

COMANCHE PEAK STEAM ELECTRIC STATION

UNIT NO. 2

ASME SECTION XI PRESERVICE INSPECTION PLAN

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PRESERVICE INSPECTION PLAN

TABLE OF CONTENTS
REVISION 0

<u>Section</u>	<u>Content</u>	<u>Page Number</u>
A	Introduction	1 - 5
B	Class 1 and 2 (IWB, IWC)	6 - 20
C	Class 3 (IWD)	21
D	Class 1, 2 and 3 Component Supports (IWF)	22, 23
E	Examination Boundary Diagrams	24 (plus diagrams)
F	Requests for Relief	25, 26

INTRODUCTION

General Plant Description

The Comanche Peak Steam Electric Station (CPSES) is a dual unit plant having Westinghouse pressurized water reactors each with an electrical output of 1150 MWe.

CPSES is located in North Texas in Somervell County, approximately forty-five miles southwest of Fort Worth.

Purpose

The purpose of this Plan is to provide details pertaining to performance of the preservice inspection (PSI) at CPSES, Unit 2, and to fulfill the requirements of 10CFR50.55a.

Scope

This Plan addresses the examinations to be performed on ASME Class 1, 2, and 3 systems and components as stipulated in the 1983 Edition of ASME Section XI (Code) (see Note).

Note: Certain areas within the Unit 2 PSI boundary were examined prior to the adoption of the 1983 Code as the Edition to be utilized. These areas include the Reactor Vessel and 37 ASME Class 1 piping welds in the reactor coolant and safety injection systems. These areas were examined in accordance with the 1980 Code.

A review of the two Code Editions reveals that similarities exist such that baseline documentation gathered under the 1980 Edition is acceptable under the rules provided in the 1983 Edition.

ASME Class 2 piping welds shall be selected in accordance with Code Case N-408.

The testing of pumps and valves as stipulated in subsections IWP and IWV of the Code is not within the scope of this Plan.

Preservice Inspection

Preservice inspection data shall constitute baseline documentation for inservice inspections and will be performed during the construction and startup phases of CPSES. Examinations shall be performed in accordance with approved procedures.

Records Retention

Documentation necessary to support the Unit 2 PSI shall be maintained as permanent plant records at CPSES. This documentation shall include, as a minimum, the applicable records described in Subsubarticle IWA-6340 of Section XI.

Nondestructive Examination

ASME Class 1 and 2 components and their supports shall be categorized in accordance with Tables IWB-2500-1, IWC-2500-1 and IWF-2500-1 and Code Case N-408.

Utilizing the nondestructive examination methods prescribed in the appropriate Code table, non-exempt components and their supports shall be examined in accordance with the techniques and requirements of Article 200 of the Code.

Exemptions

The following comprise those exemptions applicable to CPSES Unit 2.

I. For Class 1 components:

- A. piping of 1 inch nominal pipe size and smaller, except for steam generator tubing, is exempt from examination per IWB-1220 (b)(1);
- B. components and their connections in piping of 1 inch nominal pipe size and smaller, are exempt from examination per IWB-1220(b)(2);
- C. reactor vessel head connections and associated piping, 2 inch nominal pipe size and smaller, made inaccessible by control rod drive penetrations are exempt from examination per IWB-1220(c).

II. For Class 2 components other than piping welds:

- A. components of systems or portions of systems that during normal plant conditions are not required to operate but remained flooded under static conditions at a pressure of at least 80% of the pressure that the component or system will be subjected to when required to operate, are exempt from examination per IWC-1220(a);
- B. components of systems or portions of systems, other than Residual Heat Removal Systems and Emergency Core Cooling Systems, that are not required to operate above a pressure of 275 psig or above a temperature of 200°F, are exempt from examination per IWC-1220(b);
- C. component connections (including nozzles in vessels and pumps), valves, and vessels and their attachments that are 4 inch nominal pipe size and smaller, are exempt from examination per IWC-1220(c).

- III. For Class 2 piping welds in the Residual Heat Removal, Emergency Core Cooling and Containment Heat Removal systems:
- A. piping 4 inch nominal pipe size and smaller in all systems, except the high pressure safety injection system, is exempt from examination per N-408 (a)(1);
 - B. piping 1-1/2 inch nominal pipe size and smaller in the high pressure safety injection system is exempt per N-408 (a)(2);
 - C. component connections 4 inch nominal pipe size and smaller (including nozzles, socket fittings, and other connections) in vessels, piping, pumps, valves, and other components of any size in all systems except the high pressure safety injection system are exempt per N-408 (a)(3);
 - D. component connections 1-1/2 inch nominal pipe size and smaller (including nozzles, socket fittings, and other connections) in vessels, piping, pumps, valves, and other components of any size in the high pressure safety injection system, are exempt per N-408 (a)(4);
 - E. piping and component connections of any size in statically pressurized, passive safety injection systems (i.e., accumulator discharge), are exempt per N-408 (a)(4);
 - F. piping of any size beyond the last shutoff valve in open ended portions of systems that do not contain water during normal plant operating conditions, is exempt per N-408 (a)(6).
- IV. For Class 2 piping welds in systems other than Residual Heat Removal, Emergency Core Cooling and Containment Heat Removal:
- A. piping and component connections 4 inch nominal pipe size and smaller, are exempt per N-408 (b)(1) and (2);
 - B. piping and component connections in systems or portions of systems that operate (when the system function is required) at a pressure equal to or less than 275 psig and at a temperature equal to or less than 200°F, are exempt per N-408 (b)(3);
 - C. piping of any size beyond the last shutoff valve in open ended portions of systems that do not contain water during normal plant operating conditions, is exempt per N-408 (b)(4).

