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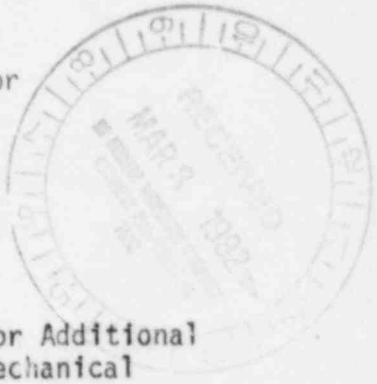

Docket Nos. 50-440/441

Mr. Dalwyn R. Davidson
Vice President
System Engineering and Construction
The Cleveland Electric Illuminating Company
P. O. Box 5000
Cleveland, Ohio 44101

Dear Mr. Davidson:

Subject: Perry Nuclear Power Plant, Units 1 and 2: Request for Additional Information - Seismic and Dynamic Qualification of Mechanical and Electrical Equipment

As a result of our review of your application for licenses for the Perry Nuclear Power Plant, we have need for additional information pertaining to seismic and dynamic qualification of mechanical and electric equipment. Enclosure (1) lists the questions and applicable FSAR sections for which information is needed for our safety evaluations. Your continued and expeditious response to this request is urged and will be most appreciated.

Please advise the project manager for Perry, John Stefano, when we may expect to receive your response within seven (7) days of receipt of this letter.

Sincerely,

/s/

A. Schwencer, Chief
Licensing Branch No. 2
Division of Licensing

Enclosure:
As stated

cc: See next page

OFFICE	DL:LB#2/PM	DL:LB#2/BC					
SURNAME	JStefano:pt	ASchwencer					
DATE	2/26/82	2/26/82					

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ENCLOSURE (1)

PERRY 1 & 2 FSAR QUESTION LIST FOR SECTIONS 3.9.3.2 AND 3.10, SEISMIC AND DYNAMIC QUALIFICATION OF MECHANICAL AND ELECTRICAL EQUIPMENT.

The following request for information references Section 3.9.3.2 of the Perry 1 & 2 FSAR.

1. Page 3.9-84, subsection 3.9.3.2.3.1.1, paragraph a. - Explain what is meant by hydrodynamic loads.

2. Page 3.9-85, first paragraph - Indicate whether the reference to IEEE 323-1971 is correct and, if so, justify referencing this specification for performing a dynamic test.

3. Page 3.9-85, last paragraph - Describe how the valve's resonance frequencies are determined as part of the overall steamline analysis.

4. Page 3.9-86, paragraph c. - Provide the criteria that was used to conclude that the 20 inch test valve is representative of the MSIVs.

5. Page 3.9-88, Subsection 3.9.3.2.3.1.4 - Explain what is meant by a typical valve and provide the criteria used for selecting the the test valve. Describe what maximum capability load means. Also, indicate whether the valve and actuator are tested together as an assembly.

6. Page 3.9-89, first paragraph - Describe how acceptable vibration levels are determined. Also, indicate if a qualified life is determined for all pumps.

7. Page 3.9-98, paragraph above Test Procedure A: - Provide the criteria used to select the test valve, including what is meant by "...most conservative construction."

8. Page 3.9-100, Test Procedure C: - Describe how the strains in critical component parts were determined. Also, clarify why more than one plant loading condition was simulated if each is larger than the combined.

9. Page 3.9-101, Subsection 3.9.3.2.4.2.1 - Clarify what is meant by appropriate seismic qualification standards.

10. Page 3.9-101, Subsection 3.9.3.2.4.2.2 - Indicate whether the check valve's internals are included in the stress analysis model. Also, indicate whether and how a qualified life is determined for these internal components.

11. Page 3.9-102, Subsection 3.9.3.2.4.2.3 - Briefly describe how the test valves were proven to be dynamically equivalent to the valves supplied to Byron.

The following request for information references Section 3.10 of the Perry 1 & 2 FSAR.

12. Tables 3.10-1 and 3.10-2, pages 3.10-17 through 3.10-63, of the FSAR on Seismic Category I Instrumentation and Electrical Equipment and Supports Identification and Seismic and Hydrodynamic Load Qualification Summary and Balance of Plant Category I Electrical and Instrumentations Equipment Qualification Results, respectively, are not complete. On what date will complete Tables 3.10-1 and 3.10-2 be submitted to the NRC?

13. For plants for which the CP application was docketed after October 27, 1972, the qualification of electrical equipment and their supports must meet the requirements and recommendations of IEEE Standard 344-1975 and the Regulatory Position of Regulatory Guide 1.100, which endorses IEEE Standard 344-1975. These documents are generally applicable to all types of equipment and should be used to the extent practicable for the qualification of mechanical equipment as well.

    Do you plan to commit to IEEE Standard 344-1975 for both NSSS and BOP equipment?

    If not, what are the exceptions and the justification for these exceptions?

14. In qualification by analysis and testing justify the selected values of 1, 2, 4 and 7 percent of the critical damping ratio as stated in Section 3.10.2.1.2 of the FSAR, page 3.10-4. Are the damping values known or are the damping values assumed?

    Do you plan to commit to Regulatory Guide 1.61 for damping values?

15. In Section 3.10.2.1.3.1, page 3.10-5, of the FSAR the higher cut-off frequency for combined seismic and hydrodynamic loads is not stated. What is the numerical value of the higher cut-off frequency?

16. The statement "if the fundamental frequency of the equipment is above the input excitation frequency, the equipment is considered rigid" appears in Section 3.10.2.2, page 3.10-8, of the FSAR. For equipment with resonant frequencies below 33 Hz and between 33 Hz and the higher cut-off frequency, is the above statement applicable?