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 PARRISH, J.V. Washington Public Power Supply System
 RECIP. NAME RECIPIENT AFFILIATION
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SUBJECT: Responds to NRC 940315 ltr re violation noted in Insp Rept
 50-397/94-02. Corrective actions: Surveillance Procedure
 (PPM 7.4.6.1.2) changed to include independent verification
 of EFCV bypass valve closure for listed valves.

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April 29, 1994
GO2-94-099

Docket No. 50-397

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Station PI-37
Washington, D. C. 20555

Gentlemen:

Subject: **WNP-2, OPERATING LICENSE NO. NPF-21
NRC INSPECTION REPORT 94-02 REPLY TO A NOTICE OF VIOLATION**

Reference: Letter, dated March 15, 1994, SA Richards (NRC) to JV Parrish (SS), "Notice of Violation (NRC Inspection Report No. 50-397/94-02)"

The Supply System hereby replies to the Notice of Violation contained in your letter dated March 15, 1994. Discussion with Region IV personnel in the Walnut Creek Field Office extended the due date from April 14 to April 29, 1994. Our reply, pursuant to the provisions of Section 2.201, Title 10, Code of Federal Regulations, consists of this letter and the attached appendices.

The referenced letter states that "Engineering appears to not have been timely in their review of fuel options for cycle 10. This issue is still under NRC review and will be addressed in a later inspection report." No additional information on this concern was provided in this Inspection Report. It is the Supply System's understanding that this concern was first raised several weeks after the close of Inspection 50-397/94-02. The Supply System expects to address this issue in our response to Inspection 50-397/94-12.

The Supply System concurs with the conclusion provided in the Inspection Report regarding the need for management attention and dedication of engineering resources to the resolution of the proposed instrumentation backfill system modification and improperly sized orifices on instrument lines.

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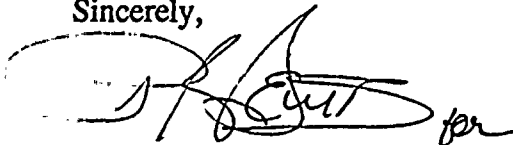
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NRC INSPECTION REPORT 94-02 REPLY TO A NOTICE OF VIOLATION

We have reviewed the 10CFR50.59 safety evaluation performed for the level instrumentation backfill system and maintain that this modification does not involve an unreviewed safety question. With regard to the instrumentation line orifices of a larger size than that described in the FSAR, the calculations to support the larger orifice size are in the review process.

If you have any questions or desire additional information regarding this matter please contact me or D.A. Swank at (509) 377-4563. .

Sincerely,



J.V. Parrish (Mail Drop 1023)
Assistant Managing Director, Operations

JVP/LCF/bk
Attachment

cc: LJ Callan - NRC RIV
KE Perkins, Jr. - NRC RIV, Walnut Creek Field Office
NS Reynolds - Winston & Strawn
JW Clifford - NRC
DL Williams - BPA/399
NRC Sr. Resident Inspector - 927N

Appendix A

The referenced letter provides details of the following Notice of Violation:

Violation

During an NRC inspection conducted from January 10 through 28, 1994, a violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10CFR Part 2, Appendix C, the violation is listed below:

- A. Technical Specification 4.6.1.1.b states, in part, that PRIMARY CONTAINMENT INTEGRITY shall be demonstrated: "At least once per 31 days by verifying that all primary containment penetrations not capable of being closed by OPERABLE containment automatic isolation valves and required to be closed during accident conditions are closed by valves, blind flanges or deactivated automatic valves secured in position..."

A note in Technical specification 4.6.1.1.b provides an exception to verifying the valves shut every 31 days. The note states, in part: "Except valves...which are...locked sealed or otherwise secured in a closed position..."

Contrary to the above, as of January 14, 1994, the manual bypass valves for 115 excess flow check valves had not been verified closed every 31 days, nor were they locked, sealed, or otherwise secured in a closed position.

This is a Severity Level IV violation (Supplement I).

