RECEIVED
NRC

Arizona Public Service Company
P.O. BOX 21666 • PHOENIX, ARIZONA 85036

1983 JUN 13 PM 1:15

June 6, 1983
ANPP-23982-BSK/RQT

REGION V

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

Attention: Mr. D. M. Sternberg, Chief
Reactor Projects Branch 1

Subject: Final Report - DER 83-29
A 50.55(e) Reportable Condition Relating to Two Hangers In Unit 1 Safety Injection System Were Not Installed As Designed.
File: 83-019-026; D.4.33.2
50-528

Reference: A) Telephone Conversation between A. Young and R. Tucker on May 6, 1983.

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 QAR

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

EEVB/RQT:ru

Enclosure

cc: See Page 2

8306170367 830606
PDR ADOCK 05000528
S PDR

IE-27

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

T. G. Woods, Jr.
G. C. Andognini
J. A. Roedel
D. B. Fasnacht
A. C. Rogers
B. S. Kaplan
W. E. Ide
J. Vorees
J. R. Bynum
P. P. Klute/D. D. Green
A. C. Gehr
W. J. Stubblefield
W. G. Bingham
R. L. Patterson
R. W. Welcher
R. M. Grant
D. R. Hawkinson
L. E. Vorderbrueggen
G. A. Fiorelli
S. R. Frost

Records Center
Institute of Nuclear Power Operations
1100 Circle 75 Parkway - Suite 1500
Atlanta, Georgia 30339

FINAL REPORT - DER 83-29
DEFICIENCY EVALUATION 50.55(e)
ARIZONA PUBLIC SERVICE COMPANY (APS)
PVNGS UNIT 1

I. Description of Deficiency

Pipe hanger drawings 13-SI-100-H-006 and 13-SI-106-H-007 specify axial restraints for Safety Injection System pipes SI-100-CCBA-4" and SI-106-CCBA-3", respectively, by indicating 1"x1/2"x0'-4" long bars attached adjacent to the north and south sides of each pipe dummy stub base plate (2 bars per base plate). The restraining bars for both hangers, shown on drawing 13-SI-106-H-007, are referenced by drawing 13-SI-100-H-006. As described in Nonconformance Report (NCR) PA-6143, all four bars were installed around the base plate for hanger 1-SI-106-H-007, restraining transverse as well as axial pipe motion. Hanger 1-SI-100-H-006 was left with unrestrained axial motion (see attached sketch). The subject condition is attributed to a misinterpretation of design drawings arising from having all four restraint bars drawn on one support drawing.

II. Analysis of Safety Implications

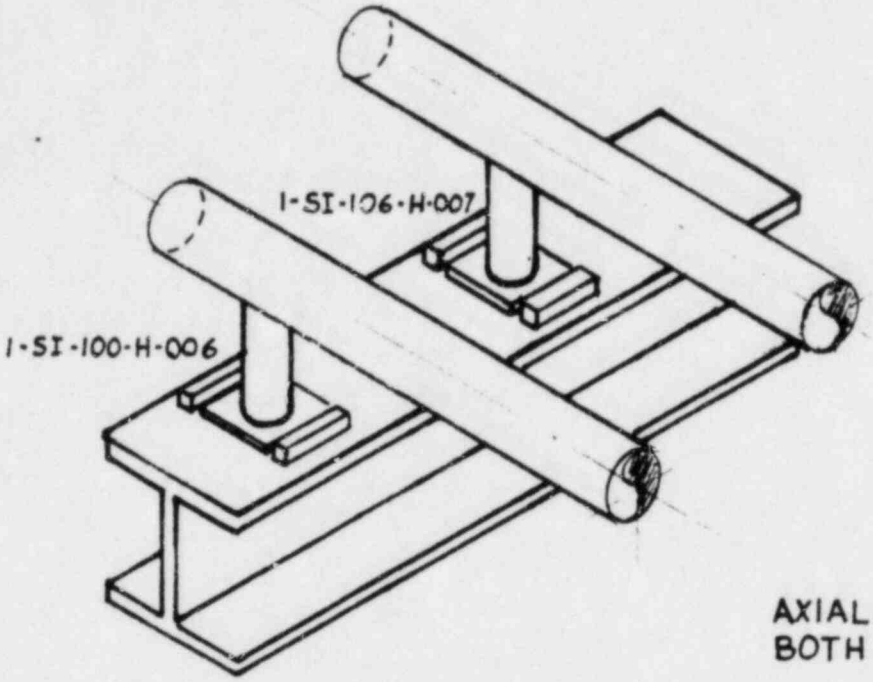
The associated piping systems were analyzed for the installed restraint configurations. Results of the evaluation show that line SI-100-CCBA-4" would have acceptable stress levels and support loads should no axial restraint be provided at support 1-SI-100-H-006. Although the stress levels of line SI-106-CCBA-3" would be acceptable, support 1-SI-106-H-003 would have inadequate load capacity to withstand additional forces imposed by a transverse (E-W) restraint at hanger 1-SI-106-H-007. The subject condition is therefore evaluated as reportable under the requirements of 10CFR50.55(e) since it represents a significant deficiency in construction such that, if left uncorrected, it could adversely affect the safety of operations of the plant during the lifetime of the plant. A detailed analysis of safety implications was not pursued as the condition is being corrected.

