UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the matter of	)	Docket Nos. 50-329-OM&OL
Consumers Power Company	)	50-330-OM&OL
(Midland Nuclear Power Plant)	)	

Testimony of William C. Otto with respect to Geotechnical review, Midland Nuclear Power Plant.

Q-1. Please state your name and position with the U.S. Army Corps of Engineers.

A. My name is William C. Otto. My position with the U.S. Army Corps of Engineers is Chief of the Geotechnical Section of the Technical Branch, Engineering Division, Detroit District.

Q-2. When did the U.S. Army Corps of Engineers get involved in the review process of the Midland Nuclear Power Plant, and what are the areas of its responsibilities?

A. According to Interagency Agreement No. NRC-03-79-167, between the U.S. Nuclear Regulatory Commission (NRC) and the U.S. Army Corps of Engineers.

Q-3. Have you prepared a statement of your professional qualification?

A. Yes. A copy of this statement is attached.

Q-4. Please state the nature of responsibilities that you have with respect to the Midland Nuclear Power Plant units 1 and 2.

(Joe Kane to write)

Q-5. Please state the purpose of this testimony?

A. The purpose of this testimony is to evaluate whether the soil investigations made at the Diesel Generator Building were sufficient to determine the engineering properties of the fill material under ~~the~~ and around the building and to evaluate the settlement of the fill and or consolidation of the fill material.

Q-6. Why was the request for borings at the Diesel Generator Building made?

A. The information concerning record sampling of the fill material furnished in the FSAR is not adequate to evaluate the stability and settlement of the Diesel Generator Building.

Q-7. Did you review the applicant's soil data and analysis of the Diesel Generator Building boring and settlement analysis including the Preload Program?

A. Yes - but the soil data is not adequate. Additional soil borings and laboratory tests at the site were needed.

Q-8. Was the original request for additional borings at the Diesel Generator Building ever revised.

A. Yes - originally SPT borings and borings to obtain undisturbed samples were requested. This was later modified since there were SPT borings that were already taken that could be used to determine the sampling in the undisturbed sample borings.

Q-9. Were the results of the borings completed by Woodward and Clyde reviewed and did they supply the needed soil data?

A. Yes - Mr. Hari Singh has reviewed them and he has included his findings in his testimony of the Diesel Generator Building.

Statement of Professional

Qualifications
of
William C. Otto

Name William C. Otto

Education

(1) One year at Purdue University
(2) Three years at University of Notre Dame
graduated "Cum Laude" BS in C.E. in 1932

Publications

(1) ASTM Statistical Study of Concrete Beams. June 1956
(2) Soil Settlement Conference - Paper on settlement study at Selfridge AF Base - 1964
(3) Paper collaborated with Dr. Lipicom of WES on Erosion Control of River Banks - 1965

Committee

U.S. member of ADHOC Committee for investigation of the Compensating Structure for the International Joint Commission of the International Lake Superior Board of Control.

Professional Experience

(1) Chief of Geotechnical Engineering Section, Engineering Division of the Corps of Engineers, Detroit District 1957 to date. Design of all types of Soil Structures on land and water. Serves as soil expert for the District on all phases of soil mechanics.

(2) From 1950 to 1957 in the Navy Consultants on Soil Designs of 140 airfields world wide, dry docks, multi-story hospitals, earth and rock embankments and stability of same and other related military structures.

(3) From 1946 to 1950 - In charge of asphaltic and aggregate laboratory of the Nebraska Highway.

(4) From 1944 to 1946 - An officer in the Bureau of Yards and Docks on all phases of military Civil Works Construction.

(5) 1941 to 1944 - Engineer with Corps of Engineers Omaha District on airfield design and construction, hospital construction, airplane manufacturing plants and other related military base design and construction.

(6) 1938 to 1941 - Engineer with International Boundary Commission United States and Mexico, United States Section - Construction of Levees and Floodway Structures.

(7) 1936 - 1938 - Engineer for Indiana Highway on construction of 4 lane divided highways.

(8) 1934 to 1936 - Engineer for U.S.G.S., Head of Rds & Streets for Building Service Co. & Bureau of Aeronautics.