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UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137

MAY 8 1980

Docket No. 50-266
Docket No. 50-301

Wisconsin Electric Power Company
ATTN: Mr. Sol Burstein
Executive Vice President
Power Plants
231 West Michigan
Milwaukee, WI 53201

Gentlemen:

Enclosed is IE Bulletin No. 80-11 which requires action by you. A written response is required. Should you have any questions regarding this Bulletin or the actions required by you, please contact this office.

Sincerely,

Charles E. Norelius
for James G. Keppler
Director

Enclosure: IE Bulletin
No. 80-11

cc w/encl:
Mr. G. A. Reed, Plant
Manager
Central Files
Director, NRR/DPM
Director, NRR/DOR
C. M. Trammell, ORB/NRR
PDR
Local PDR
NSIC
TIC
Sandra A. Bast, Lakeshore
Citizens for Safe Energy
Mr. John Duffy, Chief
Boiler Inspector, Department
of Industry, Labor and Human
Relations

SSINS No.: 6820
Accession No.:
7912190695

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

May 8, 1980

IE Bulletin No. 80-11

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 wall
pipe supports in this category, the ex
bolting through the wall or the suppor
Supports that are bolted through mason
review for this Bulletin.

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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.