DMB-016

March 18, 1986

Docket No. 50-460

Mr. G. C. Sorensen, Manager
Regulatory Programs
Washington Public Power Supply
3000 George Washington Way
P. O. Box 968
Richland, Washington 99352

Dear Mr. Sorensen:

SUBJECT: REVIEW OF EVALUATION OF ELECTRICAL CABLE TRAY AND CONDUIT SYSTEM SEISMIC DAMPING - WNP-1

During the course of the review of your October 19, 1985 submittal, we find that we need additional information in order that we may complete our review.

A list of the information requested is included in Enclosure 1. This information request will provide the basis for discussions between the NRC and members of your staff at a meeting on April 9 and 10, 1986 in Richland. Arrangements for the meeting are being coordinated with Mr. Alan Hosler of your staff.

Sincerely,

*ORIGINAL SIGNED BY
JOHN F. STOLZ*

John F. Stolz, Director
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Enclosure:
Request for Additional
Information

cc w/enclosure:
See next page

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WPPSS Nuclear Project No. 1
(WNP-1)

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Request for Additional Information Regarding Evaluation of Electrical Cable Tray and Conduit System Seismic Damping for WNP-1

I. General Concerns

1) We have a general concern about the test set-up described in in Reference 1.

The earthquake time history input is achieved via a hydraulic actuator which is inclined at a 45° angle to the horizontal plane. By using this method the time-history in the horizontal and vertical planes are not independent as required in SRP Section 3.7.2. This appears to be a fundamental problem with the test program in that it makes it difficult to endorse any of the results since the SRP criteria are not followed.

2) The previously approved damping values for the plants listed in Reference 2 have been evaluated on a plant-specific basis without any generic implications. WNP-1 damping values must be considered on the same basis.

II. Specific Requests

1) The comparison between the tested and the WNP-1 installed systems contained in the Appendix A of Ref. 2 is addressing cable tray systems only. Provide comprehensive information pertinent to the electric conduit supports which would enable to assess similarities and differences between conduit supports installed and those tested in Ref. 1.

2) Appendix A to Ref. 2 appears to contain information limited to hanger type cable trays. Provide comprehensive data which would allow the staff to assess damping for cable tray supports other than hangers, i.e., floor or wall mounted. In your response provide also the information pertinent to type of trays, connections and the corresponding data pertinent to electrical conduit supports.

3) Provide a quantitative assessment of categories of cable tray and electrical conduit supports according to type of configuration, type of support, connections, cable arrangements, material, etc. Indicate by percentage and the number how many supports fall in each category and specify the structures where they are located.

4) Justify each of the statements contained in Appendix A to Ref. 2 that the differences between the tested and the installed systems have no bearing on damping.

5) Provide information regarding the method of anchorage of the supports of the cable trays and electrical conduits to the structures.

6) Provide detailed information on how the evaluation of damping and the comparison between the tested and the installed systems were conducted. In your response include the extent of analytical evaluation, examples of the procedures followed by the personnel performing the walkdown, their qualifications and similar information which allow to assess the depth of the evaluation process.

MAR 5 1986

References:

1. Cable Tray and Conduit Raceway Seismic Test Program - Release (Final), Test Report #1053-21.1; Vol. 1 & 2, December 15, 1978; Vol. 3, May 1980; Vol. 4, March 1981; ANCO Engineers Inc.

2. Evaluation on Cable Tray System Damping for WNP-1, Washington Public Power Supply System, Bechtel Power Corporation, San Francisco, California, August 1985.