

ENCLOSURE 1

WATTS BAR NUCLEAR PLANT

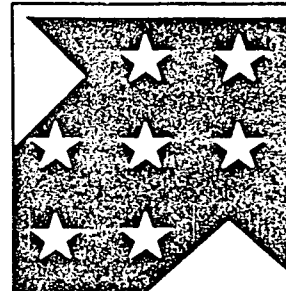
CONTAINMENT ISOLATION

Corrective Action Program Plan

Revision 0

8810250396 881020
PDR ADOCK 05000390
A PNU

WATTS BAR



CONTAINMENT ISOLATION
CORRECTIVE ACTION PROGRAM PLAN

WATTS BAR NUCLEAR PLANT

REVISION 0

Marilyn S. Childers 8/4/88
Prepared

Robert D. McIntosh 8/4/88
Reviewed (Lead Engineer)

BW Carter 8/4/88
Submitted (Project Engineer)

Ed Fuller 8/5/88
Approved (Site Director)

Ed Fuller 8/23/88
Concurred (Watts Bar Program Team)

TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
1.0 Introduction	1
2.0 Objective	1
3.0 Scope	1
4.0 Description of Program	1
5.0 Program Interfaces	4
6.0 Program Implementation	4
7.0 Program Documentation	5
8.0 Conclusion	5
9.0 References	5
Attachments	
A. Basis of CAP and Related CAQRs	A1
B. Containment Isolation Provisions Requiring Changes for GDC/SRP Compliance	B1
C. Illustration of Proposed Design Changes	C1
D. Schedule Fragnet	D1

1.0 INTRODUCTION

The plan to evaluate and upgrade the Containment Isolation System (CIS) design at Watts Bar Nuclear Plant (WBN) resulted from NRC concerns expressed at Sequoyah Nuclear Plant (SQN) in 1986 over the use of a closed loop outside containment (CLOC) as the sole outboard isolation provision for certain lines penetrating containment (reference 1). The present NRC staff position (reference 2) is that a CLOC is not generally acceptable as an isolation barrier for lines covered by 10 CFR 50 Appendix A General Design Criteria (GDC) 55 or 56. This position imposes additional requirements beyond those previously accepted in the WBN Safety Evaluation Report (SER) (reference 3). Currently, acceptable isolation provisions are those explicitly described in the GDC or those other defined bases described in Standard Review Plan (SRP) 6.2.4 and American National Standards Institute (ANSI) Standard N271-1976, "Containment Isolation Provisions for Fluid Systems." In November 1986, TVA made a commitment to reevaluate the WBN CIS design as a result of the question raised for Sequoyah (reference 4).

2.0 OBJECTIVE

The objective of the CIS CAP plan is to evaluate and document the degree of compliance to the isolation requirements of GDC 55, 56 and 57 that currently exists in the WBN CIS design, and to perform design changes as necessary to ensure licensability for the containment isolation system.

3.0 SCOPE

The scope of the CIS CAP includes a review of each fluid line penetrating containment for WBN Unit 1 to determine compliance and to identify any needed design changes to ensure compliance or proper exemptions to the applicable requirements.

4.0 DESCRIPTION OF PROGRAM

The program plan is to: 1) conduct 100% review of all 189 fluid lines penetrating containment for GDC 55, 56, and 57 compliance; 2) document compliance status and identify CIS upgrades required to comply with the GDC explicitly or via the other defined bases described in SRP 6.2.4. or ANSI N271-1976; 3) perform those design changes necessary to bring WBN CIS into compliance; 4) procure, install, and test additional CIS valves where necessary and; 5) submit exemption requests to the NRC if warranted.

Since there is no fundamental process concern identified, this plan does not represent nor require recurrence control.

4.1 Conduct Full review of all fluid lines penetrating containment for compliance to GDC 55, 56, and 57

A review of all fluid lines penetrating containment was performed to evaluate compliance with GDC 55, 56, and 57. Each fluid line penetration was individually evaluated. The applicable GDC was identified for each line based on whether it connects to the reactor coolant pressure boundary (GDC 55), to containment atmosphere (GDC 56), or to a closed system inside containment (GDC 57). The existing isolation provisions were then compared to the specific requirements of the GDC and the alternate bases allowed by SRP 6.2.4. In addition to the GDC compliance review efforts, a Technical Review Meeting for CIS GDC compliance was held at WBN. Both TVA and industry experts participated in the review of the WBN CIS design and made upgrade recommendations which were incorporated in the upgrade plans identified in section 4.2.

Eight lines penetrating containment were found to be in nonconformance to the WBN CIS design basis and licensing commitments. These were documented in Condition Adverse to Quality Reports (CAQR). Specific corrective actions and recurrence control for these nonconforming isolation provisions are to be tracked under the CAQRs identified in Attachment A.

4.2 Document compliance status and recommendation of CIS upgrades required to comply with the GDC

Results of the CIS GDC review are documented in TVA calculation WBN-OSG4-102 (reference 5). The calculation identified those penetrations whose isolation provisions comply with GDC 55, 56, or 57. Of the 189 fluid lines penetrating containment, 74 were found to be in compliance with the requirements of GDC 55, 56, or 57. The calculation also identified 76 penetrations whose isolation provisions meet the other defined bases described in SRP 6.2.4 or other industry standard (ANSI N271-1976). Of these 76, 36 are seal-welded spare penetrations which are considered part of the containment vessel and have no fluid lines attached, 26 meet explicit SRP 6.2.4 requirements, and 14 others (including equipment hatch, fuel transfer tube, flanged maintenance ports, temporary ice blowing lines) were found to be acceptable due to administrative limitations on their periods of use consistent with guidance provided in the ANSI standard.

The calculation identified 39 penetrations whose isolation provisions do not conform to GDC 55, 56 or 57 or to the currently accepted alternate bases, though in most cases they did conform to the documented design basis and licensing commitments for WBN. Thirty-five of these penetrations require a design upgrade to achieve GDC compliance. Valves associated with the final four penetrations have been redesignated to be containment isolation valves, as required by the NRC in the June 1982 SER and as explained below.

In the June 1982 SER, Section 6.2.4, the NRC required TVA to redesignate remote manual level control valves (LCV) in the safety-grade Class C portion of the Auxiliary Feedwater lines as containment isolation valves in order for TVA to comply with the requirements of GDC 57. These valves are Seismic Category I with a design pressure of 1975 psig, compared to containment accident pressure of 15 psig. The lines are connected to the secondary sides of the steam generators which are kept at a higher pressure than the primary side soon after a LOCA occurs. Any leakage between primary and secondary sides of the steam generators would be directed inward to the containment. TVA redesignated the Class C valves to provide an additional isolation boundary for these four penetrations and intends to continue with this approach.

Attachment B contains the tabular listing of penetrations to be upgraded. Attachment C contains a description of the design changes required.

4.3 Perform engineering design changes needed to bring WBN CIS into GDC compliance

For those penetrations whose isolation provisions do not meet the requirements of the GDC or the other defined bases allowed by SRP 6.2.4 or ANSI N271 - 1976, the design is to be upgraded through the Engineering Change Notice (ECN) Modification Package process or, if necessary, specific exemptions are to be requested (see 4.5). In most cases where TVA now takes credit for CLOC, there is an existing automatic or remote-manual valve outside containment which can be redesignated as a CIS valve after the Environmental Qualification, Appendix J test, Main Control Room indication and other new requirements for these valves are evaluated. For those lines which do not have an existing valve suitable for redesignation nor an industry-standard alternate design, valves with the appropriate qualifications will be added to the CIS design to ensure redundant isolation capability. Changes in surveillance, operations, and maintenance instructions will be required for either type of upgrade. FSAR, Technical Specifications, System Descriptions, Design Criteria, and associated calculations will be revised as appropriate. Document and procedural changes required by the addition or redesignation of valves will be coordinated with affected TVA organizations prior to ECN Modification Package approval.

4.4 Procure, install, and test additional CIS valves

ASME Section III, Class 2 valves are to be installed in those lines that (1) cannot be brought into GDC or SRP 6.2.4 compliance through redesignation of existing valves or (2) cannot be exempted from GDC requirements. These modifications are to comply with current CIS requirements. Necessary component and system testing is to be performed as part of the modification or as a part of the WBN prestart test program.

4.5 Submit exemption requests to the NRC as necessary

To date, no specific GDC exemption requests are planned. Any Appendix J leakage rate test exemptions, or GDC exemptions found required during the ECN Modification Package detailed design efforts will be documented. Justification for any exemptions from the GDC or Appendix J requirements are to be submitted to the NRC for approval and then incorporated in the FSAR.

5.0 PROGRAM INTERFACES

Due to valve additions or redesignations, this program requires production level interfaces with several other WBN CAPs. The Design Baseline Verification Program (DBVP), Environmental Qualification (EQ), Q-List, Control Room Design Review (CRDR), Cable Routing and Appendix R aspects of the design changes will be coordinated through the ECN Modification Package. Interface with Hanger Analysis and Update Program (HAAUP) will be required for valve additions. Valve position indication for the added or redesignated valves requires interfacing with the Reg. Guide 1.97 portion of the NUREG 0737 issue.

These production level interfaces have no programmatic impact on other WBN CAPs; therefore, there are no specific sequencing requirements related to other WBN programs.

6.0 PROGRAM IMPLEMENTATION

TVA Nuclear Engineering (NE) is the lead organization for implementing the CIS design upgrade program. Evaluation, design, and modification will be performed in accordance with standard TVA procedures and practices. Prior to issuing the Engineering Change Notice (ECN) Modifications Package for CIS valve additions and redesignations, thorough coordination with key TVA personnel from Nuclear Construction, Modifications, Maintenance, Quality Assurance, Containment Integrity, and Operations organizations will be performed as required by the procedure for control of ECN Modification Packages.

