inland site.

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INDIANA & MICHIGAN ELECTRIC COMPANY

P.O. BOX 16631
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December 2, 1986
AEP:NRC:0999A

Donald C. Cook Nuclear Plant Unit Nos. 1 and 2
Docket Nos. 50-315 and 50-316
License No. DPR-58 and DPR-74
METEOROLOGICAL PROGRAM ASSESSMENT

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Denton:

This letter is a follow-up to our letter concerning the NRC's Technical Evaluation Report (TER) of the meteorological data collected at the Donald C. Cook Nuclear Plant, submitted in our letter AEP:NRC:0999 dated August 13, 1986. In that letter, we stated that to address the concerns in the TER we would have a consultant review and develop a report on the present meteorological program.

We have completed our initial assessment of the present meteorological program. As a result of our review of this information, in conjunction with the concerns raised in your TER, we believe sufficient justification exists for enhancement of the meteorological measurement program at the Donald C. Cook Nuclear Plant. Our reasons for this decision and the action we anticipate are presented below.

Meteorology at a coastal site such as D. C. Cook is subject to two macroscopic effects (wind direction and the influence of the thermal internal boundary layer [TIBL]) from the interface of the land and the water and the radiative heating of those bodies. Because the water and the land change temperatures at different rates, the local measured wind direction is influenced by onshore lake breeze and nocturnal land breeze and may differ from the prevailing wind direction within the Emergency Planning Zone (EPZ). This effect is most significant from April through September and the existing Cook Plant site data agrees with the norms for coastal sites by indicating significant lake breeze effects approximately 25% of the days. The other macroscopic effect is the creation of a TIBL. When this occurs over the land, the air above the TIBL is characteristic of the air over the water; the air below the TIBL is more turbulent. The 10-mile EPZ for D. C. Cook is more characteristic of the air below the TIBL and radiological releases from the plant would be in this area. The unrepresentativeness of our tower as stated in the TER may be because our tower was above the TIBL for a fraction of the monitored hours.

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Based on this information, we have decided to enhance our meteorological measurement program by changing the location of our primary tower to a site further inland, installing a backup tower, and installing a tower at the lakefront to monitor the unmodified coastal environment. New locations were suggested for the primary and additional towers. The new location of the primary tower would be about 1 mile east of the plant. At that location there are minimal terrain interferences, and the tower will be located below the lowest modeled TIBL. The tower will be instrumented at the 60- and 10-meter levels. The two other towers (one as a backup to the primary and one at the lakefront) will have their instruments at the 10 meter level. The backup tower will be located in the same area as the primary tower. The tower at the lakefront will be used to characterize the unmodified coastal environment.

To complete the system, there will be a central computer that will collect the data and screen it for data quality. This computer can also be used to determine routine release data to meet the requirements of 10 CFR 50 Appendix I. It can also be used to predict doses to be used for emergency planning.

We believe that these changes to our meteorological measurement program will address the concerns of the TER. We expect to complete the upgrade and change over from the old system to the new system in June 1988. Any technical specification changes required will be submitted for your approval prior to that time.

This letter has been prepared following Corporate procedures which incorporate a reasonable set of controls to insure its accuracy and completeness prior to signature by the undersigned.

Very truly yours,


M. P. Alexich
Vice President
PBK
12/2/86

cm

cc: John E. Dolan
W. G. Smith, Jr. - Bridgman
R. C. Callen
G. Bruchmann
G. Charnoff
NRC Resident Inspector - Bridgman
J. G. Keppler - Region III

