

Docket File

10/28/69

Docket Nos. 50-329 & 50-330

Consumers Power Company
212 West Michigan Avenue
Jackson, Michigan 49201

THIS DOCUMENT CONTAINS
POOR QUALITY PAGES

Attention: Mr. Robert D. Allen
Senior Vice President

Gentlemen:

As stated in our letter of September 16, 1969, we require additional information concerning the Midland geology and foundation properties. The specific information required is indicated in Enclosure A to this letter.

Sincerely,

Peter A. Morris, Director
Division of Reactor Licensing


Enclosure:
List of Addl. Info. Required

8006170914 A

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DATE	P. A. Morris	10/28/69	10/27/69	10/22/69	10/23/69	10/23/69

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ENCLOSURE A

ADDITIONAL INFORMATION REQUIRED

CONSUMERS POWER COMPANY

MIDLAND PLANTS UNITS 1 & 2

1. On page 2-21 of the Preliminary Safety Analysis Report (PSAR), a possible fault located 55 miles south of the site is mentioned. To support your conclusion that it is not significant, discuss the horizontal and vertical extent of the fault, the age of the fault, and indicate who mapped the fault and the procedure by which it was mapped.
2. Supplement the geological map of the immediate site and the surrounding area by adding all known and possible faults or other geologic structures. Describe the examination given both the immediate site and the surrounding area for evidence of faulting.
3. Provide results of the geophysical survey, which include time-distance plots.
4. The text of the Dames and Moore Report, titled "Report, Foundation Investigation and Preliminary Explorations for Borrow Materials, Proposed Nuclear Power Plant, Midland, Michigan, for Consumers Power Company", which was submitted as Amendment No. 1 to the application, indicates on page 5 that you have been provided with the results of geologic studies made by others. Provide these results for our review.
5. Provide the reasoning used in the selection of the response spectra for the site and discuss how the spectra relate to the physical characteristics of the site.
6. On page 2-24 of the PSAR, it is stated that the amplification ratio of the glacial material is less than 2.0 on the surface of the blue-gray clay. Define amplification ratio, indicate how it was determined, and present the site test data used in determining the amplification ratio.
7. Provide sub-surface profiles for all Class 1 structures and soil strata penetrated by the soil borings, as discussed at the July 24, 1969, meeting between representatives of Consumers Power Company and the DRL staff. (An example of such drawings has been presented in figures 8.2-1 and 8.3-1 through 8.3-6 of Amendment No. 5 to the Cook PSAR).

8. As discussed at our July 24, 1969, meeting, provide information and calculations in support of your settlement tabulations on pages 19 and 20 of the Dames and Moore Supplement to the Foundation Report, submitted as Amendment No. 3, to the application.
9. Describe the emergency water cooling pond in detail. Provide profiles through the sub-surface material. Include profiles beneath the emergency water intake structure and the conduit which carries the emergency cooling water from the intake structure to the containment building.
10. In reference to the compaction curve of brown fine sand, with some silt, from boring G at 5 feet as presented in plate A-9 of the Dames and Moore Report submitted in Amendment No. 1 to the application, provide the following information:
 1. Is this curve reproducible using similar material from the same source?
 2. Is this curve representative of the uppermost granular sand?
 3. State the maximum and minimum relative densities as defined in ASTM designation D2049-64T of the material from which the compaction curve was obtained.
 4. State the values of the dry density and moisture content from which this curve was constructed.
11. Indicate if the upper, natural, undisturbed sands will be used to support any critical appurtenances such as piping.
12. Discuss and describe the method used to calculate the recommended cut and fill slopes. Indicate if the calculations allowed for horizontal accelerations due to earthquakes.