7.0 PROGRAM DOCUMENTATION

Results of the CIS GDC compliance review are documented in TVA Calculation WBN-OSG4-102 (reference 5). CIS design upgrade details will be determined during the approval of the ECN Modifications Package. Exemption requests (if required) will be submitted for NRC approval and reflected by changes to the WBN FSAR. All affected design documents are to be revised in accordance with TVA Nuclear Engineering Procedures and Watts Bar Engineering Procedures. Surveillance, operations, and maintenance instructions are to be revised to include the added and redesignated CIS valves. Changes to Technical Specification text and tables will be submitted to the NRC as necessary. Program completion is to be documented by a final CIS report.

8.0 CONCLUSION

The WBN CIS design upgrade program includes a CIS GDC compliance review similar to that performed at SQN. NRC concerns over the use of closed systems outside containment shall be resolved through valve redesignations, valve upgrades, locking closed of manual valves, or valve additions. No specific GDC exemptions are proposed at this time.

Appendix J leakage rate test requirements are to be evaluated to reconfirm compliance, propose changes, and/or provide justification for Appendix J test exemptions.

9.0 REFERENCES

1. NRC-OIE Inspection Report, Unresolved Item 50-327/86-20-09 and 50-328/86-20-09 transmitted by letter from J. A. Olshinski to S. A. White dated April 23, 1986 (A02 860425 010).
2. NUREG-1232 Volume 2, "Safety Evaluation Report on Tennessee Valley Authority: Sequoyah Nuclear Performance Plan," Section 3.6.1.1.
3. NUREG-0847 "Safety Evaluation Report related to the operation of Watts Bar Nuclear Plant, Units 1 and 2," June 1982, pages 6 -18, -19.
4. Letter from R. Gridley to B. Youngblood dated November 7, 1986 (L44 861107 801).
5. TVA Calculation WBN-OSG4-102, "Containment Isolation System - Determination of Compliance to Isolation provisions of GDC 55, 56, 57 and SRP 6.2.4." (B26 880715 050)

ATTACHMENT A

Basis of CAP and Related CAQRs

Basis of CAP

- Concerns expressed by NRC inspector (over the use of closed systems outside containment as the sole outboard isolation barrier for some penetrations) were documented in Sequoyah Unresolved Items 50-327/86-20-09 and 50-328/86-20-09 (A02 860425 010). TVA committed to evaluate WBN's compliance to GDC 55, 56 and 57 as a result of the SQN CIS issue (L44 861107 801).

Related CAQRs resulting -
from design evaluations

- Of the changes identified in Attachment B, valve additions for the Hydrogen Analyzer lines (penetrations X-92A, -92B, -99, -100) are to be planned and tracked under CAQR WBP880279. Upgrade of Radiation Monitoring lines (X-94B, -94C, -95B, -95C) are to be handled under CAQR WBP880351. These penetrations failed to meet the previously documented CIS design criteria and FSAR commitments.

The remainder of the design changes are to be performed within an ECN Modification Package. No additional CAQRs were required on the overall CIS design because the design meets our original licensing commitments. The design is being upgraded to meet current safety and licensing requirements.

CONTAINMENT ISOLATION CORRECTIVE ACTION PROGRAM (CAP) PLAN
ATTACHMENT B

CONTAINMENT ISOLATION PROVISIONS REQUIRING CHANGES FOR GDC/SRP COMPLIANCE

Cont. Penet No.	Description	Applicable GDC/SRP	Reference Drawing	Valve Numbers	Designated Cont. Isol. Valve (Y/N) Note 1	Remarks
X-12A	Feedwater	57	47W803-1 47W862-2	Out-FCV3-33 3-586	Y Y	Manual Valve 3-586 to be locked closed.
X-12B	Feedwater	57	47W803-1 47W862-2	Out-FCV3-47 3-589	Y Y	Manual Valve 3-589 to be locked closed.
X-12C	Feedwater	57	47W803-1 47W862-2	Out-FCV3-87 3-592	Y Y	Manual Valve 3-592 to be locked closed.
X-12D	Feedwater	57	47W803-1 47W862-2	Out-FCV3-100 3-595	Y Y	Manual Valve 3-595 to be locked closed.
X-13A	Main Steam	57 II.6.g	47W801-1 47W803-2	Out-FCV1-4 FCV1-147 FCV1-15 1-536 PCV1-5 RV1-522 RV1-523 RV1-524 RV1-525 RV1-526	Y N Y N Y Y Y Y Y Y	
X-13B	Main Steam	57 II.6.g	47W801-1	Out-FCV1-11 FCV1-148 1-534 PCV1-12 RV1-517 RV1-518 RV1-519 RV1-520 RV1-521	Y N N Y Y Y Y Y Y	

WBEP - 0282P
08/01/88

CONTAINMENT ISOLATION CORRECTIVE ACTION PROGRAM (CAP) PLAN
ATTACHMENT B

CONTAINMENT ISOLATION PROVISIONS REQUIRING CHANGES FOR GDC/SRP COMPLIANCE

Cont. Penet. No.	Description	Applicable GDC/SRP	Reference Drawing	Valve Numbers	Designated Cont. Isol. Valve (Y/N)	Remarks
X-13C	Main Steam	57 II.6.g	47W801-1	Out-FCV1-22 FCV1-149 1-532 PCV1-23 RV1-512 RV1-513 RV1-514 RV1-515 RV1-516	Y N N Y Y Y Y Y Y	
X-13D	Main Steam	57 II.6.g	47W801-1 47W803-2	Out-FCV1-29 FCV1-150 FCV1-16 1-538 PCV1-30 RV1-527 RV1-528 RV1-529 RV1-530 RV1-531	Y N Y N Y Y Y Y Y Y	
X-16	CVCS Normal Charging	55	47W809-1	Out-FCV62-90 62-709 In CV62-543	N N Y	Manual Valve 62-709 to be locked closed.
X-17	RHR Hot Leg Injection	55 II.6.b	47W811-1	Out-FCV63-172 IN -FCV63-158 CV63-640 CV63-643	N Y Y Y	
X-20A	RHR Cold Leg Injection	55 II.6.b	47W811-1	Out-FCV63-94 In -FCV63-112 CV63-633 CV63-635	N Y Y Y	
X-20B	RHR Cold Leg Injection	55 II.6.b	47W811-1	Out-FCV63-93 In -FCV63-111 CV63-632 CV63-634	N Y Y Y	
X-21	SIS Hot Leg Injection	55 II.6.b	47W811-1	Out-FCV63-157 In -FCV63-167 CV63-547 CV63-549	N Y Y Y	

CONTAINMENT ISOLATION CORRECTIVE ACTION PROGRAM (CAP) PLAN
ATTACHMENT B

CONTAINMENT ISOLATION PROVISIONS REQUIRING CHANGES FOR GDC/SRP COMPLIANCE

Cont. Penet No.	Description	Applicable GDC/SRP	Reference Drawing	Valve Numbers	Designated Cont. Isol. Valve (Y/N) Note 1	Remarks
X-22	BIT Charging Pump Discharge	55 II.6.g	47W811-1	Out-FCV63-25 FCV63-26 63-564 In -FCV63-174 CV63-581	N N N Y Y	
X-24	SI Relief Valve Discharge to PRT	56	47W811-1 47W813-1 47W812-1	Out-RV63-626 RV63-627 RV63-637 RV63-536 RV63-535 RV63-511 RV63-534 RV62-505 RV72-508 RV72-509 In -CV68-559	N N N N N N N N N N Y	
X-32	SIS Hot Leg Injection	55 II.6.b	47W811-1	Out-FCV63-156 In -FCV63-21 CV63-543 CV63-545	N Y Y Y	
X-33	SIS Cold Leg Injection	55 II.6.b	47W811-1	Out-FCV63-22 In -FCV63-121 CV63-557 CV63-553 CV63-555 CV63-551	N Y Y Y Y Y	
X-35	Component Cooling	57	47W859-2 47W859-3	Out-FCV70-85 In- RV70-703	Y N	RV-70-703 will also serve as inboard isolation for X-53.
X-43A	RCP Seal Injection	55 II.6.c	47W809-1	In -CV62-562	Y	Outboard remote manual valves to be added.
X-43B	RCP Seal Injection	55 II.6.c	47W809-1	In -CV62-561	Y	Outboard remote manual valves to be added.

WBEP - 0282P
08/01/88

CONTAINMENT ISOLATION CORRECTIVE ACTION PROGRAM (CAP) PLAN
ATTACHMENT B

CONTAINMENT ISOLATION PROVISIONS REQUIRING CHANGES FOR GDC/SRP COMPLIANCE

Cont. Penet. No.	Description	Applicable GDC/SRP	Reference Drawing	Valve Numbers	Designated Cont. Isol. Valve (Y/N) Note 1	Remarks
X-43C	RCP Seal Injection	55 II.6.c	47W809-1	In -CV62-563	Y	Outboard remote manual valves to be added.
X-43D	RCP Seal Injection	55 II.6.c	47W809-1	In -CV62-560	Y	Outboard remote manual valves to be added.
X-46	RCP Drain Tank Pump Discharge	56	47W830-1 47W809-7	Out-FCV77-10 84-530 In -FCV77-9	Y Y Y	Manual Valve 84-530 to be locked closed.
X-49A	RHR Spray	56 II.6.c	47W812-1	Out-FCV72-40 In -CV72-562	N Y	
X-49B	RHR Spray	56 II.6.c	47W812-1	Out-FCV72-41 In -CV72-563	N Y	
X-53	Component Cooling	57	47W859-2 47W859-3	Out-FCV70-143 In -RV70-703	Y N	RV-70-703 will also serve as inboard isolation for X-35.
X-92A	Hydrogen Analyzer	56 II.6.b	47W625-11	In -FCV43-207	Y	Outboard isolation Valve to be added.
X-92B	Hydrogen Analyzer	56 II.6.b	47W625-11	In -FCV43-208	Y	Outboard isolation Valve to be added.
X-94B	Radiation Monitoring	56	47W600-105	Out-FCV90-113 In -FCV90-114 FCV90-115	Y Y Y	Class C isolation valves to be upgraded via CAQR corrective action.
X-94C	Radiation Monitoring	56	47W600-105	Out-FCV90-117 In -FCV90-116	Y Y	Class C isolation valves to be upgraded via CAQR corrective action.
X-95B	Radiation Monitoring	56	47W600-105	Out-FCV90-107 In -FCV90-108 FCV90-109	Y Y Y	Class C isolation valves to be upgraded via CAQR corrective action.
X-95C	Radiation Monitoring	56	47W600-105	Out-FCV90-111 In -FCV90-110	Y Y	Class C isolation valves to be upgraded via CAQR corrective action.
X-99	Hydrogen Analyzer	56 II.6.b	47W625-11	In -FCV43-202	Y	Outboard isolation valve to be added.
X-100	Hydrogen Analyzer	56 II.6.b	47W625-11	In -FCV43-201	Y	Outboard isolation valve to be added.

