

UNITED STATES
ATOMIC ENERGY COMMISSION

WASHINGTON, D.C. 20545

June 3, 1970

Roger S. Boyd, Assistant Director for Boiling Water Reactors, DRL
THRU: Robert L. Tedesco, Chief, BWR-2, DRL

SEISMIC DESIGN MEETING WITH THE TOLEDO EDISON COMPANY FOR THE
DAVIS-BESSE NUCLEAR POWER STATION - DOCKET NO. 50-346

A meeting was held with The Toledo Edison Company (TEC) on May 19, 1970 to discuss the seismic response spectrum to be used in design of Class I structures and components. The purpose of this meeting was to permit the applicant to justify the seismic response spectrum used in design of the structures and components to DRS and its consultant, John A. Blume & Associates. The meeting attendance is enclosed.

Following the applicant's description of the methods used in arriving at the seismic smooth response spectra and time-history accelerogram, DRS and R. L. Sharpe of John A. Blume & Associates indicated to the applicant that the proposed seismic spectrum did not provide a sufficient safety margin for the seismic design of Class I structures and components.

DRS and its consultant informed the applicant that a smooth response spectra developed from the 1935 Helena Montana earthquake using the upper average values would provide an acceptable margin of safety. The applicant was also informed that the time-history accelerogram being developed by Dr. Idriss would be acceptable with the modification Dr. Idriss indicated would be made in the 10 to 20 cycles per second frequency range.

The applicant was also informed that if the design had progressed too far to permit using the above recommended spectra and time-history accelerogram an acceptable alternative would be to develop seismic design criteria similar to those proposed for the Midland plant.

The applicant indicated that he was not prepared to make a commitment to modify the proposed seismic spectrum at this time. We indicated that early resolution of this matter would be required.

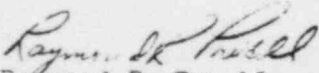
At the conclusion of the discussion of the seismic design criteria, R. L. Sharpe and E. G. Kost indicated there were several areas in the PSAR which needed further clarification before they could complete their review of the plant. The following are the matters discussed and the manner of resolution.

1. Mathematical Model to support "fixed" bases analysis. A copy of the Bechtel calculations was given to E. G. Kost. No further action required.

8002030106

June 3, 1970

2. Amplification of Vertical Accelerations - Bechtel described the manner in which this amplification would be accounted for in the design. R. L. Sharpe indicated the discussion was adequate and no documentation was required.
3. Damping - Bechtel agreed to justify and document the manner in which damping values will be applied to structures and components. Documentation will be in Amendment 6.
4. Personnel Lock & Equipment Hatch - Bechtel indicated how the seismic analysis and design would be developed. No documentation required.
5. Seismic Analysis - Bechtel agreed to clarify the use of the word "impractical" as used to define when a dynamic analysis would not be performed. Documentation of the wording agreed on will be in Amendment 6.
6. Piping System - The applicant discussed the methods which will be used to analyze and design Class I piping systems to meet Class I criteria. The applicant indicated it would document a statement of criteria similar to that proposed for the Midland plant in Amendment 6.
7. Equipment - The applicant described the procedures used to assure the Class I equipment will meet the seismic design criteria. No documentation of this matter is required.
8. Dynamic Parameters for Foundation Materials - The applicant described the range of these parameters to be used in the seismic analysis. No documentation of this matter is required.
9. Peak Ground Motions and Response Spectra - The applicant was informed of the DRL position regarding an acceptable seismic response spectra. The resolution of this matter by the applicant should be within a week and will be documented in Amendment 6.


Raymond R. Powell
Boiling Water Reactor Branch 2
Division of Reactor Licensing

Enclosure:
List of Attendees

LIST OF ATTENDEES
TOLEDO EDISON COMPANY
DAVIS-BESSE NUCLEAR POWER STATION
MAY 19, 1970

AEC-DRL

R. Tedesco

R. Powell

A. Cardone

AEC-DRS

R. Maccary

F. Schauer

R. Shewmaker

D. Lange

A. Dromerick

CO

L. Beratan

Woodward-Clyde Assoc.

Y. Lacroix

D. M. Idriss

John A. Blume & Assoc.

E. G. Kost

R. L. Sharpe

Bechtel

H. W. Wahl

J. McGeady

A. Bingaman

Toledo Edison Co.

L. E. Roe