Response to Violation A:

The Supply System accepts this violation for the two excess flow check valves (EFCVs) inside containment (PI-EFC-X72f and PI-EFC-X73e). The 113 EFCVs outside of containment provide no active containment integrity function to mitigate the consequences of a LOCA; therefore, Technical Specification 4.6.1.1.b does not apply to these EFCVs.

EFCVs PI-EFC-X72f and PI-EFC-X73e (inside containment)

(1) Reason for violation

Technical Specification surveillance 4.6.1.1.b, including note "***", provides requirements for the two EFCVs inside containment. Since these are inside containment, verification of closure is required following primary containment de-inerting, but not more often than once per 92 days. The 31 day surveillance interval does not apply.

A review of the implementing procedure identified a discrepancy which resulted in noncompliance with Technical Specification 4.6.1.1.b requirements. The EFCV bypass valves were not verified closed because the procedure did not provide accurate guidance to



successfully meet the requirement. Specifically, the EFCV bypass valves were identified by incorrect EPNs (equipment piece numbers). Due to this procedure error, a potential exists that verification of closure was made of a normally closed drain/test connection, rather than the EFCV bypass valve (Figure 1). However, the EFCVs are verified closed as part of two other surveillance procedures, the Local Leak Rate Testing (LLRT) and Inservice Testing (IST). The IST was performed most recently on May 27, 1993 and satisfies Technical Specification 4.6.1.1.b for the time period up to April 1994, when the plant was shut down for the maintenance and refueling outage.

A historical procedure review verified that the EFCV bypass valves were correctly identified in previous revisions of the surveillance procedure. Revision 5, dated February 17, 1993, reflects the results of a biennial review and the subsequent verification and validation (V&V). This revision changed the EPNs listed for the EFCV manual bypass valves so that they were incorrectly identified by the drain/test connection EPN. The EFCV manual bypass valves do not have an independent EPN, they are identified by the EFCV EPN.

The V&V procedure in effect at the time the V&V was performed, included a checklist for surveillance procedures which required verification that EPNs be included in the procedure. While it did not explicitly require EPN verification to the Technical Specifications, it did require verification that the procedure satisfy applicable Technical Specification surveillance requirements. This requirement also exists in the current version of the V&V procedure. An opportunity existed in both the verification and validation efforts to identify and correct this deficiency.

(2) Corrective steps that have been taken and the results achieved

The surveillance procedure (PPM 7.4.6.1.2) has been changed to include independent verification of EFCV bypass valve closure for valves PI-EFC-X72f and PI-EFC-X73e.

(3) Corrective steps that will be taken to avoid further violations

A training session will be provided for those individuals involved in this procedure revision effort to ensure management expectations regarding responsibilities associated with technical review, procedure revision, and V&V are understood. This training will be completed by July 1, 1994.

A sample review will be performed of V&V efforts completed to date to confirm that the identified problem is an isolated occurrence. This review will be completed by August 1, 1994.



(4) Date full compliance will be achieved

Technical Specification requirements were met on May 27, 1993 when the EFCV bypass valves were verified closed following the IST.

Full compliance was achieved on April 25, 1994 when the procedure was modified to correct the EPN error.

Additional Information for EFCVs Inside Containment

The EFCVs inside containment are one of two required isolation valves on radiation monitor return lines. These lines are capable of being closed by operable containment automatic isolation solenoid valves located outside containment (Figure 2a). The EFCVs do not have restrictive orifices and are not installed on instrument lines. Regulatory Guide (RG) 1.11, "Instrument Lines Penetrating Primary Reactor Containment", does not apply to these EFCVs. The EFCVs inside containment provide no instrument line break (ILB) mitigation function (Figure 2b).

During the course of this evaluation an additional problem was identified. This was a design error which is postulated to degrade the containment isolation capability of PI-EFC-X72f and PI-EFC-X73e. Specifically, the EFCVs are spring loaded in the open position. For the design basis LOCA, containment pressure post LOCA will seat these valves and provide containment isolation. A decrease in containment pressure will permit these to re-open, degrading the containment isolation capability of these inboard isolation valves. These two EFCVs have been declared inoperable. The associated penetrations were isolated on April 20, 1994 per Technical Specification requirements. This concern will be discussed in detail in a future Licensee Event Report.