Relief Requests

Where a particular examination requirement of the Code is determined to be impractical, a request for relief from the requirement shall be submitted pursuant to the requirement of 10 CFR 50.55a(a)(3).

Each request for relief shall contain the following information, at a minimum:

- A. Identification of the component(s) for which relief is requested;
- B. Code class of the component(s);
- C. Code examination requirement for the component(s);
- D. Basis for the request;
- E. Proposed alternative examinations, if any; and,
- F. Anticipated impact on the overall level of plant quality and safety.

Requests for relief from impractical Code requirements that are presently known are contained within this Plan. For those impractical Code requirements that may become apparent in the course of the PSI, a request for relief shall be prepared and submitted for each case.

Examination Boundaries

In accordance with IWA-1400(a) of the Code, TU Electric has identified Code classification and boundaries of systems subject to examination. These examination boundaries are provided in Section E of this Plan.

To further enhance specific examination areas, isometric drawings are developed to identify examination areas.

Reactor Pressure Vessel

Required volumes of the Reactor Pressure Vessel have been examined in accordance with the examination techniques of ASME Section V Article 4 and supplemented by additional requirements to address the intent of USNRC Regulatory Guide 1.150. The program for examination of the Reactor Vessel was submitted in a letter to the NRC issued June 13, 1983 and is addressed in the CPSES SSER 4. For continuity, the examination requirements of the Reactor Vessel are restated in this Plan.

Code Case N-408

To provide baseline examination that is consistent to the maximum extent permissible, with the latest published Code Edition, TU Electric has elected to adopt Code Case N-408 for determining components subject to examination and for establishing examination requirements for Class 2 piping.

Class 2 piping welds shall be selected for examination utilizing the exemption criteria and Tables 1 and 2 of N-408. The examination method and extent of examination shall be determined from Tables 1 and 2 of N-408.

All examinations which would be applied to components within the piping boundary as determined by IWC-1220 and Category C-F of the 1983 Code shall be applied to the piping selected in accordance with N-408 (e.g., integral attachments, bolting, valves, supports).

It is the intent that two times the minimum number of Class 2 piping welds required to be examined by Code Case N-408 be examined. This is to provide a buffer beyond the required number of Class 2 piping welds to be examined, should inservice conditions dictate selection of Class 2 piping welds outside the required baseline scope. Approximately 15% of all non-exempt Class 2 piping welds are to be examined and in no case shall fewer than the minimum 7.5% be examined.

Note: For the purpose of this Code Case, the high pressure safety injection system is defined as the discharge piping from each safety injection pump and each centrifugal charging pump. This piping is illustrated in Section E, as the Class 2 piping, 4 inch nominal pipe size and smaller, shown on the Safety Injection and Chemical and Volume Control Inservice Inspection Boundary Diagrams.

CPSES UNIT 2
ASME CLASS 1 AND 2 PRESERVICE INSPECTION

All items listed below are to be examined, as indicated, in accordance with the requirements of Subsections IWB and IWC of the 1983 Edition of Section XI of the ASME Boiler and Pressure Vessel Code except for Class 2 piping which is selected for examination and the examination methods determined in accordance with Code Case N-408.

<u>IWB-2500-1</u> <u>Item Number</u>	<u>Area To Be</u> <u>Examined</u>	<u>Examination</u> <u>Method</u>	<u>Percent To</u> <u>Be Examined</u>
<u>REACTOR VESSEL</u>			
B1.10	Shell Welds		
B1.11	Circumferential	Vol.	100
B1.12	Longitudinal	Vol.	100
B1.20	Head Welds		
B1.21	Circumferential	Vol.	100
B1.22	Meridional	Vol.	100
B1.30	Shell-to-Flange Weld	Vol.	100
B1.40	Head-to-Flange Weld	Vol. & Surf.	100
B1.50	Repair Welds		
B1.51	Beltline Region	Vol.	Note (2)
<u>PRESSURIZER</u>			
B2.10	Shell-to-Head Welds		
B2.11	Circumferential	Vol.	100
B2.12	Longitudinal	Vol.	Note (1)
B2.20	Head Welds		
B2.21	Circumferential	Vol.	Note (2)
B2.22	Meridional	Vol.	Note (2)

