

Omaha Public Power District
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402/536-4000

November 25, 1987
LIC-87-803

Mr. Jose A. Calvo, Project Director
Project Directorate IV
Division of Reactor Projects III, IV, & V
and Special Projects
U. S. Nuclear Regulatory Commission
Washington, DC 20555

- References:
1. Docket No. 50-285
 2. Letter OPPD (R. L. Andrews) to NRC (J. A. Calvo) dated November 20, 1987 (LIC-87-790)
 3. U.S. NRC Generic Letter 87-02, Unresolved Safety Issue A-46
 4. NUREG-1211
 5. NUREG-0649 Rev. 1

Dear Mr. Calvo:

SUBJECT: Seismic Qualification Information for the Valves Associated with the Air Accumulators Discussed in Reference 2 Above

Omaha Public Power District (OPPD) stated in Reference 2 that additional information would be sent regarding the valves that are associated with Critical Quality Element (CQE) air accumulators. Attached was a copy of the Fort Calhoun USAR Appendix F. Under Section F.2.2, Methods of Analysis for Class I Structures and Components, page F-10, the following information is stated:

Special seismic restraints (either rigid or snubbers) were provided on control valve mechanisms to prevent overstress when the control mechanism forms a mass center outside the pipe center line and generates over 1500 psi bending stress on the piping system due to earthquake G loading.

Also included on page F-10 is a short description of OPPD's re-verification of large diameter (2½" Ø and larger) CQE piping. This involved a complete re-analysis. The re-analysis has verified that for all the valves which are installed in large diameter CQE piping, the piping stresses generated by the valve control mechanisms are within code allowables.

As you are aware, OPPD is presently undertaking an extensive program to reconstitute the Fort Calhoun Design Basis. Under this program, OPPD will continue to try and locate any information to substantiate what is stated in the USAR. The Fort Calhoun USAR is not explicit with regard to seismic qualification of originally installed valves. OPPD has not been able to locate any test reports confirming seismic qualification of these valves and operators; however, the seismic qualification of mechanical and electrical equipment (including valves) is a generic industry problem.

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NUREG-1211 discusses Unresolved Safety Issue (USI) A-46, the NRC's document which addresses the issue of seismic qualification of mechanical and electrical equipment. The significant safety concern of USI A-46, according to NUREG-1211, can be summarized as follows: equipment in nuclear plants with CP applications docketed before about 1972, has not been reviewed in accordance with present day seismic requirements, and therefore this equipment may not have been adequately qualified. Fort Calhoun Station falls in this category.

NUREG-1211 also states that it is not feasible for older operating plants to meet current licensing requirements and that alternate procedures were investigated. The NRC selected (as an alternative) to utilize earthquake experience data, supplemented by test data.

The development of the seismic experience data base and the program to respond to USI A-46 and Generic Letter (GL) 87-02 has been developed by the Seismic Qualification Utility Group (SQUG) with the assistance of EPRI. The SQUG concluded, and the NRC has agreed, that responding to USI A-46 and GL 87-02 utilizing SQUG data base and associated programs is the recommended manner in which to respond to the seismic issue.

OPPD is a member of SQUG and has received GL 87-02. OPPD, through SQUG, has submitted a response and schedule to GL 87-02 (See SQUG submittal to T. E. Murley dated October 9, 1987). According to NUREG -1211, page 8, Table 1, Item #2 under Mechanical Equipment, air operated valves are included in the scope of USI A-46. NUREG-0649 Rev. 1, page A46/10 and 11, Item #3, provides the NRC's justification for continued operation until USI A-46 is resolved.

In summary, OPPD will seismically evaluate any required air operated valves under our resolution of USI A-46. Any further questions regarding seismic qualification of equipment within the scope of USI A-46 will be resolved under OPPD's resolution of this issue.

Sincerely,



R. L. Andrews
Division Manager
Nuclear Production

RLA/me

c: Dennis Crutchfield, NRC Director, Div. of Reactor Projects
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