EFCVs outside of containment (113 EFCVs total)

Technical Specification 4.6.1.1.b does not apply to the 113 EFCVs outside of containment because they provide no active containment integrity function to mitigate the consequences of a LOCA (Figure 3). The penetrations served by these EFCVs are not required to be closed during accident conditions for which primary containment integrity is required. For the LOCA, the EFCVs must remain open to allow instrumentation outside containment to perform the required post-LOCA monitoring functions. The EFCVs, therefore, provide a passive pressure boundary function which is ensured by valve, instrument, and piping design of the same quality standards as the containment. The instruments and piping maintain this containment integrity function with the EFCVs in the open position.

EFCVs outside containment mitigate an ILB as described in FSAR Chapter 15.6.2. Although these EFCVs will isolate an ILB downstream of the EFCV, no credit is taken for automatic closure in the accident analyses (Figure 4).



The manual bypass valve for the EFCV is an integral part of the EFCV and does not require independent maintenance and surveillance procedures. The EFCV is demonstrated operable per Technical Specification 3/4.6.3 surveillance requirements. The surveillance procedures used to test the EFCVs include a verification of EFCV bypass valve closure at the completion of testing. EFCVs outside containment are tested every 18 months.

The referenced letter indicates that Technical Specification 3.6.3 requires that reactor instrumentation line EFCVs shown in Table 3.6.3-1 "...be operable during OPERATIONAL CONDITIONS 1, 2 AND 3." The Supply System maintains that operability of the EFCVs is demonstrated by Technical Specification surveillance requirement 4.6.3.4. The surveillance procedures demonstrate the operability of the EFCVs and ensure the bypass valves are closed.

The referenced letter indicates that RG 1.11 provides guidance that each excess flow check valve should function as an automatic isolation valve in order to satisfy General Design Criteria 55 and 56 (for containment integrity). It further states that "...there should be a high probability that the valve ... will close if the instrument line is ruptured downstream." Finally, RG 1.11 provides guidance that each instrument line contain a flow-restricting orifice appropriately sized to independently limit the consequences of an instrument line failure outside of containment.

The Supply System maintains that EFCVs outside containment are installed as automatic containment isolation valves in accordance with the guidance provided in Reg Guide 1.11. The Safety Evaluation Report (NUREG-0892), in describing "small-diameter instrument lines which penetrate the containment at WNP-2", provides verification of this by stating in Section 6.2.4.4(3) that the "... design meets the provisions of Regulatory Guide 1.11 by using ... excess flow check valves on instruments connected to the primary system..."

The referenced letter indicates that FSAR Section 6.2.4.3.2.4 states, in part, "The Excess Flow Check (EFC) Valves each have an integral bypass valve which may be used to reset an actuated disc. In order to minimize a possible potential impact upon the integrity and functional performance of the secondary containment and its associated filtration systems should instrument line rupture occur, the bypass valves are periodically verified to be closed." The Supply System maintains that this periodic check is performed during the operability demonstration of the EFCV per Technical Specification surveillance requirement 4.6.3 discussed above.

The Supply System concludes that adequate programmatic guidance, procedure control, and problem identification and resolution measures exist to ensure that EFCVs located outside containment are operable and will perform their intended function. No actions are required to resolve this issue for the EFCVs located outside containment.