<u>IWB-2500-1</u> <u>Item Number</u>	<u>Area To Be</u> <u>Examined</u>	<u>Examination</u> <u>Method</u>	<u>Percent To</u> <u>Be Examined</u>
	<u>STEAM GENERATOR</u> <u>(Primary Side)</u>		
B2.30	Head Welds		
B2.31	Circumferential	Vol.	Note (2)
B2.32	Meridional	Vol.	Note (2)
B2.40	Tubesheet-to-Head Weld	Vol.	100
	<u>HEAT EXCHANGERS</u> <u>(Primary Side) Head</u>		
B2.50	Head Welds		
B2.51	Circumferential	Vol.	Note (2)
B2.52	Meridional	Vol.	Note (2)
	<u>HEAT EXCHANGERS</u> <u>(Primary Side) Shell</u>		
L2.60	Tubesheet-to-Head Welds	Vol.	Note (2)
B2.70	Longitudinal Welds	Vol.	Note (2)
B2.80	Tubesheet-to-Shell Welds	Vol.	Note (2)
	<u>REACTOR VESSEL</u>		
B3.10	Nozzle-to-Vessel Welds	Vol.	Note (3)
B3.20	Nozzle Inside Radius Section	Vol.	Note (3)
	<u>PRESSURIZER</u>		
B3.30	Nozzle-to-Vessel Welds	Vol.	Note (3)
B3.40	Nozzle Inside Radius Section	Vol.	Note (3)

<u>IWB-2500-1</u> <u>Item Number</u>	<u>Area To Be</u> <u>Examined</u>	<u>Examination</u> <u>Method</u>	<u>Percent To</u> <u>Be Examined</u>
	<u>STEAM GENERATORS</u> <u>(Primary Side)</u>		
B3.50	Nozzle-to-Vessel Welds	Vol.	Note (3)
B3.60	Nozzle Inside Radius Section	Vol.	Note (3)
	<u>HEAT EXCHANGERS</u> <u>(Primary Side)</u>		
B3.70	Nozzle-to-Vessel Welds	Vol.	Note (3)
B3.80	Nozzle Inside Radius Section	Vol.	Note (3)
	<u>REACTOR VESSEL</u>		
B3.90	Nozzle-to-Vessel Welds	Vol.	100
B3.100	Nozzle Inside Radius Section	Vol.	100
	<u>PRESSURIZER</u>		
B3.110	Nozzle-to-Vessel Welds	Vol.	100
B3.120	Nozzle Inside Radius Section	Vol.	100
	<u>STEAM GENERATORS</u> <u>(Primary Side)</u>		
B3.130	Nozzle-to-Vessel Welds	Vol.	100
B3.140	Nozzle Inside Radius Section	Vol.	100
	<u>HEAT EXCHANGERS</u> <u>(Primary Side)</u>		
B3.150	Nozzle-to-Vessel Welds	Vol.	Note (2)
B3.160	Nozzle Inside Radius Section	Vol.	Note (2)

<u>IWB-2500-1</u> <u>Item Number</u>	<u>Area To Be</u> <u>Examined</u>	<u>Examination</u> <u>Method</u>	<u>Percent To</u> <u>Be Examined</u>
<u>REACTOR VESSEL</u>			
B5.10	Nominal Pipe Size ≥ 4 in. Nozzle to Safe End Butt Welds	Vol. & Surf.	100
B5.20	Nominal Pipe Size < 4 in. Nozzle to Safe End Butt Welds	Surf.	Note (2)
B5.30	Nozzle to Safe End Socket Welds	Surf.	Note (2)
<u>PRESSURIZER</u>			
B5.40	Nominal Pipe Size ≥ 4 in. Nozzle to Safe End Butt Welds	Vol. & Surf.	100
B5.50	Nominal Pipe Size < 4 in. Nozzle to Safe End Butt Welds	Surf.	Note (2)
B5.60	Nozzle to Safe End Socket Welds	Surf.	Note (2)
<u>STEAM GENERATOR</u>			
B5.70	Nominal Pipe Size ≥ 4 in. Nozzle to Safe End Butt Welds	Vol. & Surf.	100
B5.80	Nominal Pipe Size < 4 in. Nozzle to Safe End Butt Welds	Surf.	Note (2)
B5.90	Nozzle to Safe End Socket Welds	Surf.	Note (2)

