



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
631 PARK AVENUE
KING OF PRUSSIA, PENNSYLVANIA 19406

May 8, 1980

Docket No. 50-309

Maine Yankee Atomic Power Company
ATTN: Mr. Robert H. Groce
Senior Engineer - Licensing
25 Research Drive
Westborough, Massachusetts 01581

Gentlemen:

The enclosed IE Bulletin No. 80-11, "Masonry Wall Design," is forwarded to you for action. A written response is required. If you desire additional information regarding this matter, please contact this office.

Sincerely,


Boyce H. Grier
Director

Enclosures:

1. IE Bulletin No. 80-11 with Attachment
2. List of Recently Issued IE Bulletins

CONTACT: S. D. Ebneter
(215-337-5288)

cc w/encls:
E. Wood, Plant Superintendent
E. W. Thurlow, President

8005210131

ENCLOSURE 1

SSINS No.: 6820
Accession No.:
7912190695

UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT
WASHINGTON, D.C. 20555

IE Bulletin No. 80-11
Date: May 8, 1980
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MASONRY WALL DESIGN

Description of Circumstances:

In the course of conducting inspections pursuant to IE Bulletin Nos. 79-02 and 79-14 at the Trojan Nuclear Plant, Portland General Electric Co. (PGE) identified a problem with the structural integrity of concrete masonry walls with Seismic Category I piping attached to them. This problem was briefly addressed in IE Information Notice No. 79-28, which was sent to all Construction Permit and Operating License holders on November 16, 1979 (Attachment 1).

The problem was that some walls were found which did not have adequate structural strength to sustain the required piping system support reactions. These structural deficiencies were at that time reported to be attributable to two deficiencies:

- 1) Apparent lack of a final check of certain pipe support locations and reactions to ensure that the supporting elements possessed adequate structural integrity to sustain the required loads.
- 2) Non-conservative design criteria for the reactions from supports anchored into the face of concrete masonry walls; e.g., relying on the combined strength of double block walls without substantial positive connection between the two walls by means other than the bond provided by a layer of mortar, grout or concrete between them.

Continued investigations into the deficiencies identified at the Trojan Nuclear Plant, engineered by Bechtel, confirmed the deficiencies to be attributable to error in engineering judgment, lack of procedures and procedural detail, and inadequate design criteria (details are in Trojan Nuclear Plant's LER No. 79-15, and supplements). Because of this and the generic implications of similar deficiencies with other operating facilities, we have concerns with regard to the adequacy of design criteria used for the design of masonry walls and an apparent lack of design coordination between the structural and piping/equipment design groups.

IE Bulletin 79-02, Revision 2 issued on November 8, 1979 required a review of pipe supports attached to masonry walls using expansion anchor bolts. For most pipe supports in this category, the expansion anchor bolts were replaced by bolting through the wall or the support was relocated to another structure. Supports that are bolted through masonry walls are also to be considered in the review for this Bulletin.

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SSINS No.: 6870
Accession No.:
7910250475

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November 16, 1979

IE Information Notice No. 79-28

OVERLOADING OF STRUCTURAL ELEMENTS DUE TO PIPE SUPPORT LOADS

Description of Circumstances:

Recently, the NRC was informed that, in the course of the inspections pursuant to IE Bulletin No. 79-02 and 79-14 by the Portland General Electric Co. (PGE) at the Trojan Nuclear Plant, some walls were found which did not have adequate structural strength to sustain the required support reactions. Bechtel Corporation was the Architect Engineer for the plant. These structural inadequacies were reported to be attributable to two deficiencies:

- 1) Apparent lack of a final check of certain pipe support locations and reactions to ensure that the supporting structural elements possessed adequate structural integrity to sustain the required loads.
- 2) Inadequate design criteria for the reactions from supports anchored into the face of concrete block walls; e.g., relying on the combined strength of double concrete block walls without positive connection between the two walls by means other than the bond provided by layer of grout between them.

The NRC is currently pursuing these issues in detail for the Trojan Nuclear Plant to determine the extent of these deficiencies and the generic implications for other Bechtel facilities.

This Information Notice is provided as an early notification of a possible significant matter. It is expected that recipients will review the information for possible applicability to their facilities and the actions being performed under IE Bulletin No. 79-02. Specific action is being requested relating to the adequacy of attachments to concrete block walls under IE Bulletin No. 79-02, Revision 2, item 5.c. No specific actions are requested in response to this Information Notice. If NRC evaluations so indicate, further licensee actions may be requested or required. If you have any questions regarding this matter, please contact the Director of the appropriate NRC Regional Office.

No written response to this IE Information Notice is required.

ENCLOSURE 2

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RECENTLY ISSUED IE BULLETINS

Bulletin No.	Subject	Date Issued	Issued To
80-05	Vacuum Conditions Resulting in Damage to Chemical Volume Control System (CVCS) Holdup Tanks	3/10/80	All PWR Power Reactor Facilities with an Operating License (OL) or Construction Permit (CP)
80-06	Engineered Safety Feature (ESF) Reset Controls	3/13/80	All Power Reactor Facilities with an OL (For Action) All Power Reactor Facilities with a CP (For Information)
79-03A	Longitudinal Weld Defects in ASME SA-312, Type 304 Stainless Steel Pipe	4/4/80	All Power Reactor Facilities with an OL or CP
80-07	BWR Jet Pump Assembly Failure	4/4/80	BWR 3 & 4's with OL (For Action) BWR's with CP (For Information)
80-08	Examination of Containment Liner Penetration Welds	4/7/80	All Power Reactor Facilities with an OL or CP
80-09	Hydromotor Actuator Deficiencies	4/17/80	All Power Reactor Facilities with an OL or CP
80-10	Contamination of Nonradioactive System and Resulting Potential for Unmonitored, Uncontrolled Release to Environment	5/6/80	All Power Reactors with OL (for action) with CP (for information)