CONTAINMENT ISOLATION CORRECTIVE ACTION PROGRAM (CAP) PLAN
ATTACHMENT B

CONTAINMENT ISOLATION PROVISIONS REQUIRING CHANGES FOR GDC/SRP COMPLIANCE

Cont. Penet No.	Description	Applicable GDC/SRP	Reference Drawing	Valve Numbers	Designated Cont. Isol. Valve (Y/N) Note 1	Remarks
X-107	RHR Pump Supply	55 II.6.c ANSI N271- 1976	47W810-1	In -FCV74-2 FCV74-8 FCV63-185 RV74-505	Y Y N N	

Note 1: All valves marked "Y" are currently designated as containment isolation valves.
All valves marked "N" are to be redesignated as containment isolation valves.

ATTACHMENT C

Illustration of Proposed Design Changes

The 35 lines shown in Attachment B include 18 lines that can be brought into compliance with the GDC or SRP 6.2.4 by redesignating existing automatic or remote manual process system isolation valves as containment isolation valves. Five lines require manual valves to be locked closed for GDC compliance. Eight lines require installation of outboard isolation valves. Four lines require upgrade of safety classification.

The proposed design upgrades are illustrated on the following pages.

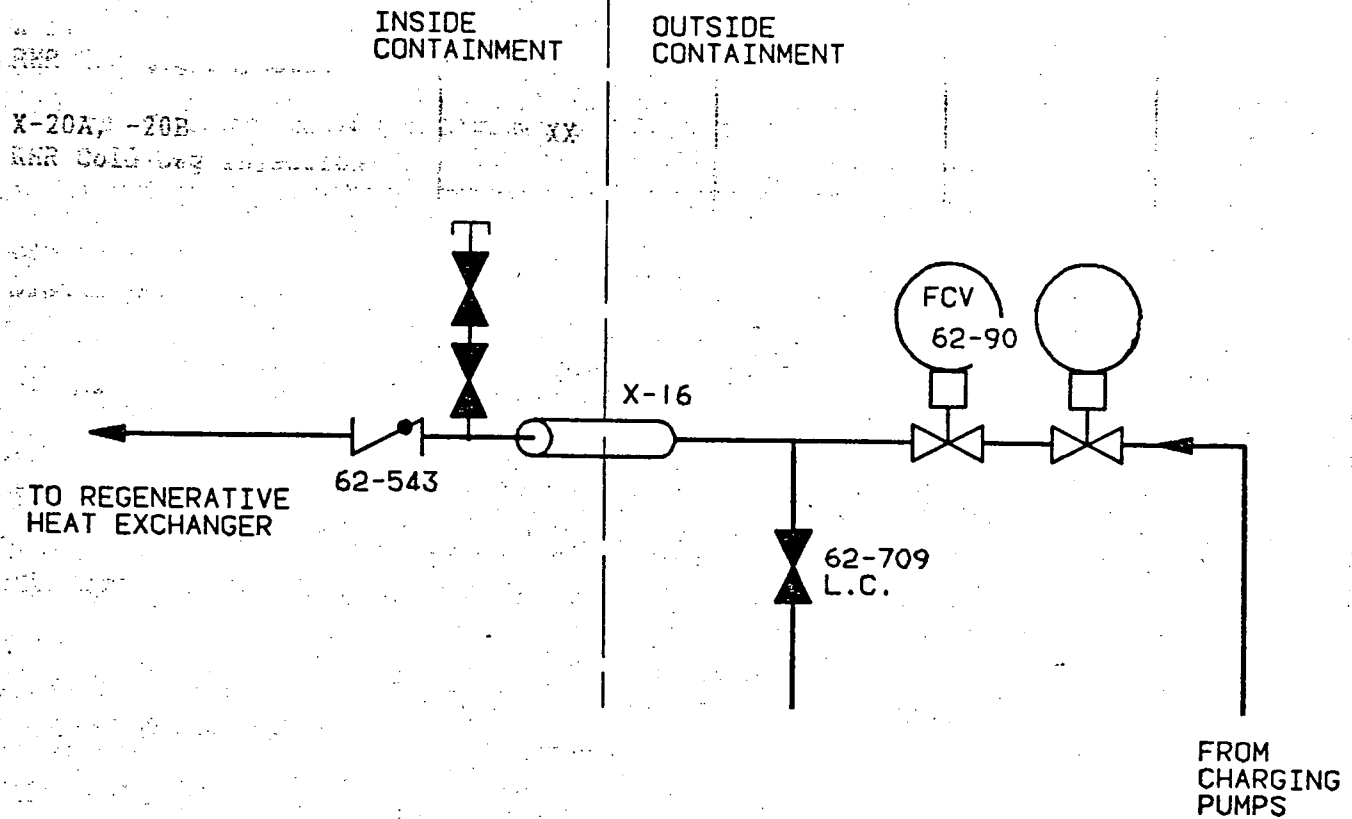
In addition to surveillance, maintenance and operating procedures that must be revised to reflect the addition or redesignation of these valves, an evaluation of the guaranteed 30-day water seal provisions is to be performed for those ECCS, RHR and Containment Spray lines excluded from Appendix J Type C leakage rate testing. This evaluation is to include review and documentation of the positive pressure water seals post-accident. If the necessary 30-day water seal cannot be guaranteed for any of the redesignated isolation valves, after assuming a single-failure, procedures will be revised to ensure the seal is maintained, provisions will be made for leakage rate testing under Appendix J, or a specific exemption request will be submitted for NRC approval.

CONTAINMENT ISOLATION CORRECTIVE ACTION PROGRAM (CAP) PLAN
ATTACHMENT C

WBN CONTAINMENT ISOLATION SYSTEM UPGRADES

Penetration Number Description of Line	Redesignate Existing Valves	Lock Manual Valve Closed	Install New Valves	Upgrade Safety Class
X-16 Normal Charging	X			
X-17 RHR Hot Leg Injection	X			
X-20A, -20B RHR Cold Leg Injection	XX			
X-22 BIT Charging Pump Discharge	X			
X-21, -32 SIS Hot Leg Injection	XX			
X-33 SIS Cold Leg Injection	X			
X-49A, -49B RHR Spray	XX			
X-24 SI Relief Valve Discharge	X			
X-13A, -13B, -13C, -13D Main Steam	XXXX			
X-35, -53 Component Cooling	XX			
X-107 RHR Pump Supply	X			
X-12A, -12B, -12C, -12D Feedwater		XXXX		
X-46 RC Drain Tank Pump Discharge		X		
X-43A, -43B, -43C, -43D RCP Seal Injection			XXXX	
X-92A, -92B, -99, -100 Hydrogen Analyzer (CAQR WBP880279)			XXXX	
X-94B, -94C, -95B, -95C Radiation Monitoring (CAQR WBP880351)				XXXX

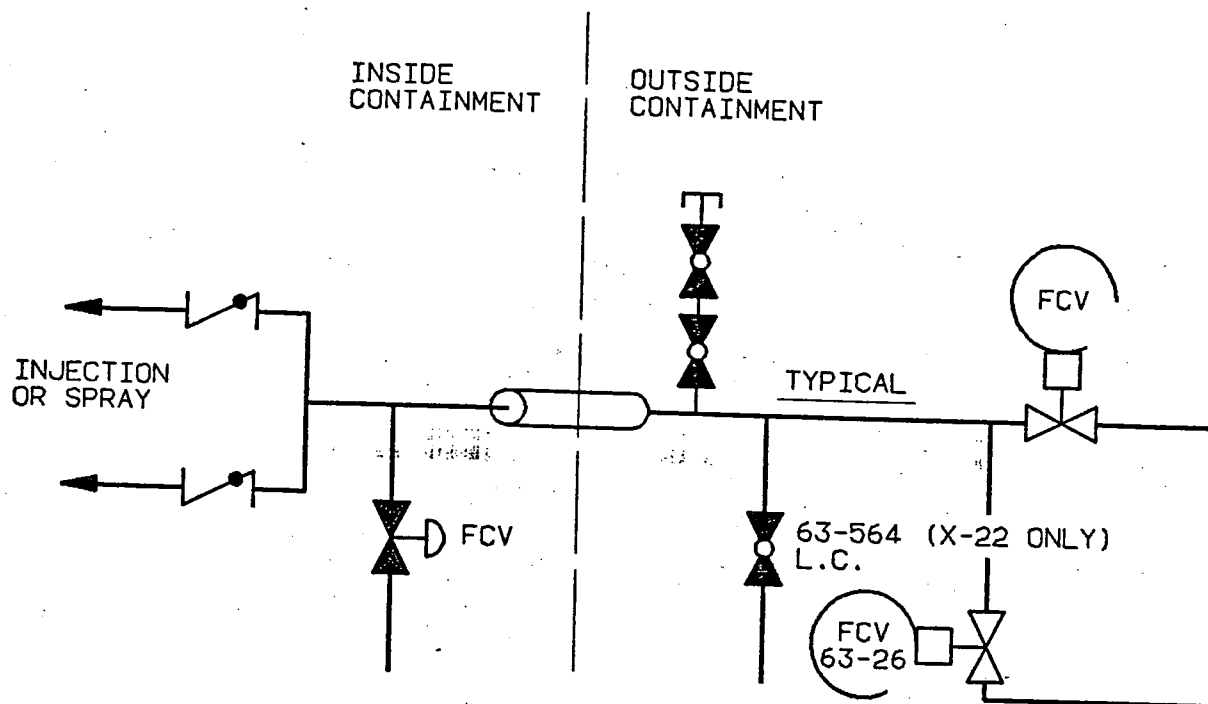
UPGRADE RECOMMENDED FOR NORMAL CHARGING LINE



