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 AUTH. NAME AUTHOR AFFILIATION
 RENBERGER, D.L. Washington Public Power Supply System
 RECIP. NAME RECIPIENT AFFILIATION

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SUBJECT: Deficiency rept re Power Piping Co beam attachment, HS-142,
 used in rigid sway brace assemblies supplied w/undersized
 welds. Caused by bracket design deficiency. Stop work order
 issued to all contractors installing such brackets.

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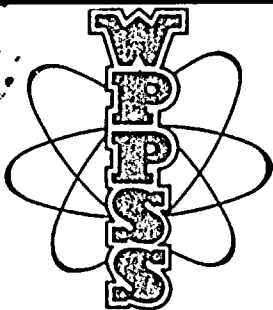
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Washington Public Power Supply System
A JOINT OPERATING AGENCY

P. O. Box 968

3000 GEO. WASHINGTON WAY

RICHLAND, WASHINGTON 99352

PHONE (509) 375-3000

September 19, 1980
G02-80-208

Mr. R. H. Engelken, Director
Nuclear Regulatory Commission
Region V
Suite 202, Walnut Creek Plaza
1900 N. California Blvd.
Walnut Creek, California 94596

Subject: WPPSS NUCLEAR PROJECT NO. 2
DOCKET NO. 50-397, CPPR-93
REPORTABLE DEFICIENCY - 10CFR50.55(e)

Dear Mr. Engelken:

In accordance with the provisions of 10CFR50.55(e), your staff was informed by telephone on August 20, 1980, of a reportable deficiency relative to sway brace brackets supplied by Power Piping Co.

Attached is our interim report on this deficiency.

Please contact us if you have additional questions.

Very truly yours,

D. L. Renberger
D. L. Renberger
Assistant Director,
Technology.

DLR/RPS/im

Attachment

cc: Mr. JR Lewis, BPA w/1
Mr. ND Lewis, EFSEC, Olympia w/1
MR. RE Snaith, B&R w/1
Mr. V. Stello, NRC w/1
Mr. AD Toth, NRC w/1
MR. JJ Verderber, B&R w/1
Mr. B. Wood, NUS Corp. w/1
WNP-2 Files

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REPORTABLE DEFICIENCY AND CORRECTIVE ACTION
WPPSS NUCLEAR PROJECT NO. 2
SWAY BRACE BRACKET'S, HS-142, MANUFACTURED BY POWER PIPING CO.
WITH POOR WELDMENT
(UNDERSIZED WELDS, LACK OF FUSION)

WASHINGTON PUBLIC POWER SUPPLY SYSTEM
DOCKET NO. 50-397
LICENSE NO. CPPR-93

Description of Deficiency

It has been determined that Power Piping Co. Beam Attachment, HS-142, used in rigid sway brace assemblies were supplied with undersized welds as required by ASME Section III, Div. 1, Subsection NF, Mandatory Appendix XIII Subparagraph XII-1732.1. These weldments were observed to be of poor quality with lack of fusion at the toe of the weld.

Using ASME Code Allowables, an analysis has determined that a design deficiency exists for these brackets when loads are applied at an angle greater than 15° off the perpendicular.

Safety Significance

Failure of the HS-142 beam attachment would render the rigid sway brace ineffective and could result in piping system failure. This would adversely affect the safe operation of the plant and personnel safety.

Corrective Action

A Stop Work Order has been issued to all contractors installing such brackets.

Project Engineering Directive, 215-H-4005, has been issued requesting the 215 mechanical contractor to remove HS-142 brackets with identified undersized welds.

Power Piping Co. was informed of our concern for angular applied loads. Power Piping Co. tested one bracket of each size on September 12, 1980. This test indicates that all sizes, except Nos. 60 and 80, attained Proof Load at a critical angle. An Engineering Directive has since been issued to all Hanger Engineers instructing them not to utilize the No. 60 and 80 size brackets in future designs.

An inspection of all sway brace brackets will be initiated to determine if the welds are undersized. Those brackets with undersized welds will be identified and held for future disposition pending final evaluation of the problem.

Engineering destructively examined additional brackets manufactured by Power Piping Co., N.P.S. and ITT Grinnell. Brackets from these manufacturers exhibited similar deficiencies of weld quality. It appears this may be an industry problem.

A test program will be developed and instituted to qualify existing rigid sway supports. A follow-up report of our investigative activities will be made by November 21, 1980.