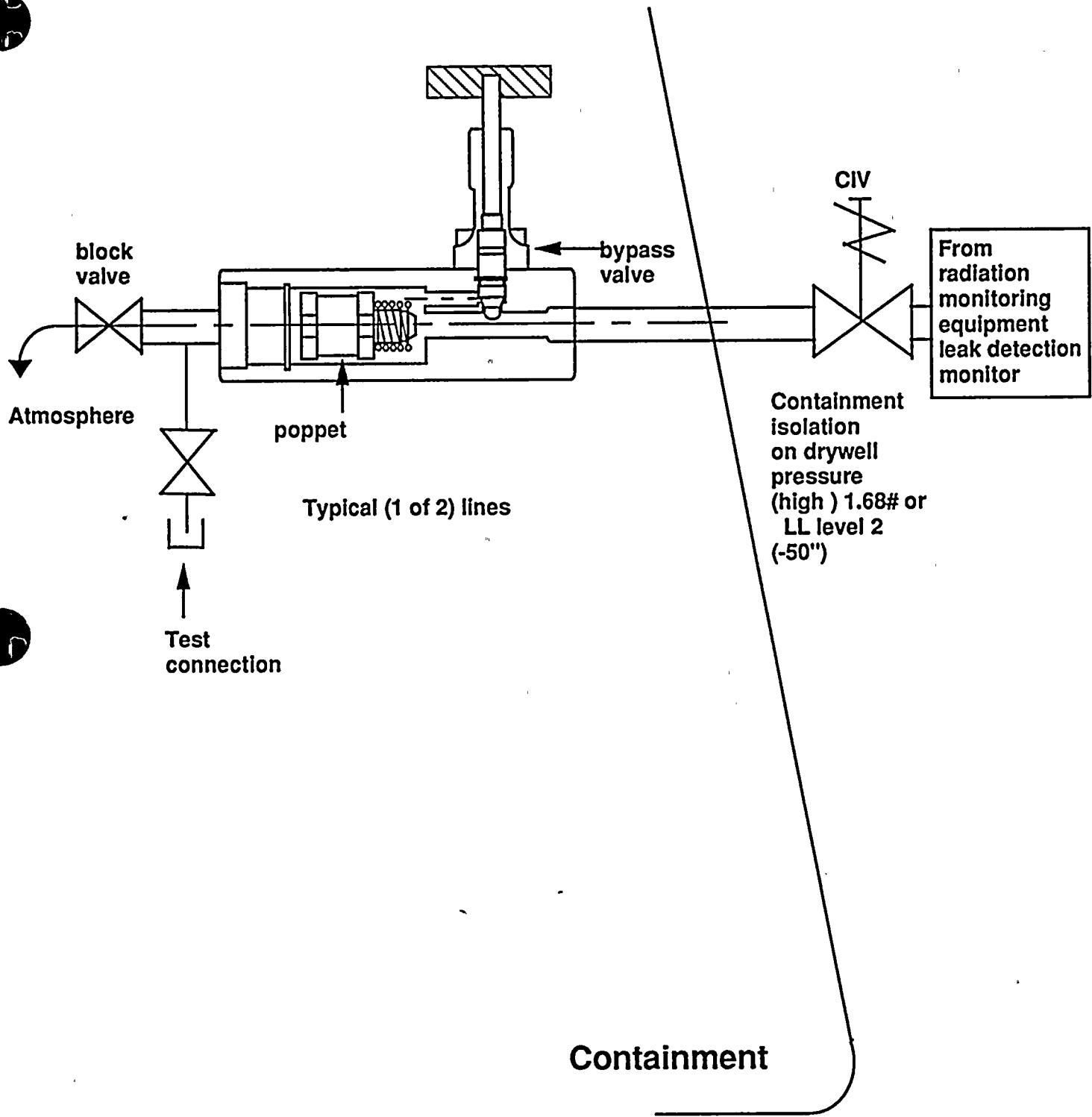
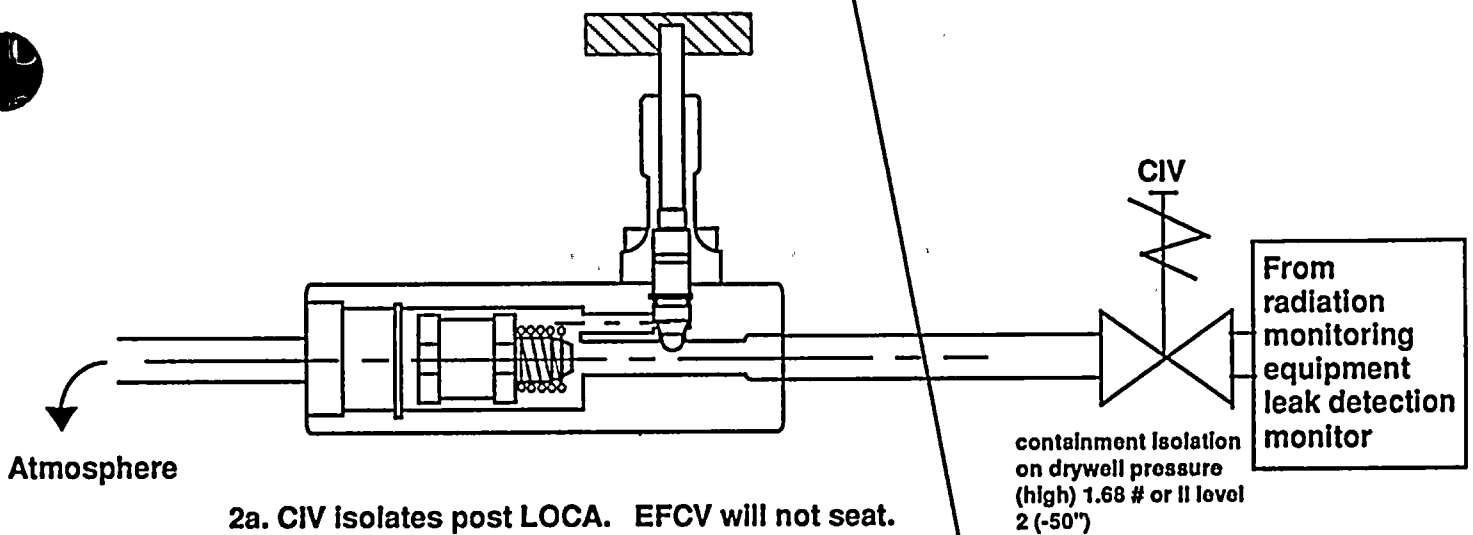
