

Docket No. 50-461

JUL 12 1985

Mr. Frank A. Spangenberg
Director of Nuclear Licensing &
Configuration Management
Clinton Power Station
P.O. Box 306
Mail Code V920
Clinton, Illinois 61727

Dear Mr. Spangenberg:

SUBJECT: EFFECTS OF VALVE FLEXIBILITY IN DYNAMIC PIPING ANALYSES - REQUEST
FOR ADDITIONAL INFORMATION

The Office of Nuclear Reactor Regulation was requested by the Office of Inspection and Enforcement (I&E) to resolve a follow-up item related to the effects of valve flexibility in dynamic piping analyses resulting from the Clinton Independent Design Review (IDR). This item is the result of an I & E inspection team's inspection performed at the Sargent & Lundy offices in Chicago, Illinois between May 6 and May 9, 1985, to evaluate the adequacy and status of corrective actions which originated from the IDR. The request for additional information pertaining to this item is contained in the enclosure.

It is requested that you provide a response within 45 days of the date of this letter. If you need clarification or extension of the response date, please contact the licensing project manager for your application.

Sincerely,

Walter R. Butler, Chief
Licensing Branch No. 2
Division of Licensing

Enclosure: As stated

cc: See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

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Sincerely,

A handwritten signature in cursive script that reads "Walter R. Butler".

Walter R. Butler, Chief
Licensing Branch No. 2
Division of Licensing

Enclosure: As stated

cc: See next page

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REQUEST FOR ADDITIONAL INFORMATION ON THE EFFECTS OF VALVE FLEXIBILITY IN DYNAMIC
PIPING ANALYSES

In conjunction with the Independent Design Review (IDR) conducted by Bechtel Power Corporation for the Clinton Power Station, a follow-up inspection was performed by the NRC staff during May 6-9, 1985 at the offices of Sargent & Lundy in Chicago, Illinois to evaluate the adequacy and status of corrective actions which originated from the IDR.

During the follow-up inspection, a question was raised regarding the modeling of flexible valves in the piping stress analyses. S & L stated that all valves are assumed to be rigid (frequency greater than 33 hz in the piping model). However, the staff learned that some motor-operated valves could have a fundamental frequency less than 33hz. Apparently, S & L has not performed any analyses to qualify these flexible valves.

In the FSAR Q & R Chapter 3, in response to MEB (DSER) Item No. 49 (May, 1981), the applicant committed to perform an assessment of any valve/operator assemblies with a natural frequency below 33 hz. The staff requests that the applicant address the following:

- a. Explain the apparent inconsistency between the FSAR commitment and the S & L consideration of flexible valves.
- b. Provide a list of all valve/operator assemblies with natural frequencies less than 33 hz, the vendor, the acceleration values for which the valves are qualified, and the calculated valve acceleration value.
- c. Provide an assessment of the effects of the flexible vs. rigid valve modeling in piping stress analyses and include any differences in the calculated valve accelerations, piping stresses, and support loads resulting from the rigid and flexible valve model.