

Arizona Public Service Company

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May 19, 1983

ANPP-23812-RQT/ESK ON VISE

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

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

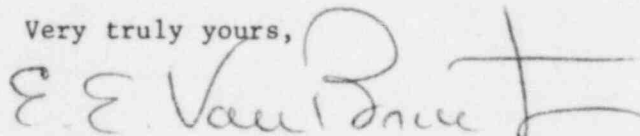
Subject: Final Report - DER 83-23
A 50.55(e) Reportable Condition Relating to
Main Steam Isolation Bypass Valves Will Not Close In The
Required Time
File: 83-019-026; D.4.33.2

Reference: A) Telephone Conversation between P. Narbut and R. Tucker on
April 19, 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, Jr.
APS Vice President
Nuclear Projects Management
ANPP Project Director

EEVBJr/RQT:db
Enclosure
cc: See Page 2

Mr. D. M. Sternberg
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cc: Richard DeYoung, Director
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U. S. Nuclear Regulatory Commission
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FINAL REPORT - DER 83-23
DEFICIENCY EVALUATION 50.55(e)
ARIZONA PUBLIC SERVICE COMPANY (APS)
PVNGS UNITS 1, 2 & 3

I. DESCRIPTION OF DEFICIENCY

Per Specification 13-PM-221B, Data Sheets 13-J-082-093 and 13-J-082-094, the Main Steam Isolation Valve (MSIV) bypass valves are required to close within five (5) seconds upon loss of electrical power to either Separation Train A or B solenoid valves. During Startup Testing of the Unit 1 Main Steam System the MSIV bypass valves (Tag No.'s SGE-UV-169 and 183) failed to close within five (5) seconds under one simulated testing mode. This condition is documented in Startup Field Report 1SG-057.

Each MSIV bypass valve (pneumatically opened, normally closed and fail closed) is operated with Separation Train A and B solenoid air supply valves (three-way ASCO NP831654E) in series, as indicated in the attached figure. The bypass valves are open during a plant startup to decrease the pressure differential across the initially closed MSIV's, facilitating the opening of the MSIV's.

For the MSIV bypass valve to close, air pressure in the bypass valve actuator (supplied via the solenoid valves) must be released. Conceptually, this would occur upon tripping either one or both solenoid valves, as the tripped solenoid valve(s) vent(s) the pressurized air in the bypass valve actuator to the building environment. During testing, solenoid valve B was deenergized with solenoid valve A intentionally left energized (i.e., simulated binding of solenoid valve A), thus requiring venting of the pressurized air through solenoid valve A to the solenoid valve B vent port. This simulated failure revealed that solenoid valve A, if not tripped, would restrict reverse air flow, thereby delaying the decrease in air pressure in the MSIV bypass valve actuator necessary for bypass valve closure.

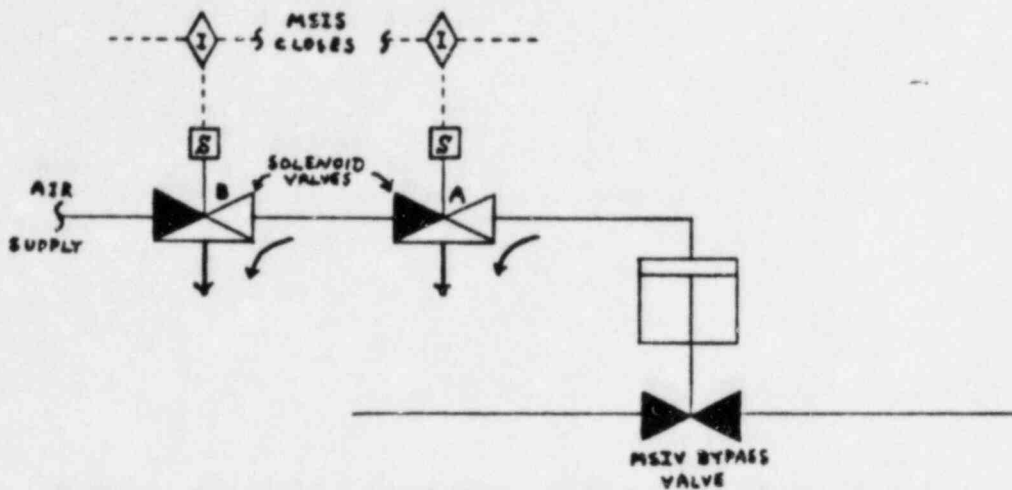
II. ANALYSIS OF SAFETY IMPLICATIONS

Should solenoid valve A fail to trip upon being deenergized, the MSIV bypass valve would not close within five (5) seconds as committed to in licensing documents. This condition constitutes a violation of the Combustion Engineering design interface requirements for the Main Steam System. Additional analysis of this requirement and revision to project licensing documents are not being performed since the condition is being corrected. The subject deficiency is thus evaluated as reportable under the requirements of 10CFR50.55(e) since, if left uncorrected, it could potentially affect the safety of operations of the plant and it represents a significant deficiency in final design.