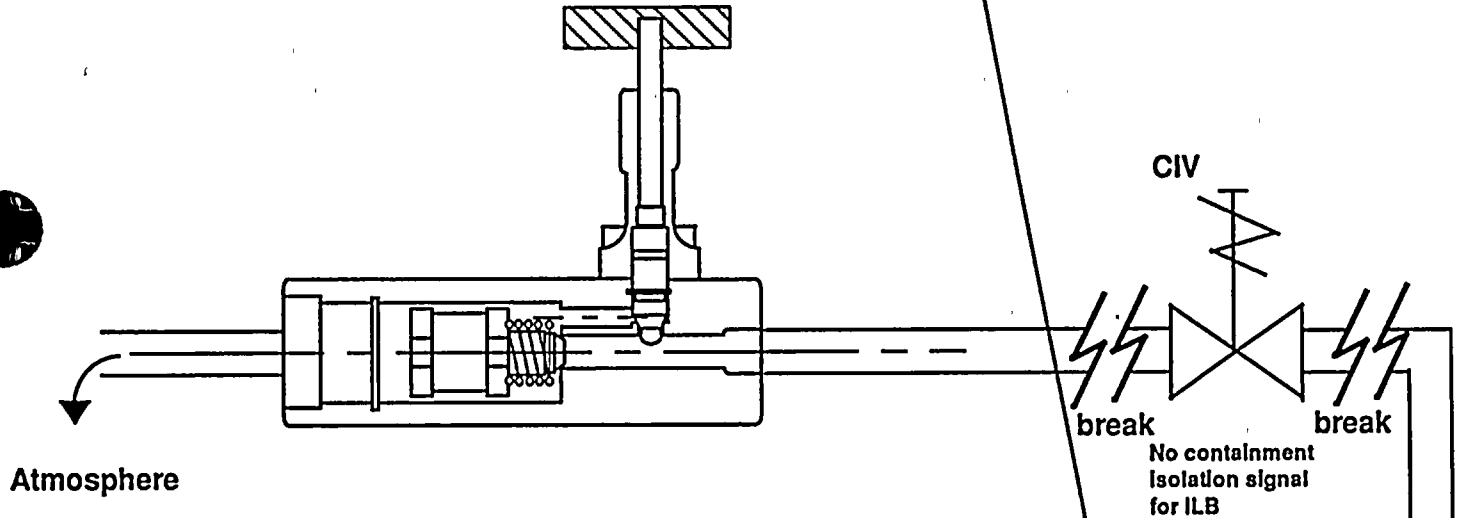