III. Corrective Action

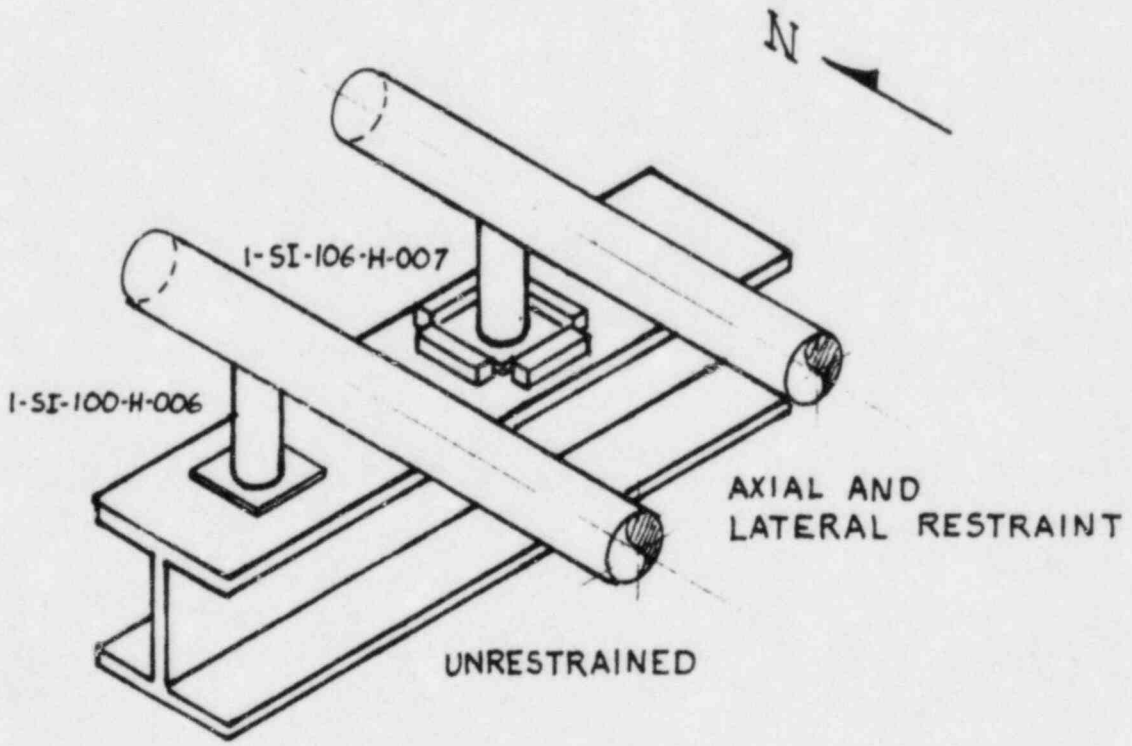
1. NCR PA-6143 will be dispositioned to have supports 1-SI-100-H-006 and 1-SI-106-H-007 repaired per the design drawings.

2. To preclude recurrence, drawings 13-SI-100-H-006 and 13-SI-106-H-007 are being revised to clarify restraint bar locations.

3. This condition has been verified to be an isolated event. The attached tabulation provides a list of all Q-Class pipe supports having dummy stubs. Based upon a review of the associated drawings, 65 support designs were identified with base plates restrained by bar stops. Of these, only two subject supports used cross-reference on one support drawing and located the restraint bars for both on the other support drawing.



DESIGN CONFIGURATION



INSTALLED CONFIGURATION

HANGER TAG NO.	BAR STOPS	X-REF DWG
13-CH-142-H-001		
13-CH-142-H-005		
13-CH-142-H-006		
13-CH-142-H-008	X	
13-CH-149-H-001	X	
13-CH-149-H-002		
13-CH-149-H-005		
13-CH-149-H-007		
13-CH-149-H-009	X	
13-CH-149-H-010	X	
13-CH-149-H-012	X	
13-CH-149-H-013	X	
13-CH-149-H-014	X	
13-CH-424-H-001		
13-CH-424-H-002		
13-CH-425-H-001		
13-CH-425-H-008		
13-EW-005-H-004	X	
13-EW-005-H-005	X	
13-SG-033-H-012		
13-SG-036-H-017	X	
13-SG-039-H-001		
13-SG-039-H-005		
13-SG-039-H-012		
13-SG-039-H-014		
13-SG-039-H-017		
13-SG-039-H-020		
13-SG-039-H-022		
13-SG-039-H-024		
13-SG-039-H-028		
13-SG-042-H-017	X	
13-SG-045-H-012		
13-SG-048-H-001		
13-SG-048-H-005		
13-SG-048-H-015		
13-SG-048-H-017		
13-SG-048-H-020		
13-SG-048-H-026		
13-SG-052-H-001		
13-SG-052-H-005		
13-SG-053-H-001		
13-SG-053-H-005		
13-SI-002-H-001		
13-SI-002-H-003		
13-SI-008-H-001	X	
13-SI-008-H-003	X	
13-SI-008-H-005	X	
13-SI-009-H-002	X	
13-SI-009-H-005	X	
13-SI-031-H-004	X	

