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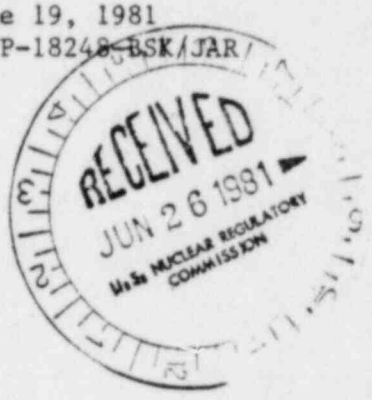
ARIZONA PUBLIC SERVICE COMPANY
P. O. BOX 21666 · PHOENIX, ARIZONA 85036

June 19, 1981
ANPP-18248-BSK/JAR



U. S. Nuclear Regulatory Commission
Region V
Walnut Creek Plaza - Suite 202
1990 North California Boulevard
Walnut Creek, California 94596

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

Subject: Final Report
A 50.55(e) Reportable Condition Relating to Loose Bushings
on ITT Grinnell Sway Struts
File: 81-019-026
D.4.33.2

Reference: (1) Telephone Conversation between R. Haynes and B. S. Kaplan on November 20, 1980 (DER 80-36)

(2) Interim Report, ANPP-16804-BSK/JAR, dated December 1, 1980

(3) Interim Report, ANPP-17368-BSK/JAR, dated February 2[illegible], 1981

Dear Sir:

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

A Bechtel Quality Assurance Bulletin indicated that ITT Grinnell manufactured sway struts, snubbers and shock suppressors may have been found to contain partially or totally disengaged self-aligning end bushings. An evaluation demonstrated that loose or disengaging bushings alone do not constitute a safety significant condition.

Very truly yours,

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

EEVBJr/BSK:skc

Attachment

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cc: [redacted] Director
Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

A. C. Gehr
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R. L. Robb
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FINAL REPORT

REPORTABLE DEFICIENCY 50.55(e)

ARIZONA PUBLIC SERVICE COMPANY (APS)

PVNGS UNIT NO. 1, 2 AND 3

I. Description of Deficiency

Project receipt of Bechtel Quality Assurance Bulletin 80-30 and Bechtel Problem Alert TPM-P-80-6, October 13, 1980, which referenced a 10CFR Part 21 Report filed by Bechtel's Ann Arbor office, indicated that ITT Grinnell manufactured sway struts, snubbers and shock suppressors may have been found to contain partially or totally disengaged self-aligning rod end bushings. This condition would be considered safety significant if left uncorrected since the condition of total disengagement during a seismic event may result in piping and/or piping welds being overstressed due to movement of the piping system. These documents did not provide definitive direction as to repairing or replacing these products, but indicated that each project was responsible for providing an acceptable disposition

In summary, Bechtel and the Palo Verde Project has provided inspection and/or corrective action for 100% of the ITT Grinnell self-aligning rod end bushings received at the jobsite as follows:

a. The initial group of products (beginning of the project to October, 1978) which did not receive specific shop inspection for loose bushings have been inspected and dispositioned by Bechtel Construction at the Palo Verde jobsite. (See Interim Report No. 2 (ANPP-17368, dated February 26, 1981)) Inspection results are noted below.

b. The production from October, 1978 to November, 1980 was covered by an "informal" staking program by ITT Grinnell whereby the bushing was staked when the Bechtel in-house inspector determined that a bushing appeared to be loose. Both the inspection criteria and the staking repair operation were performed in a subjective manner; however, it is felt that this inspection was adequate to preclude the noted condition of disengaged bushings.

c. Beginning in November, 1980, a formal staking procedure was implemented where 100% of the production of the Figure 200, 201, 211, 306 and 307 products are staked by ITT Grinnell as part of the production process.

As noted in Item (a) above, Bechtel Construction provided a 100% inspection of the initial group (60) of sway struts and shock arrestors by visually verifying the existence of the bushings. The rod ends were checked for any possibility of bushing disengagement within the pipe-clamp assembly. This

inspection included all the Figure 211 sway struts and Figure 306/307 mechanical shock arrestors received at the jobsite. The results of this detailed inspection indicate that none of the installed products exhibited loose or disengaged rod end bushings; however, two (2) snubbers were found in the material receiving area with the bushing partially disengaged. NCR #2422 was instituted to repair according to ITT Grinnell Procedure No. PE-292 for staking. As indicated by Interim Report No. 2 (Reference ANPP-17368, dated February 26, 1981), this same condition was also observed on two (2) other sway struts in the material receiving area at an earlier date.

Loose or disengaging bushings alone do not constitute a safety significant condition because the bushing is held captive by either the rear bracket and the spacer washers or the clamp and spacer washers at the pipe-clamp end after the device is installed. These conditions preclude the possibility of total disengagement for most cases. The combination of the staking program and/or the inspection program has eliminated the potential for disengaged bushings for those cases where the tolerance conditions at the pipe-clamp end would allow sufficient space for the bushing to become disengaged.

II. Analysis of Safety Implications

As indicated above, it has been demonstrated that a safety significant condition did not exist; therefore, this condition is considered to be not reportable for this project.

III. Corrective Action

No further corrective action is required.

Bechtel Power Corporation

Interoffice Memorandum

IOM-C/E-3899-D FLN#6941

To: W.G. Bingham

File No: D.4.33

Subject: D.E.R. 80-36
DCP-1-CS-ZZ-002

Date: May 13, 1981

From: W. J. Stubblefield

Dept: Construction

Location: A.K.Priest
E. Stiens ✓
D.R. Hawkinson
D.J. Montgomery

At: PVNGS Ext: 5050

Per Directive of DCP-1-CS-ZZ-002, A 100% visual examination of the list of possible deficient items was performed.

Two (2) ITT Grinnell Snubbers, 1-ZT-MAV-H-015 and 1-SG-001-H-009 with Rod End Bushings were partially disengaged.

An NCR #2422 was instituted with a disposition to repair according to ITT Grinnell Procedure for Staking PE-292.

Work was complete with Q.C. verification.

W J Stubblefield

WJS/JES/mlb

RECEIVED
MAY 19 1981
R. R. STIENS