Figure 1.
EFCVs inside containment
Functional Diagram





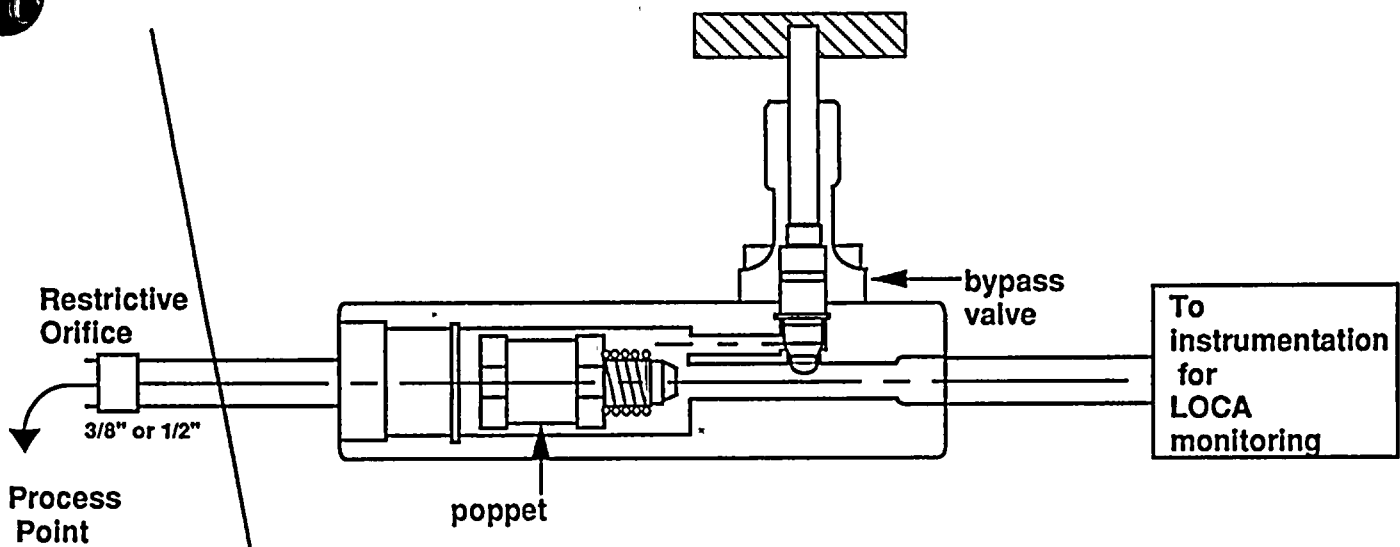
2a. CIV isolates post LOCA. EFCV will not seat. A postulated failure of the outboard isolation valve (CIV), due to single failure criteria, requires EFCV actuation.



2b. Break between isolation valves not postulated. Break downstream of CIV required to be mitigated by isolation valves.