VALVE DESIGNATION EVALUATION

- 62-543 CURRENTLY DESIGNATED AS INBOARD ISO VALVE
- REDESIGNATE FCV-62-90 AND 62-709 AS OUTBOARD ISO VALVES
- 62-709 IS TO BE LOCKED CLOSED
- BRINGS LINE INTO COMPLIANCE WITH GDC 55

UPGRADES RECOMMENDED FOR ECCS AND RHR SPRAY LINES



(THIS IS A REPRESENTATIVE SKETCH, NUMBER OF INBOARD CHECK VALVES MAY VARY)

INJECTION PATH

RHR-HOT LEG
RHR-COLD LEG
RHR-COLD LEG
CHARGING-BIT
SIS-HOT LEG
SIS-HOT LEG
SIS-COLD LEG
RHR SPRAY
RHR SPRAY

PENETRATION

X-17
X-20A
X-20B
X-22
X-21
X-32
X-33
X-49A
X-49B

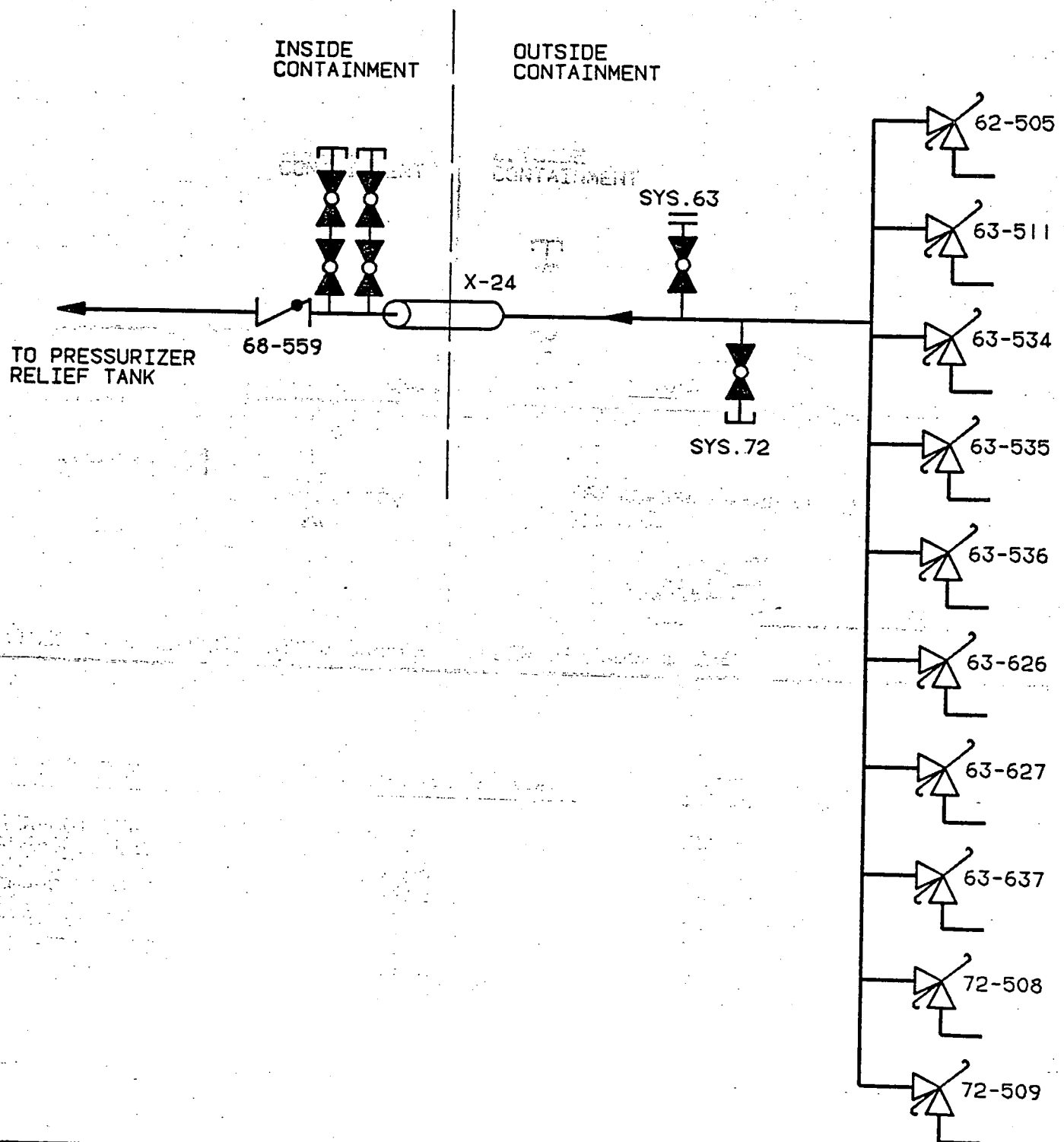
REDESIGNATED VALVES

FCV-63-172
FCV-63-94
FCV-63-93
FCV-63-25, -26, AND 63-564
FCV-63-157
FCV-63-156
FCV-63-22
FCV-72-40
FCV-72-41

VALVE DESIGNATION EVALUATION

- INBOARD CHECK AND FCV'S CURRENTLY DESIGNATED AS INBOARD ISO VALVES
- REDESIGNATE ABOVE LISTED FCV'S AND 63-564 AS OUTBOARD ISO VALVES
- BRINGS LINES INTO COMPLIANCE WITH GDC 55 OR 56 VIA SRP 6.2.4

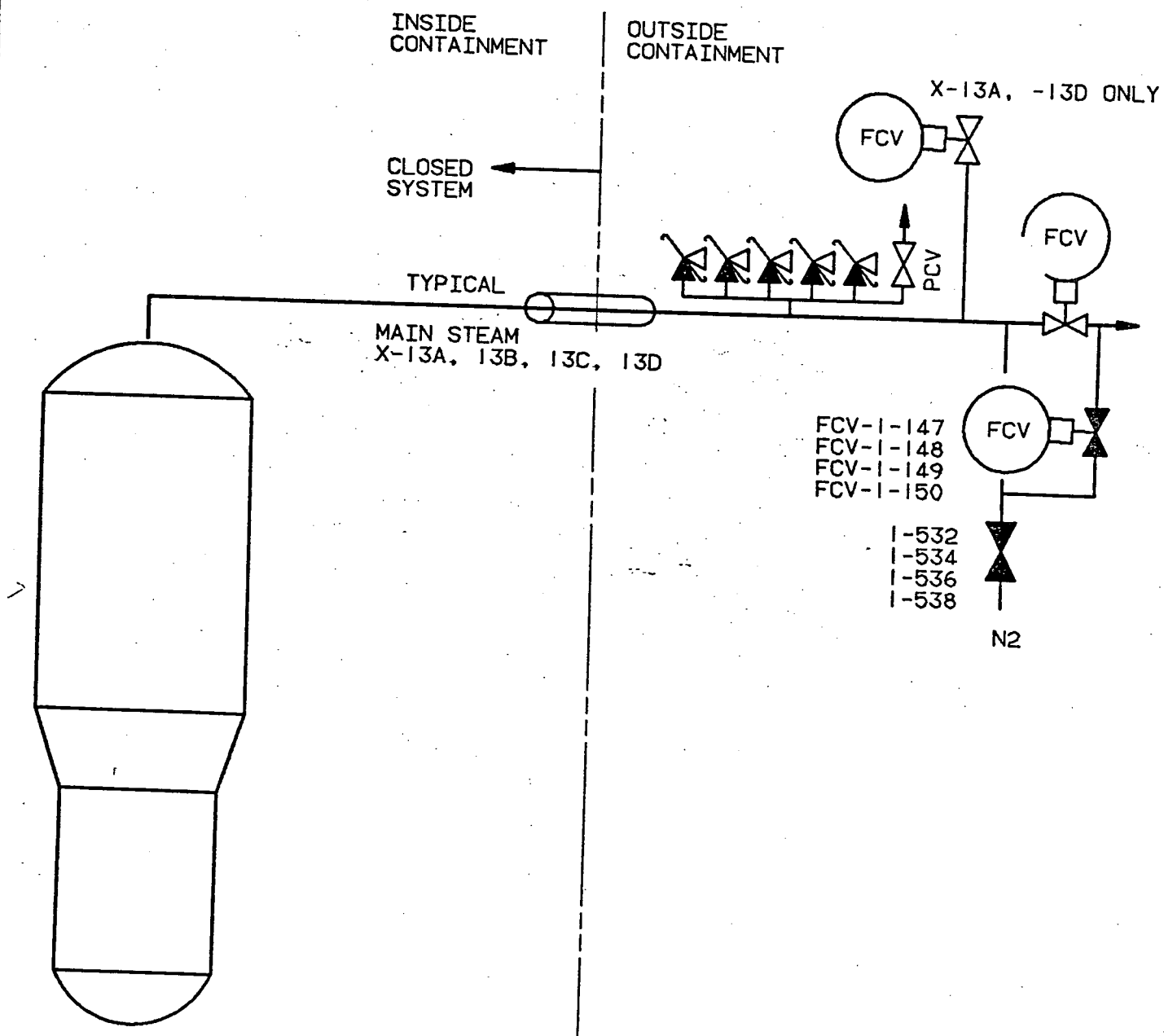
UPGRADE RECOMMENDED FOR RELIEF VALVE DISCHARGE LINE



VALVE DESIGNATION EVALUATION

- 68-559 CURRENTLY DESIGNATED AS INBOARD ISO VALVE
- REDESIGNATE TEN RELIEF VALVES AS OUTBOARD ISO VALVE
- BRINGS LINE INTO COMPLIANCE WITH GDC 56 VIA SRP 6.2.4

