

Arizona Public Service Company

(CORRECTED COPY)

August 23, 1984
ANPP-30311-TDS/TRB

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

Attention: Mr. T. W. Bishop, Director
Division of Resident
Reactor Projects and Engineering Programs

Subject: Final Report - DER 83-83
A 50.55(e) Reportable Condition Relating to Incorrect Sway
Strut Supporting Class Q1A Piping Was Installed.
File: 84-019-026; D.4.33.2

Reference: A) Telephone Conversation between P. Gage and K. Parrish on
December 2, 1983
B) ANPP-28540, dated January 4, 1984 (Interim Report)
C) ANPP-29247, dated April 6, 1984 (Time Extension)
D) ANPP-29584, dated May 23, 1984 (Interim Report)

Dear Sir:

Attached is our final written report of the deficiency referenced above,
which has been determined to be Reportable under the requirements of
10CFR50.55(e).

Very truly yours,

E. E. Van Brunt / *EBK*
E. E. Van Brunt, Jr.
APS Vice President
Nuclear Production
ANPP Project Director

EEVB/TRB/nj
Attachment

cc: See Page Two

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DER 83-83
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cc: Richard DeYoung, Director
Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

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FINAL REPORT - DER 83-83
DEFICIENCY EVALUATION 50.55(e)
ARIZONA PUBLIC SERVICE COMPANY (APS)
PVNGS UNITS 1, 2, 3

I. Description of Deficiency

Pipe support drawing 13-SI-193-H008 Rev. 5 requires the installation of an ITT Grinnell sway strut assembly size No. 7 for Item 61 of the drawing. In Unit 2, construction personnel substituted Corner and Lada (C&L) sway strut size No. 7 for the Grinnell size No. 7 sway strut. The required design load for the sway strut assembly is 85,895 lbs. The ITT Grinnell sway strut assembly size No. 7 has a Level D maximum load rating of 86,500 lbs., whereas the Corner and Lada sway strut size 7 has a Level D maximum load rating of 39,480 lbs.

The problem was discovered during a field engineering inspection in Unit 2.

Specification 13-PM-204 allows the interchange of pipe support components supplied by ITT Grinnell and Corner and Lada, provided they have the same design load capacities. The size designation and associated design load capacity for most pipe support components, such as variable springs, constant supports, and mechanical shock arrestors are consistent between suppliers. The only components for which this does not apply are sway struts. A Corner and Lada sway strut of a given size has a lower load capacity than a Grinnell sway strut of the same size designation. When pipe support 2-SI-193-H-008 was installed, the Grinnell sway strut was replaced with a Corner and Lada sway strut of the same size designation rather than the same load capacity.

To verify that other improper substitutions were not made, an inspection of the C&L sway struts installed in Unit 2 was made. The results of this inspection are given in Table I. Of the six undersized supports found, only one had a design load in excess of its capacity.

TABLE 1

<u>Description</u>	<u>Qty</u>
A. Pipe supports having correct size C&L sway strut	262
B. Pipe supports with undersized C&L sway strut	6
C. Pipe supports with oversized C&L sway strut	4
D. Pipe supports not inspected because scaffold was required	52

II. Analysis of Safety Implications

Pipe support 13-SI-193-H008 is in the safety injection system which is required for safe shutdown of the reactor. The substitution of a greatly undersized support would cause excessive loading of nozzles in the piping system.

Based upon the above, this condition is evaluated as reportable under 10CFR Part 50.55(e) since, if left uncorrected, it would constitute a significant safety hazard.

The root cause of this deficiency is attributed, not to a basic component, but to the failure on the part of construction and/or field engineering personnel to select for installation the component specified on the design drawing. Based on the above, this deficiency is evaluated as not reportable under the requirements of 10CFR Part 21.

III. Corrective Action

- A. NCR PC-7460 was dispositioned to replace the Corner and Lada size No. 7 strut used for support 13-SI-193-H008 with another sway strut assembly equivalent to an ITT Grinnell sway strut assembly size No. 7.
- B. The six undersized C&L pipe supports identified in the Unit 2 inspection will be removed and replaced with a sway strut sized per latest design drawings. This will be accomplished by NCRs PA-7744, PC-7823, PC-7826, PC-7827, PC-7841, and PC-7706.
- C. The four oversized C&L pipe supports identified in the Unit 2 inspection will be dispositioned Use-As-Is per NCRs PT-7842, PC-7824, PC-7825, and PC-7843.
- D. For Unit 1, Bechtel Construction has initiated a reinspection program under WPP/QCI 564.0 for all Corner and Lada supports presently installed. This reinspection is scheduled to be complete August 30, 1984. A similar reinspection program will be initiated for Unit 3. Deficiencies found shall be documented by NCR which cross-reference this DER for reportability disposition.
- E. To improve inspection standards in Units 1, 2, and 3, the following training sessions, including specialized training by Bechtel's Material and Quality Services (M&QS) on inspection techniques have been conducted with QC and Field Engineering personnel:

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1. A Corrective Action Reverification Program has been established by Bechtel Jobsite QA. The purpose of this program is to reverify the effectiveness of previous corrective actions taken for selected quality problems which:
 - a. were serious enough to have been reported to the NRC (DERs).
 - b. have a history of recurrence (trends/audit/surveillance CARs).
 - c. may be generic (Bechtel Power Divisions CIDS computer program).
2. The Field QA Surveillance Program has been upgraded to include a selective sampling of QC-accepted installations on a monthly basis to continually assess effectiveness of the inspection program in vital areas of pipe supports.
3. Specification 13-PM-204 has been revised to include load capacity data sheets for ITT Grinnell and Corner and Lada sway struts as an additional clarification via SCN No. 3573.
4. A copy of this report will be sent to the Bechtel Field Construction Manager requesting that this report and Specification Change Notice No. 3573 be used for Construction training to preclude further occurrences.