Figure 2.
EFCVs inside containment





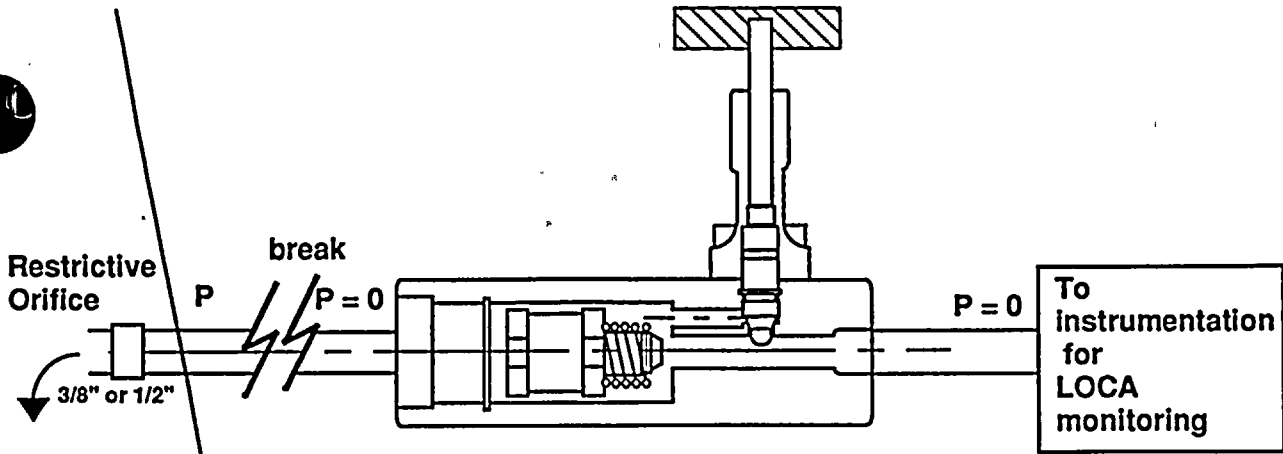
Post LOCA conditions will not result in ΔP in instrument line, the EFCV will not seat.

Pressure boundary (closed system) provides containment integrity

Containment

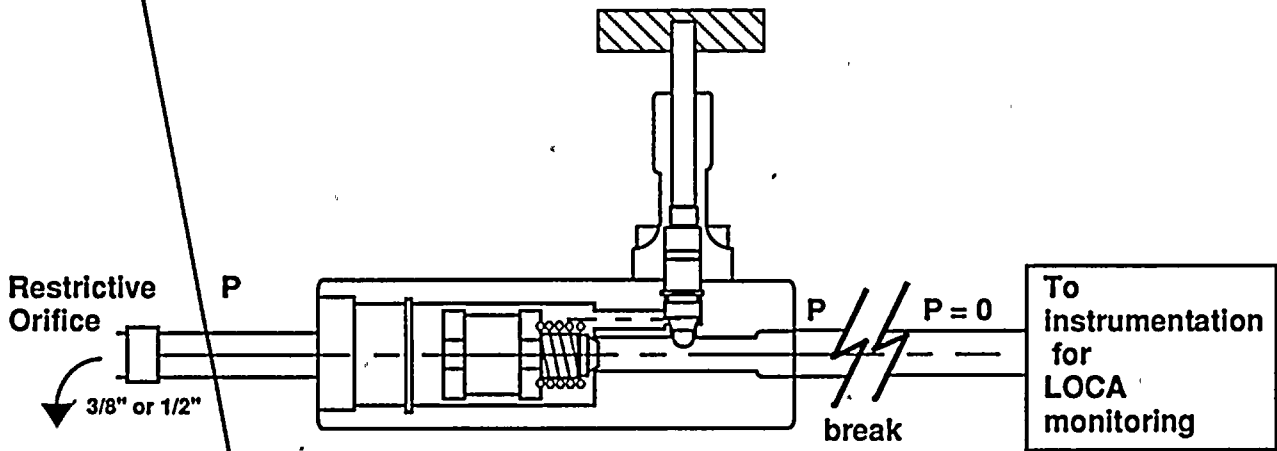
Figure 3.
EFCVs outside containment LOCA mitigation





Process Point

4a. No ΔP across EFCV, no automatic ILB isolation. must de-pressurize RPV to mitigate event.



Process Point

4b. ΔP will seat EFCV, ILB isolation.

Containment

Figure 4.
EFCVs outside containment
instrument line break (ILB) mitigation