UPGRADES RECOMMENDED FOR MAIN STEAM LINES



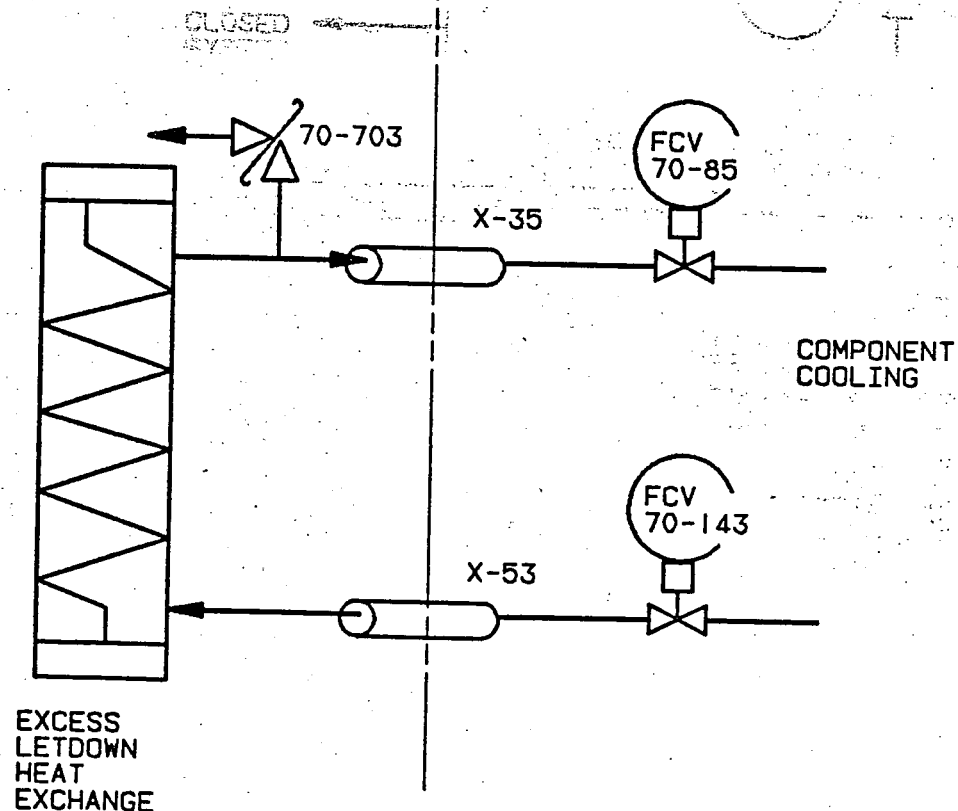
VALVE DESIGNATION EVALUATION

- CLOSED SYSTEM INSIDE CONTAINMENT ON SECONDARY SIDE OF SG. SECONDARY SIDE OF SG FILLED WITH WATER POST-LOCA, TYPICAL OF ALL PWR'S AND FOLLOWS THE PHILOSOPHY OF GDC 57
- FCV'S, PCV'S AND RELIEF VALVES CURRENTLY DESIGNATED CIS VALVES
- ADDITIONAL FCV'S AND LOCKED CLOSED MANUAL VALVES TO BE REDESIGNATED AS CIS VALVES

UPGRADE RECOMMENDED FOR COMPONENT COOLING SYSTEM RELIEF VALVES

INSIDE CONTAINMENT

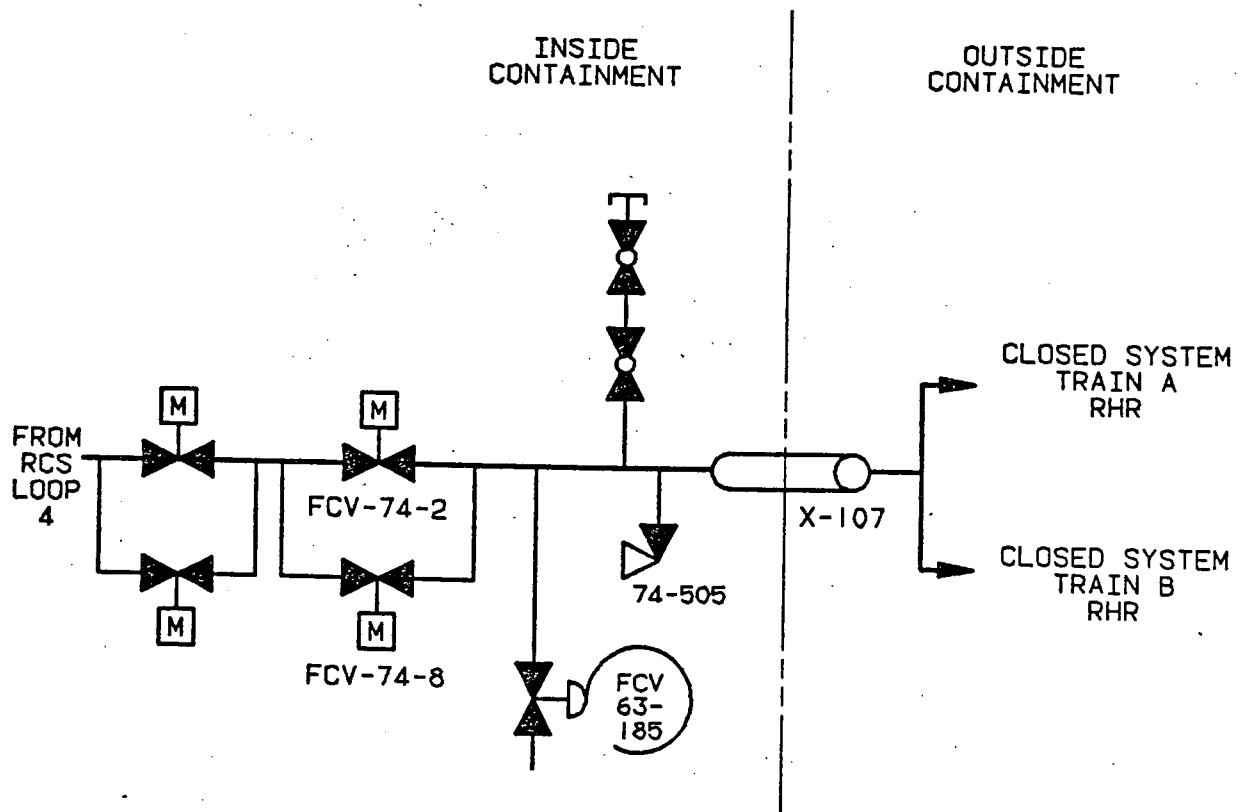
OUTSIDE CONTAINMENT



VALVE DESIGNATION EVALUATION

- FCV-70-85 AND -143 CURRENTLY DESIGNATED AS CIS VALVES
- REDESIGNATE 70-703 AS INBOARD ISOLATION VALVE
- BRINGS LINE INTO COMPLIANCE WITH GDC 57 VIA SRP 6.2.4

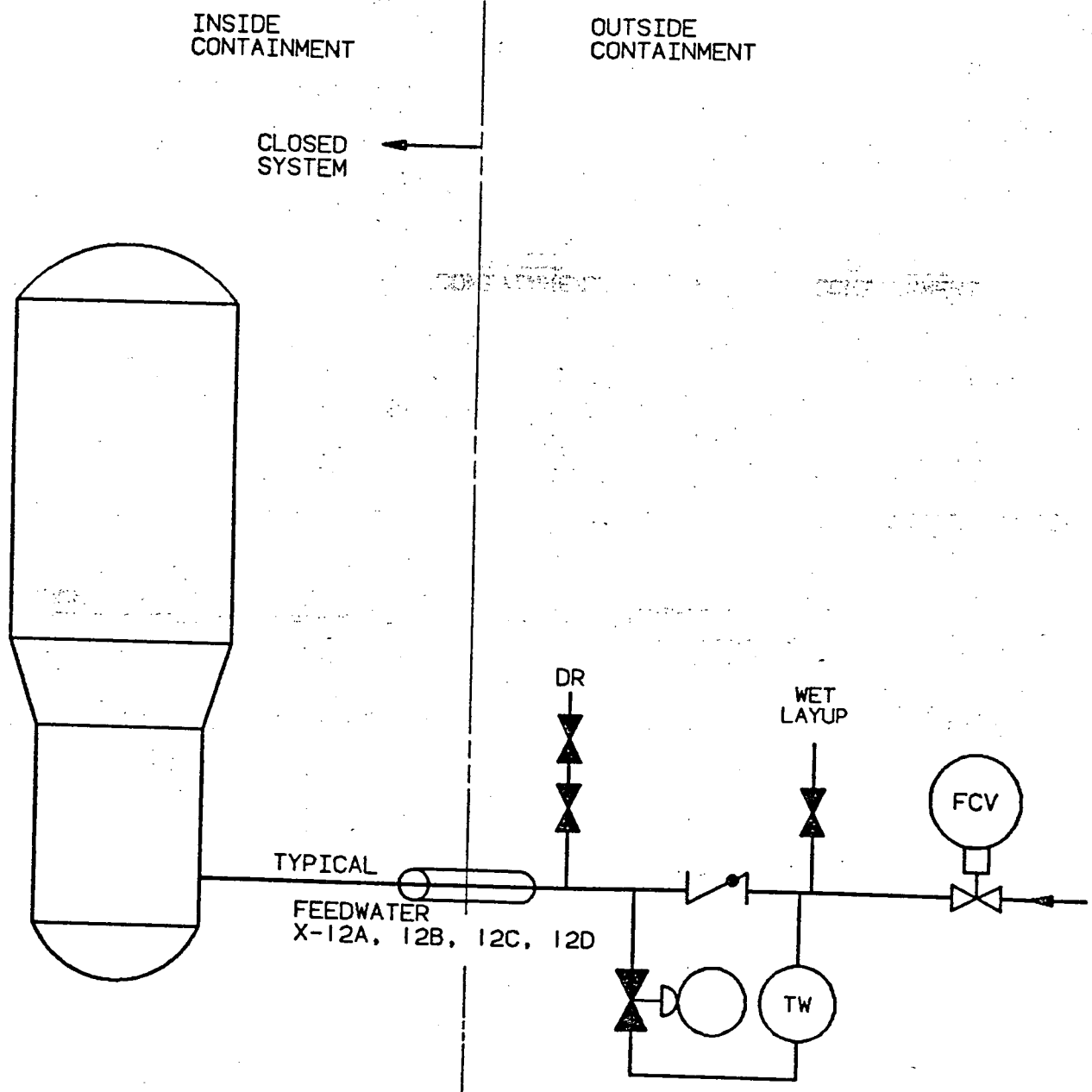
UPGRADE RECOMMENDED FOR RHR SUPPLY TO PUMPS