<u>IWB-2500-1</u> <u>Item Number</u>	<u>Area To Be</u> <u>Examined</u>	<u>Examination</u> <u>Method</u>	<u>Percent To</u> <u>Be Examined</u>
<u>HEAT EXCHANGERS</u>			
B5.100	Nominal Pipe Size ≥ 4 in. Nozzle to Safe End Butt Welds	Vol. & Surf.	Note (2)
B5.110	Nominal Pipe Size < 4 in. Nozzle to Safe End Butt Welds	Surf.	Note (2)
B5.120	Nozzle to Safe End Socket Welds	Surf.	Note (2)
<u>PIPING</u>			
B5.130	Nominal Pipe Size ≥ 4 in. Dissimilar Metal Butt Welds	Vol. & Surf.	100
B5.140	Nominal Pipe Size < 4 in. Dissimilar Metal Butt Welds	Surf.	Note (2)
B5.150	Dissimilar Metal Socket Welds	Surf.	Note (2)
<u>REACTOR VESSEL</u>			
B6.10	Closure Head Nuts	Surf.	100
B6.20	Closure Studs, In Place	Vol.	Note (4)
B6.30	Closure Studs, Removed	Vol. & Surf.	100
B6.40	Threads in Flange	Vol.	100
B6.50	Closure Washers, Bushings	VT-1	Note (5)

<u>IWB-2000-1</u> <u>Item Number</u>	<u>Area To Be</u> <u>Examined</u>	<u>Examination</u> <u>Method</u>	<u>Percent To</u> <u>Be Examined</u>
<u>PRESSURIZER</u>			
B6.60	Bolts and Studs	Vol.	Note (2)
B6.70	Flange Surface, Disassembled	VT-1	Note (2)
B6.80	Nuts, Bushing, and Washers	VT-1	Note (2)
<u>STEAM GENERATORS</u>			
B6.90	Bolts and Studs	Vol.	Note (2)
B6.100	Flange Surface, Disassembled	VT-1	Note (2)
B6.110	Nuts, Bushing, and Washers	VT-1	Note (2)
<u>HEAT EXCHANGERS</u>			
B6.120	Bolts and Studs	Vol.	Note (2)
B6.130	Flange Surface, Disassembled	VT-1	Note (2)
B6.140	Nuts, Bushing, and Washers	VT-1	Note (2)
<u>PIPING</u>			
B6.150	Bolts and Studs	Vol.	Note (2)
B6.160	Flange Surface, Disassembled	VT-1	Note (2)
B6.170	Nuts, Bushing, and Washers	VT-1	Note (2)

<u>IWB-2500-1 Item Number</u>	<u>Area To Be Examined</u>	<u>Examination Method</u>	<u>Percent To Be Examined</u>
<u>PUMPS</u>			
B6.180	Bolts and Studs	Vol.	Note (2)
B6.190	Flange Surface, Disassembled	VT-1	Note (2)
B6.200	Nuts, Bushing, and Washers	VT-1	Note (2)
<u>VALVES</u>			
B6.210	Bolts and Studs	Vol.	Note (2)
B6.220	Flange Surface, Disassembled	VT-1	Note (2)
B6.230	Nuts, Bushing, and Washers	VT-1	Note (2)
<u>REACTOR VESSEL</u>			
B7.10	Bolts, Studs, and Nuts	VT-1	Note (2)
<u>PRESSURIZER</u>			
B7.20	Bolts, Studs, and Nuts	VT-1	100
<u>STEAM GENERATORS</u>			
B7.30	Bolts, Studs, and Nuts	VT-1	100
<u>HEAT EXCHANGERS</u>			
B7.40	Bolts, Studs, and Nuts	VT-1	Note (2)
<u>PIPING</u>			
B7.50	Bolts, Studs, and Nuts	VT-1	100

<u>IWB-2500-1</u> <u>Item Number</u>	<u>Area To Be</u> <u>Examined</u>	<u>Examination</u> <u>Method</u>	<u>Percent To</u> <u>Be Examined</u>
	<u>PUMPS</u>		
B7.60	Bolts, Studs, and Nuts	VT-1	100
	<u>VALVES</u>		
B7.70	Bolts, Studs, and Nuts	VT-1	100
	<u>CRD HOUSINGS</u>		
B7.80	Bolts, Studs, and Nuts	VT-1	100
	<u>REACTOR VESSEL</u>		
B8.10	Integrally Welded Attachments	Vol. or Surf.	Note (2)
	<u>PRESSURIZER</u>		
B8.20	Integrally Welded Attachments	Vol. or Surf.	100
	<u>STEAM GENERATOR</u>		
B8.30	Integrally Welded Attachments	Vol. or Surf.	Note (2)
	<u>HEAT EXCHANGERS</u>		
B8.40	Integrally Welded Attachments	Vol. or Surf.	Note (2)

