



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

TIC

Docket No. 50-461
Docket No. 50-462

MAY 8 1980

Illinois Power Company
ATTN: Mr. W. C. Gerstner
Executive Vice President
500 South 27th Street
Decatur, IL 62525

Gentlemen:

Enclosed is IE Bulletin No. 80-11 which is forwarded to you for information. No written response is required. Should you have any questions regarding this matter, please contact this office.

Sincerely,

Charles E. Nowinski

for James G. Keppler
Director

Enclosure: IE Bulletin
No. 80-11

cc w/encl:
Central Files
Director, NRR/DPM
Director, NRR/DOR
PDR
Local PDR
NSIC
TIC
Mr. Dean Hansell, Office of
Assistant Attorney General

8005210046

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 walls using expansion bolts. For pipe supports in this category, the expansion bolts should be bolted through the wall or the support. Supports that are bolted through masonry walls should be included in the review for this Bulletin.

DUPLICATE DOCUMENT

Entire document previously
entered into system under:

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No. of pages: 6

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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. For pipe supports in this category, the existing bolting through the wall or the support. Supports that are bolted through masonry walls are to be reviewed. A review for this Bulletin.

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Attachment 1
SSINS No.: 6870
Accession No.:
7910250475

Dupe

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.