HANGER TAG NO.	BAR STOPS	X-REF DWG
13-SI-031-H-005	X	
13-SI-033-H-002		
13-SI-033-H-003	X	
13-SI-033-H-004	X	
13-SI-034-H-002	X	
13-SI-034-H-004		
13-SI-067-H-002	X	
13-SI-067-H-004		
13-SI-070-H-003		
13-SI-070-H-004		
13-SI-070-H-006	X	
13-SI-070-H-008		
13-SI-070-H-009	X	
13-SI-070-H-012		
13-SI-072-H-003		
13-SI-072-H-004		
13-SI-072-H-005		
13-SI-072-H-009	X	
13-SI-072-H-012		
13-SI-072-H-013		
13-SI-072-H-020		
13-SI-078-H-005		
13-SI-079-H-006	X	
13-SI-082-H-002	X	
13-SI-087-H-001	X	
13-SI-087-H-002	X	
13-SI-087-H-008		
13-SI-089-H-008		
13-SI-089-H-013		
13-SI-090-H-001		
13-SI-090-H-002		
13-SI-099-H-001		
13-SI-099-H-002		
→ 13-SI-100-H-006	X	X
13-SI-100-H-029	X	
13-SI-100-H-031	X	
13-SI-100-H-032	X	
13-SI-100-H-035	X	
13-SI-100-H-037	X	
13-SI-105-H-002	X	
13-SI-105-H-004	X	
→ 13-SI-106-H-007	X	X
13-SI-106-H-016	X	
13-SI-107-H-001		
13-SI-107-H-002		
13-SI-107-H-014		
13-SI-107-H-026	X	
13-SI-107-H-034	X	
13-SI-107-H-042	X	
13-SI-107-H-045	X	

HANGER TAG NO.	BAR STOPS	X-REF DWG
13-SI-107-H-046		
13-SI-114-H-001	X	
13-SI-119-H-002		
13-SI-119-H-003	X	
13-SI-119-H-005	X	
13-SI-119-H-006		
13-SI-122-H-009	X	
13-SI-123-H-007		
13-SI-129-H-003		
13-SI-129-H-005		
13-SI-129-H-007		
13-SI-129-H-010		
13-SI-129-H-013	X	
13-SI-130-H-002		
13-SI-131-H-007	X	
13-SI-131-H-013	X	
13-SI-134-H-005		
13-SI-134-H-008		
13-SI-134-H-009	X	
13-SI-134-H-011		
13-SI-173-H-001	X	
13-SI-194-H-002	X	
13-SI-194-H-003		
13-SI-194-H-004		
13-SI-194-H-008	X	
13-SI-194-H-010	X	
13-SI-194-H-011	X	
13-SI-194-H-012	X	
13-SI-241-H-001		
13-SI-241-H-002		
13-SI-241-H-003	X	
13-SI-241-H-004		
13-SI-241-H-005		
13-SI-241-H-009		
13-SI-241-H-012		
13-SI-257-H-001	X	
13-SI-307-H-002		
13-SI-307-H-004		
13-SI-307-H-005		
13-SI-307-H-008	X	
13-SI-307-H-009		
13-SI-307-H-010		
13-SI-307-H-011		
13-SI-307-H-012		
13-SI-307-H-014		
13-SI-308-H-002		
13-SI-308-H-005		
13-SI-308-H-008		
13-SI-308-H-013	X	
13-SI-308-H-015		

HANGER TAG NO.	BAR STOPS	X-REF DWG
13-SI-378-H-001		
13-SI-378-H-003		
13-SI-378-H-005		
13-SI-378-H-006		
13-SP-025-H-006		
13-SP-025-H-008		
13-SP-025-H-009		
13-SP-030-H-004	X	
13-SP-030-H-005		
13-SP-030-H-006		
13-SP-030-H-007		
13-SP-030-H-008	X	
13-SP-065-H-012		
13-SP-068-H-004		
13-SP-068-H-005		
13-SP-068-H-006		
13-SP-068-H-007		
13-SP-068-H-008	X	
13-SP-079-H-006		
13-SP-079-H-007		
13-SP-079-H-008		
13-SP-079-H-009		
13-SP-079-H-010	X	
13-SP-079-H-011		
13-SP-080-H-011		
13-SP-080-H-017		
13-SP-098-H-004		
13-SP-100-H-004		