<u>IWB-2500-1</u> <u>Item Number</u>	<u>Area To Be</u> <u>Examined</u>	<u>Examination</u> <u>Method</u>	<u>Percent To</u> <u>Be Examined</u>
<u>PIPING</u>			
B9.10	Nominal Pipe Size ≥ 4 in.	Vol. & Surf.	
B9.11	Circumferential Welds		100
B9.12	Longitudinal Welds		Note (2)
B9.20	Nominal Pipe Size < 4 in.	Vol. & Surf.	
B9.21	Circumferential Welds		100
B9.22	Longitudinal Welds		Note (2)
B9.30	Branch Pipe Connection Welds		
B9.31	Nominal Pipe Size ≥ 4 in.	Vol. & Surf.	100
B9.32	Nominal Pipe Size < 4 in.	Surf.	100
B9.40	Socket Welds	Surf.	100
<u>PIPING</u>			
B10.10	Integrally Welded Attachments	Vol. or Surf.	100
<u>PUMPS</u>			
B10.20	Integrally Welded Attachments	Vol. or Surf.	Note (2)
<u>VALVES</u>			
B10.30	Integrally Welded Attachments	Vol. or Surf.	Note (2)
<u>PUMPS</u>			
B12.10	Pump Casing Welds	Vol.	Note (2)
B12.20	Pump Casing	VT-3	100

<u>IWB-2500-1</u> <u>Item Number</u>	<u>Area To Be</u> <u>Examined</u>	<u>Examination</u> <u>Method</u>	<u>Percent To</u> <u>Be Examined</u>
<u>VALVES</u>			
B12.30	Valves, Nominal Pipe Size < 4 in. Valve Body Welds	Surf.	Note (2)
B12.40	Valves, Nominal Pipe Size \geq 4 in. Valve Body Welds	Vol.	Note (2)
B12.50	Valve Body > 4 in. Nominal Pipe Size	VT-3	Note (6)
<u>REACTOR VESSEL</u>			
B13.10	Vessel Interior	VT-3	Note (7)
B13.50	Interior Attachments Within Beltline Region	VT-1	Note (8)
B13.60	Interior Attachments Beyond Beltline Region	VT-3	Note (8)
B13.70	Core Support Structure	VT-3	Note (9)
<u>REACTOR VESSEL</u>			
B14.10	Welds in CRD Housing	Vol. or Surf.	Note (10)

<u>IWC-2500-1</u> <u>Item Number</u>	<u>Area To Be</u> <u>Examined</u>	<u>Examination</u> <u>Method</u>	<u>Percent To</u> <u>Be Examined</u>
<u>VESSELS</u>			
C1.10	Shell Circumferential Welds	Vol.	100
C1.20	Head Circumferential Welds	Vol.	100
C1.30	Tubesheet-to-Shell Welds	Vol.	100
<u>VESSEL NOZZLE WELDS</u>			
C2.10	Nozzles in Vessels ≤ 1/2 in. Nominal Thickness		
C2.11	Nozzle-to-Shell (or Head) Weld	Surf.	100
C2.20	Nozzle Without Reinforcing Plate in Vessels > 1/2 in. Nominal Thickness		
C2.21	Nozzle to Shell (or Head) Weld	Vol. & Surf.	100
C2.22	Nozzle Inside Radius Section	Vol.	100
C2.30	Nozzles With Reinforcing Plate in Vessels > 1/2 in. Nominal Thickness		
C2.31	Reinforcing Plate Welds to Nozzle and Vessel	Surf.	Note (2)
C2.32	Nozzle-to-Shell (or Head) Welds When Inside of Vessel is Accessible	Vol.	Note (2)
C2.33	Nozzle-to-Shell (or Head) Welds When Inside of Vessel is Inaccessible	VT-2	Note (2)

<u>IWC-2500-1</u> <u>Item Number</u>	<u>Area To Be</u> <u>Examined</u>	<u>Examination</u> <u>Method</u>	<u>Percent To</u> <u>Be Examined</u>
	<u>PRESSURE VESSELS</u>		
C3.10	Integrally Welded Attachments	Surf.	100
	<u>PIPING</u>		
C3.20	Integrally Welded Attachment	Surf.	100
	<u>PUMPS</u>		
C3.30	Integrally Welded Attachments	Surf.	100
	<u>VALVES</u>		
C3.40	Integrally Welded Attachments	Surf.	Note (2)
	<u>PRESSURE VESSELS</u>		
C4.10	Bolts and Studs	Vol.	Note (2)
	<u>PIPING</u>		
C4.20	Bolts and Studs	Vol.	Note (2)
	<u>PUMPS</u>		
C4.30	Bolts and Studs	Vol.	Note (2)
	<u>VALVES</u>		
C4.40	Bolts and Studs	Vol.	Note (2)
	<u>PIPING</u>		
C5.10	Piping Welds \geq 3/8 in. Wall Thickness for Piping $>$ NPS 4		
C5.11	Circumferential Welds	Vol. & Surf.	7.5
C5.12	Longitudinal Welds	Vol. & Surf.	Note (11)