VALVE DESIGNATION EVALUATION

- FCV-74-2 AND -8 ARE CURRENTLY DESIGNATED REMOTE MANUAL CIS VALVES, NORMALLY CLOSED AND INTERLOCKED TO PREVENT OPENING WHEN RCS PRESSURE EXCEEDS RHR DESIGN PRESSURE. IN ACCORDANCE WITH ANSI N271-1976.
- REDESIGNATE 74-505 AND FCV-63-185 AS INBOARD ISOLATION VALVES

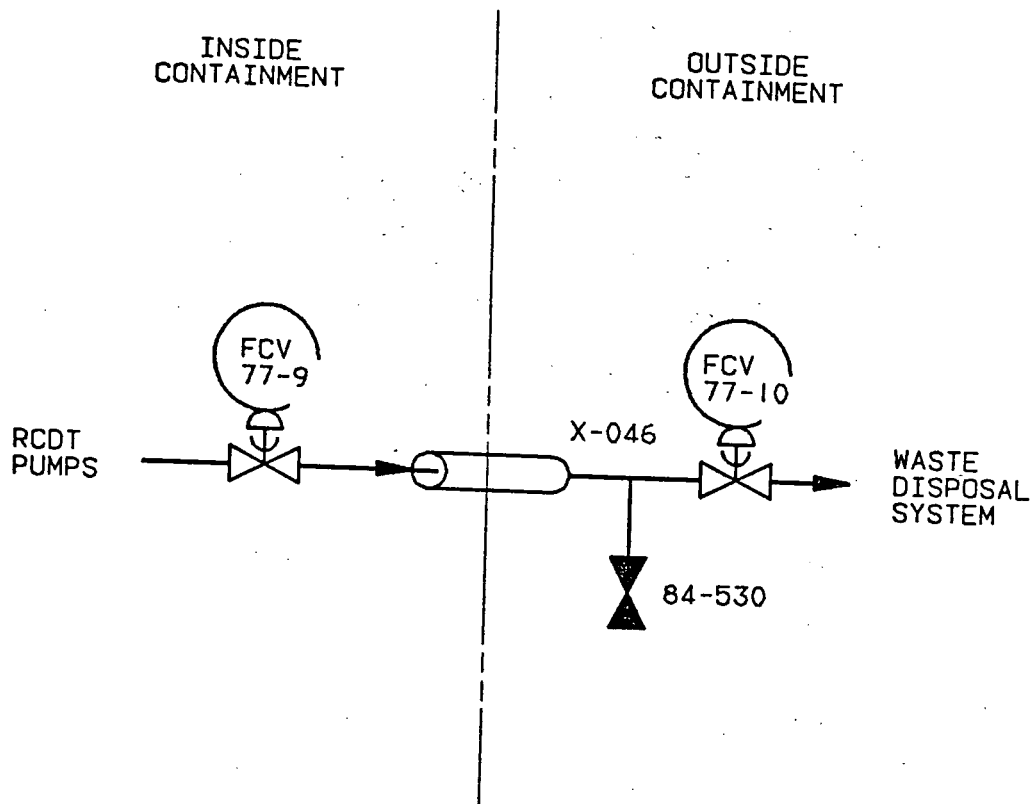
UPGRADE RECOMMENDED FOR FEEDWATER LINES



VALVE DESIGNATION EVALUATION

- CLOSED SYSTEM INSIDE CONTAINMENT ON SECONDARY SIDE OF SG. SECONDARY SIDE OF SG FILLED WITH WATER POST-LOCA, TYPICAL OF ALL PWR'S AND FOLLOWS THE PHILOSOPHY OF GDC 57
- FCV'S & MANUAL VALVES CURRENTLY DESIGNATED FOR CIS, MANUAL VALVE TO BE LOCKED CLOSED.

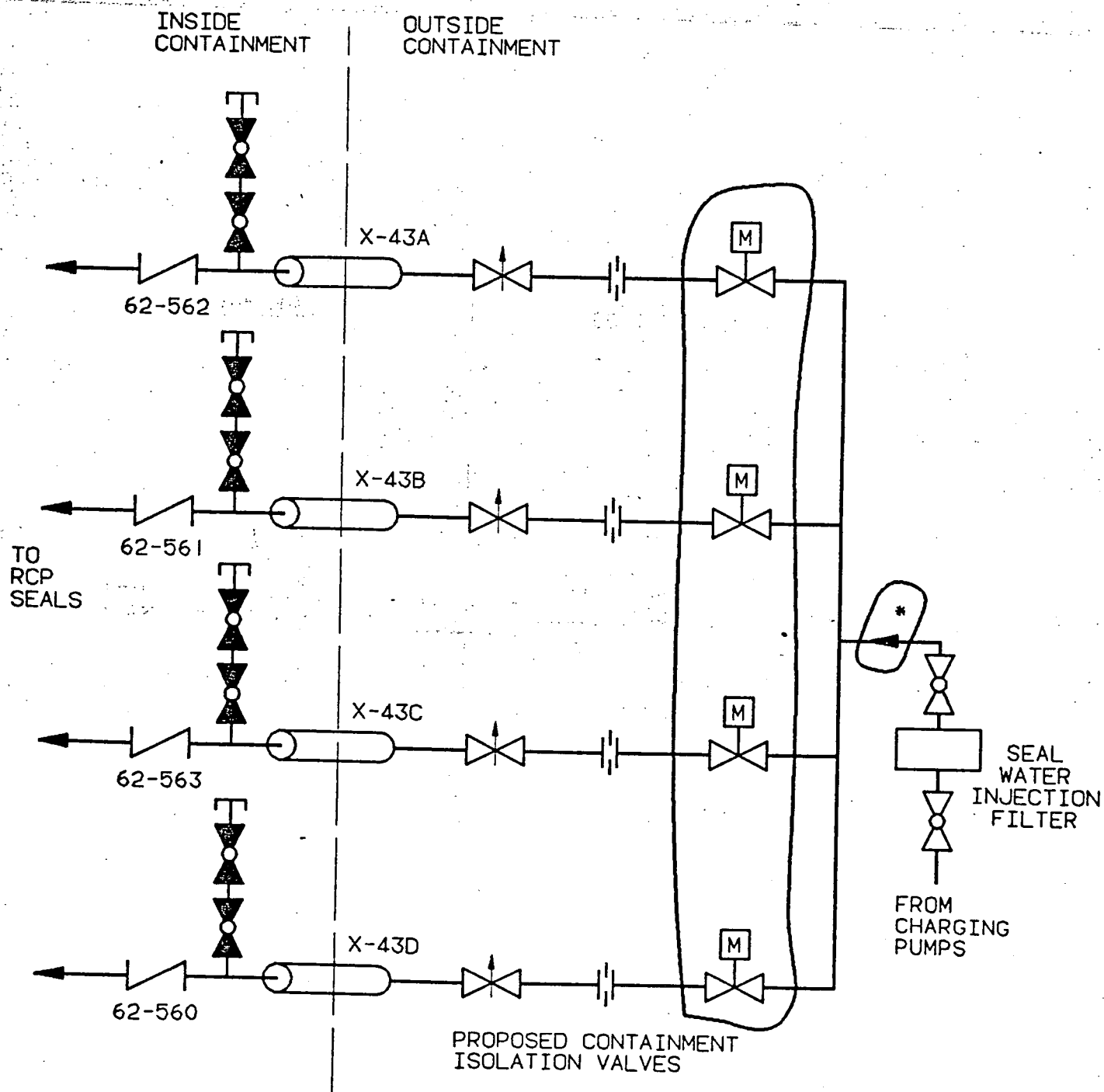
UPGRADE RECOMMENDED FOR R.C. DRAIN TANK PUMP DISCHARGE



VALVE DESIGNATION EVALUATION

- FCV-77-9 CURRENTLY DESIGNATED AS INBOARD ISO VALVE.
- FCV-77-10 AND 84-530 CURRENTLY DESIGNATED AS OUTBOARD ISO VALVES.
- MANUAL VALVE 84-530 IS TO BE LOCKED CLOSED
- BRINGS LINE INTO COMPLIANCE WITH GDC 56

