



**Consumers
Power
Company**

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MARU 45-79

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REGULATORY DOCKET FILE COPY

Attached is the additional information required to document the seismic resistance capability of the Palisades facility as requested by the NRC (Howard Levin) by telecopy of July 19, 1979.

CPCo and our consultants Bechtel Corp. and Combustion Engineering have searched the drawing, engineering and purchase files. The result of this search is that most of the information requested has been located and attached. The files searched did not, in all cases, contain the information requested. Where this occurred, additional information was provided with the intent that the NRC staff and/or its consultants could perform the necessary calculation and thereby satisfy themselves of the seismic adequacy. It was determined that this approach was the most cost effective way to gather the majority of the information in a reasonable period of time. If the NRC staff believes that sufficient information still does not exist, CPCo is willing to derive or obtain the necessary information. Note however that the cost will be much greater and the time to obtain the information longer.

Information not available as follows:

Question A.2 - The turbine building model is presented however no results (moments, shears, displacements, etc.) from the use of the model is available. CPCo and Bechtel believe that the turbine will withstand the seismic forces and that this is evident from the drawings distributed at the Palisades site meeting, the results of a dynamic analysis are summarized in Amendment 17, Question 8 of the Palisades FSAR and Section 5.3 of the FSAR.

Question A.3 - The response spectra presented was derived after the purchase specifications had been sent out. A series of spot checks show that these spectra are very close to those used (See Table 1-1 of the original submittal-letter Hoffman to Zieman, June 8, 1979).

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Question B.2 - The anchorage details for the service water pumps and auxiliary feedwater pump were not found in this search. Based on the purchase specification, the seismic calculations, manufacturers drawings and good erection and construction practice, CPCo believes that anchorage details were developed and used in the foundation construction. If deemed necessary, CPCo will obtain these details.

Question B.4a - No information is presently available concerning the diesel generator fuel oil day tank. The diesel generator and related equipment were purchased late in the plant construction phase. CPCo knows that these tanks were purchased under specification M-38. CPCo believes that they were built to Seismic Class I criteria as defined in that specification based their inclusion in Appendix A of the FSAR and Amendment 15 Question 7.7. The search, described above, however produced no additional information. If deemed necessary, CPCo is willing to spend the time necessary to obtain the information required.

Question B.4a - Anchorage details are not available for any of the tanks. Based on the purchase specification, the seismic calculation manufacturers drawings, and good erection and construction practice CPCo believes that anchorage details were developed and used in the foundation construction. If deemed necessary, CPCo will obtain these details. Note T-102 is the Hydrazine Tank although it is noted as the NaOH Tank and T-103 is the NaOH Tank.

Question B.8 - The analysis demonstrating that the C-06 panel is rigid and that it can withstand the accelerations is not available. Based on the information contained in the purchase specification concerning seismic design, Attachment B.8-1 and letters from HARLO stating that other cabinets included in the purchase specification (C12, C03, C08, C01) were manufactured in accordance with the spec, CPCo believes that the C06 panel was built to the seismic design criteria listed in the specification. CPCo believes that the geometry of the C06 panel is such that overturning moment should not be a problem.

Question B.9 - The only information presently available concerning the DC Motor Control Centers is that CPCo specified in the purchase specification that seismic loads be considered, Westinghouse took no exception to the specification when they accepted the job and no letters exist stating that seismic loads could not be incorporated. If necessary, CPCo is willing to spend the time to gather the missing data.

Question B.11 - Seismic qualifications of the RPS will be performed by reviewing the Palisades equipment against that contained in CENPD-61. This determination will be submitted at a later date.

Question B.13 - CPCo has just received the report from the Cable Tray and Conduit Raceway Seismic Test Program conducted by Bechtel Corporation and ANCO Engineers, Inc. The report covers seismic testing of various cable trays, conduits combinations of trays and conduits and their supports. None of the trays or conduits tested suffered damage which impaired the function of the circuits contained. A more thorough review will be conducted to determine the tray and conduit configuration most like Palisades. The test performed and the results for this configuration will be reported later.

Questions B.15 and B.16 are the questions asked by EDAC and sent to us by telecopy on August 10, 1979 from T.M. Cheng.

A set of drawings have been inserted into the appropriate locations within the responses. An identical set of aperture cards of these drawings has also been provided from which the consultants copies can be made.



RMMarusich
Senior Engineer