<u>IWC-2500-1 Item Number</u>	<u>Area To Be Examined</u>	<u>Examination Method</u>	<u>Percent To Be Examined</u>
C5.20	Piping Welds > 1/5 in. Nominal Wall Thickness for Piping ≥ NPS 2 and ≤ NPS 4 (High Pressure Safety Injection)		
C5.21	Circumferential Welds	Vol. & Surf.	7.5
C5.22	Longitudinal Welds	Vol. & Surf.	Note (11)
C5.30	Socket Welds	Surf.	7.5
C5.40	Pipe Branch Connections of Branch Piping ≥ NPS 2		
C5.41	Circumferential Welds	Surf.	7.5
C5.42	Longitudinal Welds	Surf.	Note (11)
C5.50	Piping Welds ≥ 3/8 in. Nominal Wall Thickness for Piping > NPS 4		
C5.51	Circumferential Welds	Vol. & Surf.	7.5
C5.52	Longitudinal Welds	Vol. & Surf.	Note (11)
C5.60	Piping Welds > 1/5 in. Nominal Wall Thickness for Piping ≥ NPS 2 and < NPS 4 (High Pressure Safety Injection)		
C5.61	Circumferential Weld	Vol. & Surf.	Note (2)
C5.62	Longitudinal Weld	Vol. & Surf.	Note (2)
C5.70	Socket Welds	Surf.	7.5
C5.80	Pipe Branch Connections of Branch Piping ≥ NPS 2		
C5.81	Circumferential Welds	Surf.	7.5
C5.82	Longitudinal Welds	Surf.	Note (11)
	<u>PUMPS</u>		
C6.10	Pumps Casing Welds	Surf.	Note (2)
	<u>VALVES</u>		
C6.20	Valve Body Welds	Surf.	100

NOTES

- (1) 1 foot of all longitudinal welds intersecting the circumferential weld is to be examined.
- (2) There are no items of this type within the PSI boundary
- (3) TU Electric has elected to utilize inspection program B and therefore this item does not apply.
- (4) Reactor Vessel studs shall be removed for examination
- (5) 100 percent of closure washers shall be examined. There are no bushings in the reactor vessel.
- (6) Examinations are limited to one valve within each group of valves of the same constructional design and manufacturing method and that perform similar system functions. See Attachment 1 for a group listing.
- (7) 100 percent of accessible areas are examined.
- (8) 100 percent of accessible welds are examined.
- (9) 100 percent of accessible surfaces are examined.
- (10) 100 percent of peripheral CRD housing welds are examined.
- (11) The examination area includes 2.5 times the thickness from the circumferential weld selected for examination.

ATTACHMENT 1

Class 1 Valve Bodies > 4 in. NPS

Group 1 - Forged Pressurizer Relief Valves

2-8010A
2-8010B
2-8010C

Group 2 - Forged Gate Valves Isolating the RC System from the RHR System

2-8701A
2-8701B
2-8702A
2-8702B

Group 3 - Forged Check Valves Isolating the RC System from the SI System

2-8948A
2-8948B
2-8948C
2-8948D
2-8956A
2-8956B
2-8956C
2-8956D
2-8818A
2-8818B
2-8818C
2-8818D
2-8949A
2-8949B
2-8949C
2-8949D
2-8841A
2-8841B

CPSSES UNIT 2

ASME CLASS 3 PRESERVICE INSPECTION

Relief has been requested from the requirements for preservice inspection of Class 3 systems and components. This relief request, titled D-1, may be found in the relief request section of this Plan (Section F).

CPSES UNIT 2
 ASME CLASS 1, 2 AND 3 COMPONENT
 SUPPORT PRESERVICE INSPECTION

All ASME Class 1, 2 and 3 component supports within the boundaries of inspection identified in Section E which are required to be constructed in accordance with NF shall be examined, as indicated, in accordance with Subsection IWF of the 1983 Edition of Section XI of the ASME Boiler and Pressure Vessel Code.

<u>IWF-2500-1 Item Number</u>	<u>Area To Be Examined</u>	<u>Examination Method</u>
	<u>PLATE AND SHELL TYPE SUPPORTS</u>	
F1.10	Mechanical connections to pressure retaining components and building structure	VT-3
F1.20	Weld connections to building structure	VT-3
F1.30	Weld and mechanical connections at intermediate joints in multiconnected integral and nonintegral supports	VT-3
F1.40	Component displacement settings of guides and stops, misalignment of supports, assembly of support items	VT-3
	<u>LINEAR TYPE SUPPORTS</u>	
F2.10	Mechanical connections to pressure retaining components and building structure	VT-3

