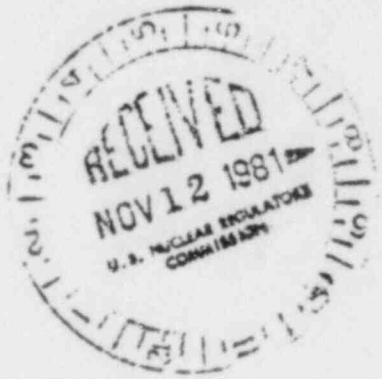
Docket No. 50-528/529/530
50.55(e) Report

ARIZONA PUBLIC SERVICE COMPANY
STA. 3003
P.O. BOX 21666 - PHOENIX, ARIZONA 85036

October 21, 1981
ANPP-19233-GHD/BSK



U. S. Nuclear Regulatory Commission
Region V
Creekside Oaks Office Park
1450 Maria Lane - Suite 210
Walnut Creek, California 94596-5368

Attention: Mr. B. H. Faulkenberry, Chief
Reactor Construction and
Engineering Support Branch

Subject: Final Report - DER 81-17
A 50.55(e) Reportable Condition Relating to Pipe Supports Fabricated Without Required Weld Joint Preparation
File: 81-019-026
D.4.33.2

Reference: (A) Telephone Conversation between W. Wagner and J. E. Cook on June 18, 1981

(B) ANPP-18405, dated July 15, 1981 (Interim Report)

Dear Sir:

Attached, is our final written report of the reportable deficiency under 10CFR50.55(e), referenced above.

Very truly yours,

E. E. Van Brunt, Jr.
APS Vice President
Nuclear Projects
ANPP Project Director

EEVBJr/GHD:skc

Attachment

cc: See Attached

IE27
S
1/1

8111130769 811021
PDR ADOCK 05000528
S PDR

81-201

cc: Victor Stello, Jr., Director
U. S. Nuclear Regulatory Commission
Office of Inspection and Enforcement
Washington, D. C. 20555

J. A. Roedel
D. B. Fasnacht
G. C. Andognini
F. W. Hartley
J. M. Allen
A. C. Rogers
B. S. Kaplan
W. E. Ide
J. Vorees
J. A. Brand
A. C. Gehr
W. J. Stubblefield
W. G. Bingham
R. L. Patterson
R. W. Welcher
R. M. Grant
D. R. Hawkinson
L. E. Vorderbrueggen

Ms. Patricia Lee Hourihan
6413 South 26th Street
Phoenix, Arizona 85040

FINAL REPORT - DER 81-17

REPORTABLE DFFICIENCY 50.55(e)

ARIZONA PUBLIC SERVICE COMPANY (APS)

PVNGS UNITS 1, 2 AND 3

I. Description of Deficiency

A field visual examination by borescope of Pullman supplied welded pipe stanchion on ASME Code III piping and reinforcing pads showed that the connecting welds lacked full penetration as specified by the Bechtel Engineering drawings. The weld symbol is denoted as a combined single bevel-groove and a fillet weld.

The cause of this deficiency is attributed to weld symbol identification and interpretation problems that Pullman Power Products has with the full penetration weld symbol.

A destructive examination was performed on several of the Pullman supplied assemblies by cutting the welded attachments and piping to expose the cross section of the weld joint. This examination confirmed lack of full penetration. Based on these findings, it was decided to reevaluate the pipe support design to determine the load carrying capacity of the support. A total of 450 pipe support shop drawings for Units 1, 2 and 3 have been identified as being supplied by Pullman for fabrication.

For purposes of the evaluation, it was assumed that each weld was a fillet only; i.e., no credit was taken for the partial penetration portion weld. The results of the analysis using final design loads resulted in the following:

a. 280 of these were found to be satisfactory, using only the existing fillet size as adequate to support the design loads.

b. 69 supports were identified as needing increased fillet sizes.

c. 44 of the supports submitted were found to have been modified previously either to delete the welded stanchion or to eliminate the support entirely.

d. For 57 of the supports, the design calls for a fillet weld only. These supports are satisfactory without additional evaluation or rework.

II. Analysis of Safety Implications

This condition is evaluated as Reportable since, if left uncorrected, the inadequately welded supports and related safety-related piping systems could possibly fail during a safe shutdown earthquake.

III. Corrective Action

The following are the corrective actions being taken to resolve this deficiency:

a. The American Welding Society has concluded that the weld symbol used on the Bechtel Shop drawings called for a full penetration weld. Pullman has received copies of this correspondence.

b. Except for lined pipe, Pullman has been directed to stop welding the dummy stub pipe to the run pipe or the reinforcing pad. Bechtel Construction will make these welds in the field.

c. Applicable drawings will be revised and reissued to show fillet weld only or increased fillet weld sizes. Supports requiring increased fillet weld sizes will be repaired following the dispositioned NCR-W-C423.