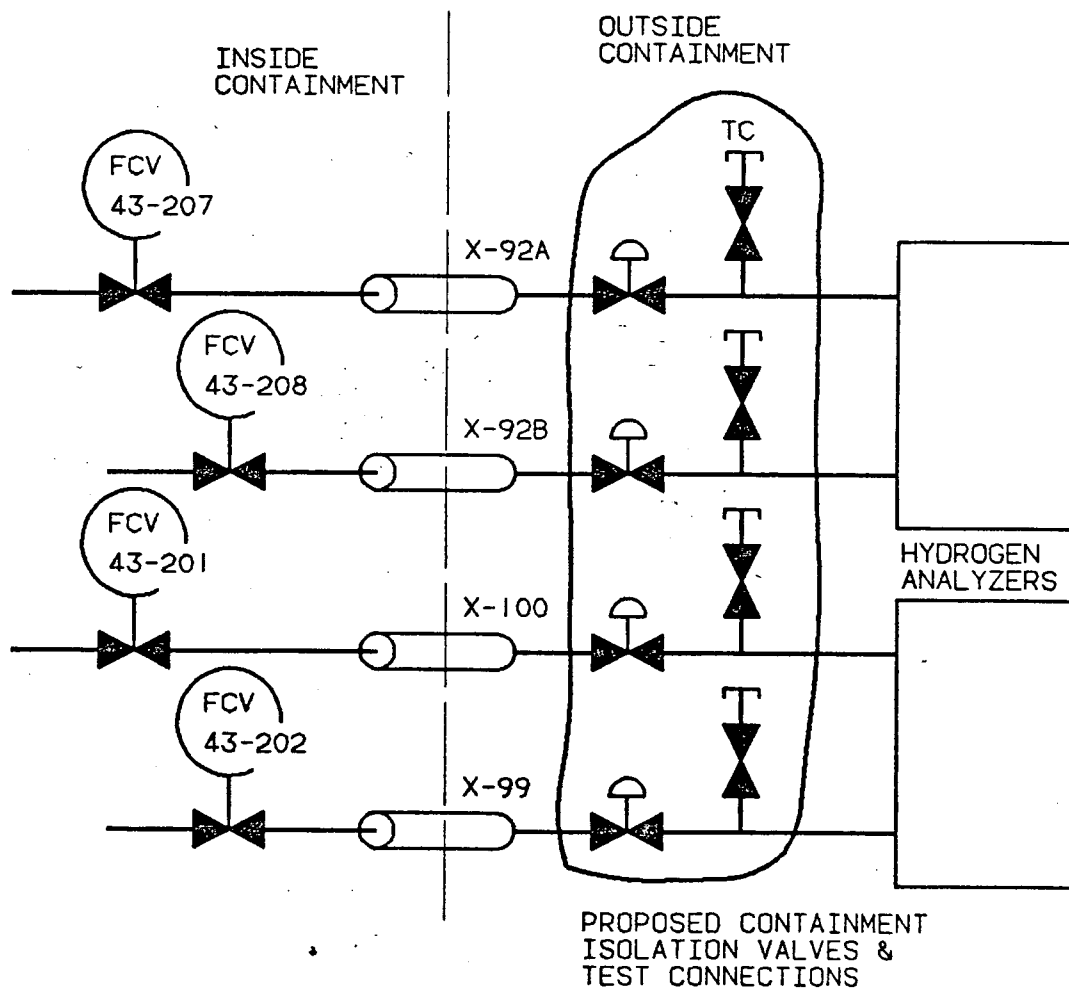
UPGRADE RECOMMENDED FOR REACTOR COOLANT PUMP SEAL INJECTION LINES



VALVE DESIGNATION EVALUATION

- 62-560 THRU 563 CURRENTLY DESIGNATED AS INBOARD ISO VAVLES
- ADD INDIVIDUAL REMOTE MANUAL OUTBOARD VALVES OR SINGLE R.M. OUTBOARD VALVE IN COMMON HEADER AT *.
- EITHER ADDITION BRINGS LINE INTO COMPLIANCE WITH GDC 55 VIA SRP 6.2.4

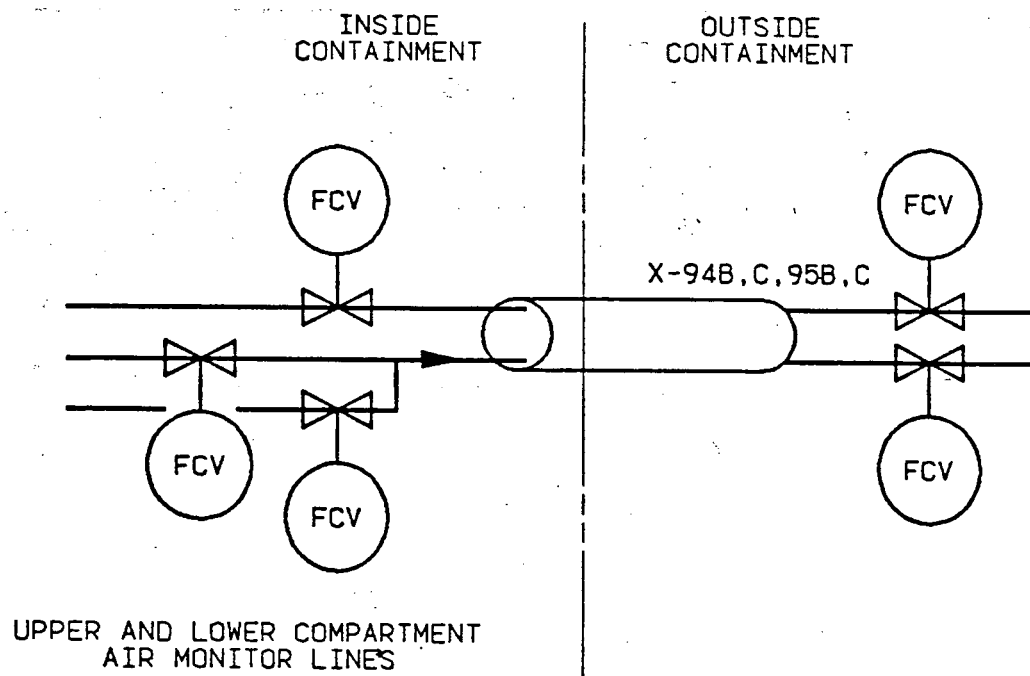
UPGRADE RECOMMENDED FOR HYDROGEN ANALYZER LINES



VALVE DESIGNATION EVALUATION

- INBOARD FCV's CURRENTLY DESIGNATED AS INBOARD ISO VALVES
- PREVIOUSLY CONSIDERED CLOSED SYSTEM OUTSIDE CONTAINMENT
- ADD INDIVIDUAL REMOTE MANUAL OUTBOARD VALVES AND TEST CONNECTIONS VIA CAQR WBP 880279
- BRINGS LINE INTO COMPLIANCE WITH GDC 56 VIA SRP 6.2.4

UPGRADE RECOMMENDED FOR RADIATION MONITORING LINES



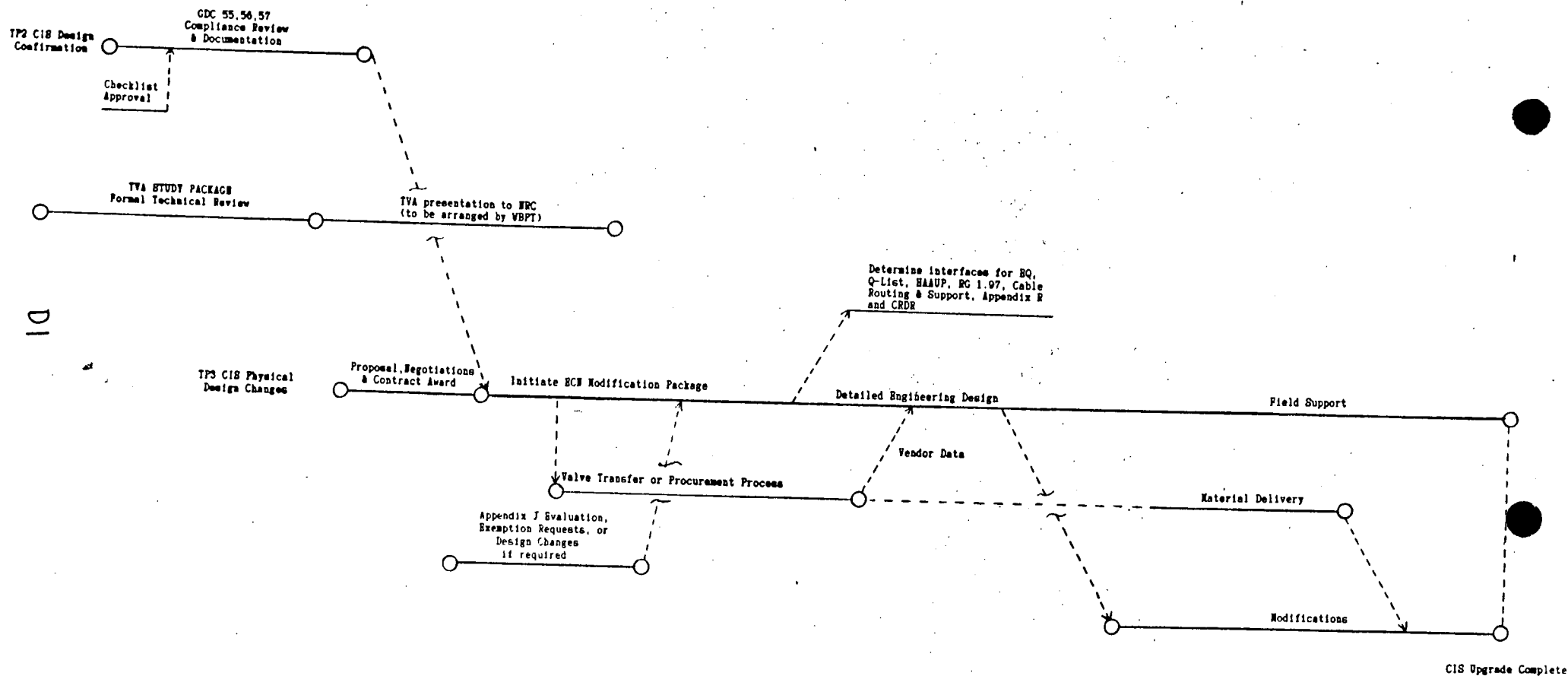
VALVE DESIGNATION EVALUATION

- TVA CLASS C FCV'S INBOARD AND OUTBOARD ARE CURRENTLY DESIGNATED CONTAINMENT ISOLATION VALVES
- CLASSIFICATION TO BE UPGRADED VIA CAOR - WBP880351
- CLASS UPGRADE SATISFIES SRP 6.2.4 QUALITY GROUP REQUIREMENTS

CONTAINMENT ISOLATION CORRECTIVE ACTION PROGRAM (CAP) PLAN

1988

F · M · A · M · J · J · A



ATTACHMENT D
SCHEDULE FRAGNET

Enclosure 2

For the Watts Bar Nuclear Plant (WBN), TVA commits to:

- ° Conduct 100-percent review of all 189 fluid lines penetrating containment for General Design Criteria (GDC) 55, 56, and 57 compliance.
- ° Document compliance status and identify Containment Isolation System (CIS) upgrades required to comply with the GDC explicitly or by the other defined bases described in the Standard Review Plan (SRP) 6.2.4 or American National Standards Institute (ANSI) N271-1976.
- ° Perform those design changes necessary to bring WBN's CIS into compliance.
- ° Procure, install, and test additional CIS valves where necessary.
- ° Submit exemption requests to NRC if warranted.