<u>IWF-2500-1 Item Number</u>	<u>Area To Be Examined</u>	<u>Examination Method</u>
F2.20	Weld connections to building structure	VT-3
F2.30	Weld and mechanical connections at intermediate joints in multiconnected integral and nonintegral supports	VT-3
F2.40	Component displacement settings of guides and stops, misalignment of supports, assembly of support items	VT-3
<u>COMPONENT STANDARD SUPPORTS</u>		
F3.10	Mechanical connections to pressure retaining components and building structure	VT-3
F3.20	Weld connections to building structure	VT-3
F3.30	Weld and mechanical connections at intermediate joints in multiconnected integral and nonintegral supports	VT-3
F3.40	Component displacement settings of guides and stops, misalignment of supports, assembly of support items	VT-3
F3.50	Spring type supports, constant load type supports, shock absorbers, hydraulic and mechanical type snubbers	VT-4

EXAMINATION BOUNDARY DIAGRAMS

This section contains diagrams depicting the bounds within which the examination requirements of ASME Section XI, and Code Case N-408 for Class 2 piping welds, are applied. These are those Class 1, 2 and 3 systems and components which are not exempt (exemption criteria is provided in Section A).

Examination Boundary Diagrams

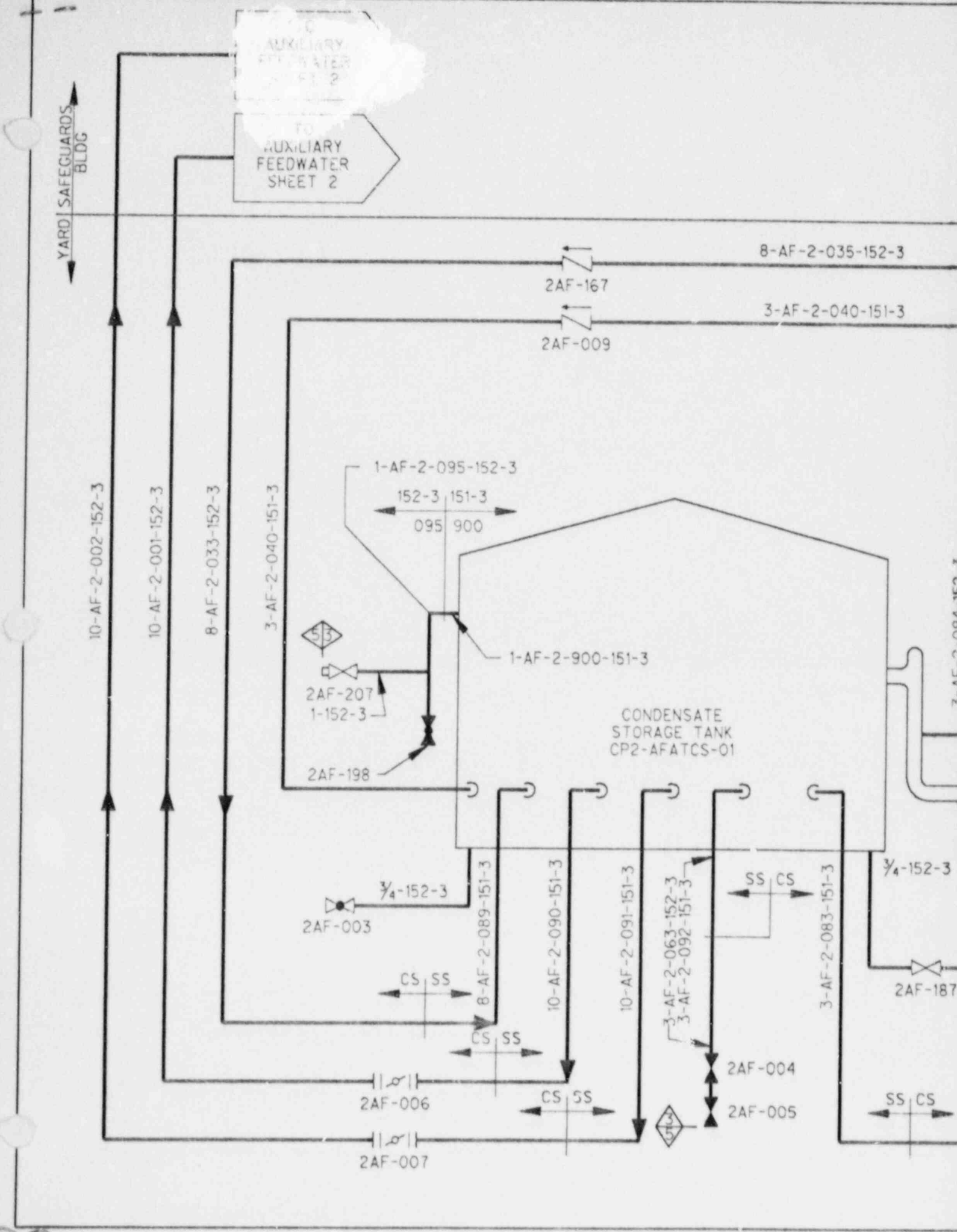
Auxiliary Feedwater (Sh. 1, 2, 3)
Chemical & Volume Control
Component Cooling Water (Sh. 1, 2, 3)
Containment Spray
Diesel Generator
Feedwater
Main Steam
Reactor Coolant (Sh. 1 & 2)
Residual Heat Removal
Safety Injection (Sh. 1 - 6)
Station Service Water (Sh. 1 & 2)

