

Arizona Public Service Company

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REGION V I&E

August 24, 1984
ANPP- 30854-TDS/TRB

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

Attention: Mr. T. W. Bishop, Director
Division of Reactor Safety and Projects

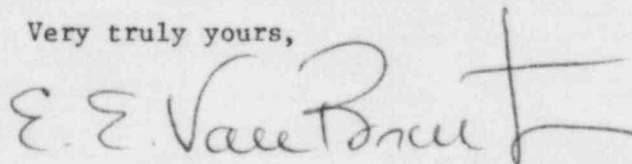
Subject: Final Report - DER 84-20
A 50.55(e) Reportable Condition Relating To Displacement Of A
Connecting Line In the SI System.
File: 84-019-026; D.4.33.2

Reference: A) Telephone Conversation between T. Young and J. Cook on
April 20, 1984
B) ANPP-29531, dated May 17, 1984 (Interim Report)
C) ANPP-29973, dated July 16, 1984 (Time Extension)
D) ANPP-30277, dated August 20, 1984 (Time Extension)
D) ANPP-30478, dated September 11, 1984 (Time Extension)

Dear Sir:

Attached is our final written report of the deficiency referenced above,
which has been determined to be Not Reportable under the requirements of
10CFR50.55(e).

Very truly yours,



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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Mr. T. W. Bishop
DER 84-20
Page Two

cc: Richard DeYoung, Director
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U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

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FINAL REPORT - DER 84-2C
DEFICIENCY EVALUATION 50.55(e)
ARIZONA PUBLIC SERVICE COMPANY (APS)
PVNGS UNIT 1

I. Description of Deficiency

A misalignment resulted from disassembly of an already erected and operated piping system.

Line 01-SIB-030-HCBA-24" connects to the recirculation sump and runs 23'-8" horizontally through penetration sleeve 24 in the containment base wall, to flanged butterfly valve 1J-SIB-UV-676. Line 01-SIB-308-GCBC-24" runs from the other side of this valve, past check valve 1P-SIB-V-206, and drops 26'-3" to the LPSI pump suction. With bracing under check valve V-206, butterfly valve UV-676 was removed per NCR SE-3179. This resulted in a displacement to line SIB-030 of 1-3/8" down and 3/4" laterally. This exceeds the closure gaps allowed without engineering approval by Specification 13-PM-204 (Rev. 13, paragraph 8.5) for erection of pipe spools. The condition was reported by SFR/NCR SM-3935. A survey of the line indicated that the anchor point at the recirculation sump liner plate is 1/8" low and the elbow downstream of valve V-206 is 7/8" high, resulting in a one-inch vertical offset. Additionally, the 23'-8" length of line SIB-030 was unsupported after being disconnected from the butterfly valve. The sag due to the deadweight of the pipe was calculated to be 1/8."

Evaluation

The original installation was within the tolerances of the installation specification. The general topic of cold springing piping systems was addressed in the response to NRC Inspection Follow-up Item 5-528/83-02-03. Bechtel and APS review concluded that pipe installation at PVNGS is performed in accordance with approved procedures.

The spool misfit procedure in Specification 13-PM-204 applies to the final closure fit up during erection of a piping system. It is not directly applicable to piping where random joints are released (cut or unbolted) after final closure was achieved. In such cases, there may be residual strains in the system due to weld shrinkage or support adjustments. This is a natural occurrence and is self-relieving with time. Additionally, after a system has been operated, residual strains may remain in the system due to friction in the restraints. Any complex high temperature piping system can be expected to experience misalignment if it is disconnected after final erection closure and operation. This misalignment does not represent a spool closure misfit deficiency, but rather the existence of residual strains in the system.

Since the system in question had been fully erected and operated before the flange at the butterfly valve was disconnected, the amount of residual strain in the system could only be determined by a systematic disassembly of the piping and supports. Because disassembly is not practical, the resulting misalignment has been evaluated as if it were a final closure misfit. Even with this assumption, the resulting calculated stresses (calculation 13-MC-SI-502A) in the piping system are within acceptable limits and the stress (196 psi) at the butterfly valve will not impair its operation.

II. Analysis of Safety Implications

Based on the above discussion, this condition, if left uncorrected, would not adversely affect the safety of operations of the plant; consequently, this condition is evaluated as not reportable under the requirements of 10CFR50.55(e) or 10CFR Part 21.

III. Corrective Action

SFR/NCR EM-3935 was dispositioned use-as-is. The proper operation of valve 1J-SIB-UV-676 was verified after reassembly as part of the disposition of SFR/NCR SE-3179.

IV. References

1. Crocker, Sabin; Piping Handbook, Fifth Edition, pp. 4-72 through 4-79. McGraw-Hill, Inc. (New York)