LICENSING TRANSMITTAL TO NRC
SUMMARY AND CONCURRENCE SHEET

DATE _____

DATE DUE NRC 10/14/88

ACTION NO. _____

SUBMITTAL PREPARED BY J. H. Young FEES REQUIRED YES _____ NO X

PROJECT/DOCUMENT I.D.--WBN - Corrective Action Program (CAP) Plan for Containment Isolation.

PURPOSE/SUMMARY--Provides the CAP for evaluation and documentation of the current degree of WBN containment isolation design compliance to the isolation requirements of General Design Criteria (GDC) 55, 56, and 57 current, as well as provision for design changes as necessary to ensure licensability of the Containment Isolation System (CIS).

RESPONDS TO NA (RIMS NO.) COMPLETE RESPONSE YES X NO _____

PROBLEM OR DEFICIENCY DESCRIPTION--This CAP provides the planned corrective action for one of the special programs as defined in the Watts Bar Program Plan (WBPP). The WBPP was submitted to NRC by TVA letter dated May 27, 1988 (T52 880526 904).

CORRECTIVE ACTION/COMMITMENT--Specific commitments are to: (1) conduct 100 percent review of all 189 fluid lines penetrating containment for GDC 55, 56, and 57 compliance; (2) document compliance status and identify CIS upgrades required to comply with the GDC explicitly or by the other defined bases described in Standard Review Plan (SRP) 6.2.4 or American National Standards Institute (ANSI) N271-1976; (3) perform those design changes necessary to bring WBN CIS into compliance; (4) procure, install, and test additional CIS valves where necessary; and (5) submit exemption requests to NRC if warranted.

CONCURRENCE

NAME	ORGANIZATION	SIGNATURE
H. B. Bounds	WBN-NE	
J. A. Kirkebo	Vice President-NE	
W. R. Brown, Jr.	Vice President-NC	
E. D. Fuller	WBN-Program Team Chairman	
H. C. Johnson	WBN-NQA	
N. C. Kazanas	Vice President-NQA	N C Kazanas 10/12/88
R. A. Pedde	WBN-Site Director	
C. H. Fox, Jr.	Vice President-NTD	C H Fox 10/17/88
APPROVED <u>[Signature]</u>	NLRA MANAGER	DATE <u>10/17/88</u>

LICENSING TRANSMITTAL TO NRC
SUMMARY AND CONCURRENCE SHEET

DATE _____ DATE DUE NRC 10/14/88 ACTION NO. _____

SUBMITTAL PREPARED BY J. H. Young FEES REQUIRED YES _____ NO X

PROJECT/DOCUMENT I.D.--WBN - Corrective Action Program (CAP) Plan for Containment Isolation.

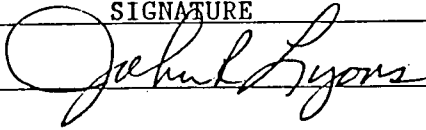
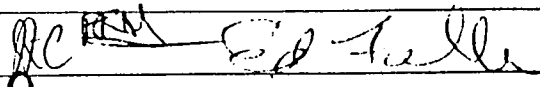
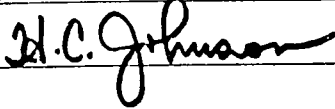

PURPOSE/SUMMARY--Provides the CAP for evaluation and documentation of the current degree of WBN containment isolation design compliance to the isolation requirements of General Design Criteria (GDC) 55, 56, and 57 current, as well as provision for design changes as necessary to ensure licensability of the Containment Isolation System (CIS).

RESPONDS TO NA (RIMS NO.) COMPLETE RESPONSE YES X NO _____

PROBLEM OR DEFICIENCY DESCRIPTION--This CAP provides the planned corrective action for one of the special programs as defined in the Watts Bar Program Plan (WBPP). The WBPP was submitted to NRC by TVA letter dated May 27, 1988 (T52 880526 904).

CORRECTIVE ACTION/COMMITMENT--Specific commitments are to: (1) conduct 100 percent review of all 189 fluid lines penetrating containment for GDC 55, 56, and 57 compliance; (2) document compliance status and identify CIS upgrades required to comply with the GDC explicitly or by the other defined bases described in Standard Review Plan (SRP) 6.2.4 or American National Standards Institute (ANSI) N271-1976; (3) perform those design changes necessary to bring WBN CIS into compliance; (4) procure, install, and test additional CIS valves where necessary; and (5) submit exemption requests to NRC if warranted.

CONCURRENCE

NAME	ORGANIZATION	SIGNATURE
H. B. Bounds	WBN-NE	
J. A. Kirkebo	Vice President-NE	
W. R. Brown, Jr.	Vice President-NC	
E. D. Fuller	WBN-Program Team Chairman	
H. C. Johnson	WBN-NQA	
N. C. Kazanas	Vice President-NQA	
R. A. Pedde	WBN-Site Director	
G. H. Fox, Jr.	Vice President-NTD	

APPROVED  DATE _____
NLRA MANAGER

cc: RIMS, MR 4N 72A-C
Licensing Support Section

LICENSING TRANSMITTAL TO NRC
SUMMARY AND CONCURRENCE SHEET

DATE _____ DATE DUE NRC 10/14/88 ACTION NO. _____

SUBMITTAL PREPARED BY J. H. Young FEES REQUIRED YES NO X

PROJECT/DOCUMENT I.D.--WBN - Corrective Action Program (CAP) Plan for Containment Isolation.

PURPOSE/SUMMARY--Provides the CAP for evaluation and documentation of the current degree of WBN containment isolation design compliance to the isolation requirements of General Design Criteria (GDC) 55, 56, and 57 current, as well as provision for design changes as necessary to ensure licensability of the Containment Isolation System (CIS).

RESPONDS TO NA (RIMS NO.) COMPLETE RESPONSE YES X NO _____

PROBLEM OR DEFICIENCY DESCRIPTION--This CAP provides the planned corrective action for one of the special programs as defined in the Watts Bar Program Plan (WBPP). The WBPP was submitted to NRC by TVA letter dated May 27, 1988 (T52 88D526 904).

CORRECTIVE ACTION/COMMITMENT--Specific commitments are to: (1) conduct 100 percent review of all 189 fluid lines penetrating containment for GDC 55, 56, and 57 compliance; (2) document compliance status and identify CIS upgrades required to comply with the GDC explicitly or by the other defined bases described in Standard Review Plan (SRP) 6.2.4 or American National Standards Institute (ANSI) N271-1976; (3) perform those design changes necessary to bring WBN CIS into compliance; (4) procure, install, and test additional CIS valves where necessary; and (5) submit exemption requests to NRC if warranted.

CONCURRENCE

NAME	ORGANIZATION	SIGNATURE
H. B. Bounds	WBN-NE	
✓ J. A. Kirkebo	Vice President-NE	<i>[Signature]</i> 10/15/88
✓ W. R. Brown, Jr.	Vice President-NC	
E. D. Fuller	WBN-Program Team Chairman	
H. C. Johnson	WBN-NQA	
N. C. Kazanas	Vice President-NQA	
R. A. Pedde	WBN-Site Director	
C. H. Fox, Jr.	Vice President-NTD	
APPROVED <i>[Signature]</i>	NLRA MANAGER	DATE: <u>10/17/88</u>

cc: RIMS, MR 4N 72A-C
Licensing Support Section

DNS4 - 6323Q

LICENSING TRANSMITTAL TO NRC
SUMMARY AND CONCURRENCE SHEET

DATE _____ DATE DUE NRC 10/14/88 ACTION NO. _____

SUBMITTAL PREPARED BY J. H. Young FEES REQUIRED YES _____ NO X

PROJECT/DOCUMENT I.D.--WBN - Corrective Action Program (CAP) Plan for Containment Isolation.

PURPOSE/SUMMARY--Provides the CAP for evaluation and documentation of the current degree of WBN containment isolation design compliance to the isolation requirements of General Design Criteria (GDC) 55, 56, and 57 current, as well as provision for design changes as necessary to ensure licensability of the Containment Isolation System (CIS).

RESPONDS TO NA (RIMS NO.) COMPLETE RESPONSE YES X NO _____

PROBLEM OR DEFICIENCY DESCRIPTION--This CAP provides the planned corrective action for one of the special programs as defined in the Watts Bar Program Plan (WBPP). The WBPP was submitted to NRC by TVA letter dated May 27, 1988 (T52 88D526 904).

CORRECTIVE ACTION/COMMITMENT--Specific commitments are to: (1) conduct 100 percent review of all 189 fluid lines penetrating containment for GDC 55, 56, and 57 compliance; (2) document compliance status and identify CIS upgrades required to comply with the GDC explicitly or by the other defined bases described in Standard Review Plan (SRP) 6.2.4 or American National Standards Institute (ANSI) N271-1976; (3) perform those design changes necessary to bring WBN CIS into compliance; (4) procure, install, and test additional CIS valves where necessary; and (5) submit exemption requests to NRC if warranted.

CONCURRENCE

NAME	ORGANIZATION	SIGNATURE
H. B. Bounds	WBN-NE	
J. A. Kirkebo	Vice President-NE	<i>[Signature]</i>
W. R. Brown, Jr.	Vice President-NC	<i>[Signature]</i>
E. D. Fuller	WBN-Program Team Chairman	
H. C. Johnson	WEN-NQA	
N. C. Kazanas	Vice President-NQA	
R. A. Pedde	WBN-Site Director	
G. H. Fox, Jr.	Vice President-NTD	

APPROVED _____ DATE _____
NLRA MANAGER

cc: RIMS, MR 4N 72A-C
Licensing Support Section

DN541 - 6323Q