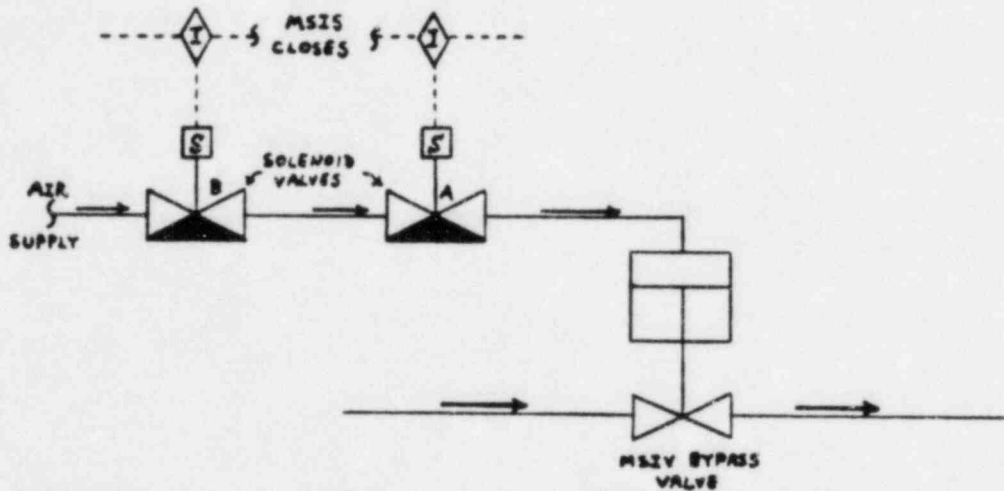
III. CORRECTIVE ACTION

- 1) Design Change Packages 1SJ-SG-067, 2SJ-SG-067 and 3CJ-SG-067 have been issued to correct this deficiency. Solenoid valve A will be replaced with a four-way type valve (ASCO NPS344A72E). This replacement solenoid valve design provides for reverse air flow.
- 2) Bechtel's Controls Systems Discipline has determined the subject deficiency to be an isolated case.
- 3) Bechtel Power Corporation is issuing a Problem Investigation Request alerting other Bechtel projects of this potential deficiency.

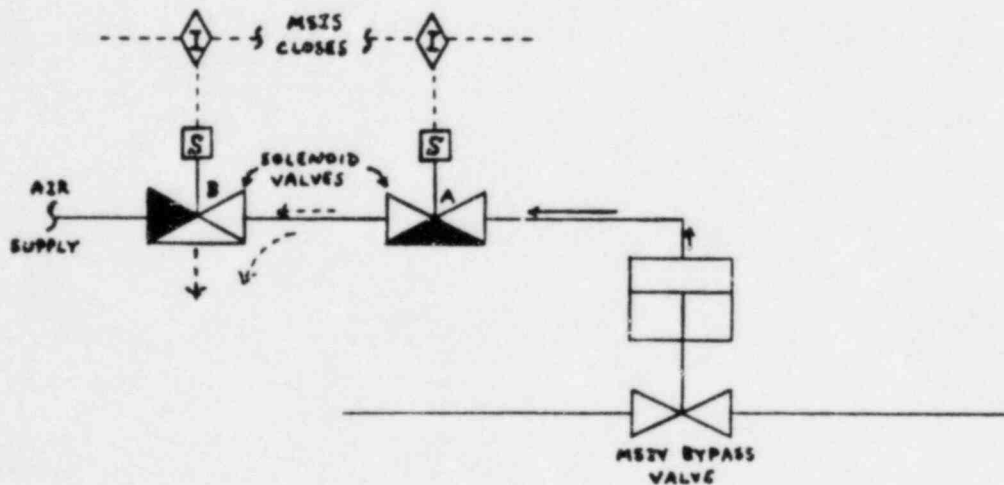
In addition to reportability under 10CFR50.55(e), Bechtel PVNGS Project considers the deficiency to be reportable under the requirements of 10CFR Part 21 by the supplier. Deficiency Evaluation Report 83-23 addresses the reporting requirements specified under 10CFR 21.21(b) (3) with the exception of sub-part (vi) which requires the identification of all other facilities with the subject deficiency. A copy of this report will be sent to Anchor Darling requesting their review for reporting under 10CFR Part 21 including number and location of all components supplied.



NORMAL: Solenoid Valves Open, MSIV Bypass Valve Closed



STARTUP: Solenoid Valves Closed, MSIV Bypass Valve Open



POTENTIAL PROBLEM: Solenoid Valve 'A' Remains Open, Restricting Reverse Air Flow to be Vented by Solenoid Valve 'B'