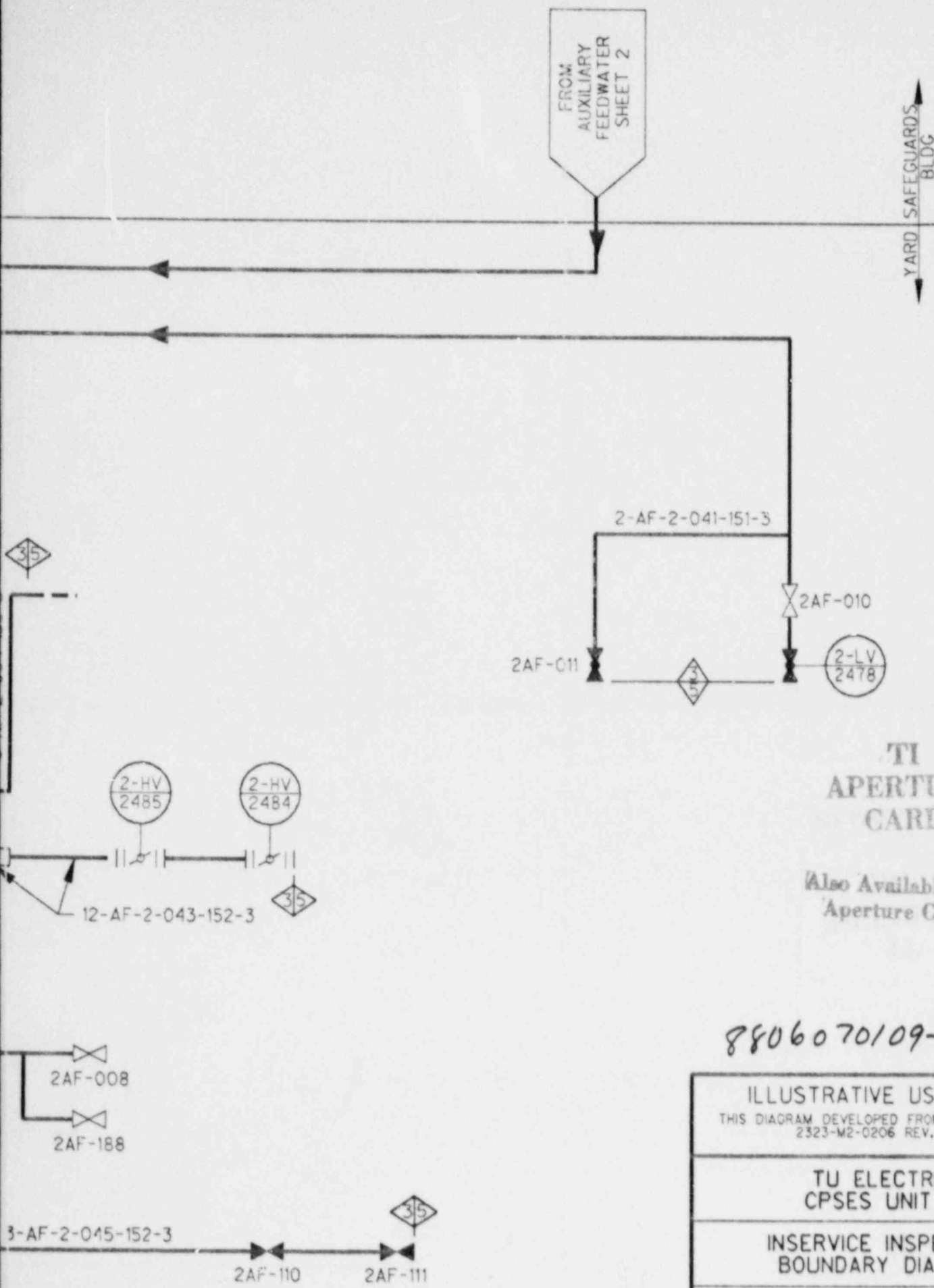
LEGEND

A solid line indicates that the rules of the Code or N-408 are applied to select examination areas.

A phantom line indicates Class 2 piping which is > 4 in. NPS and $< 3/8$ in. nominal wall thickness. This piping is not subject to examination but is included in the total weld count to which the sampling rate is applied.

A dashed line indicates piping not in the system for which the diagram applies or exempt piping and is shown for clarity only.



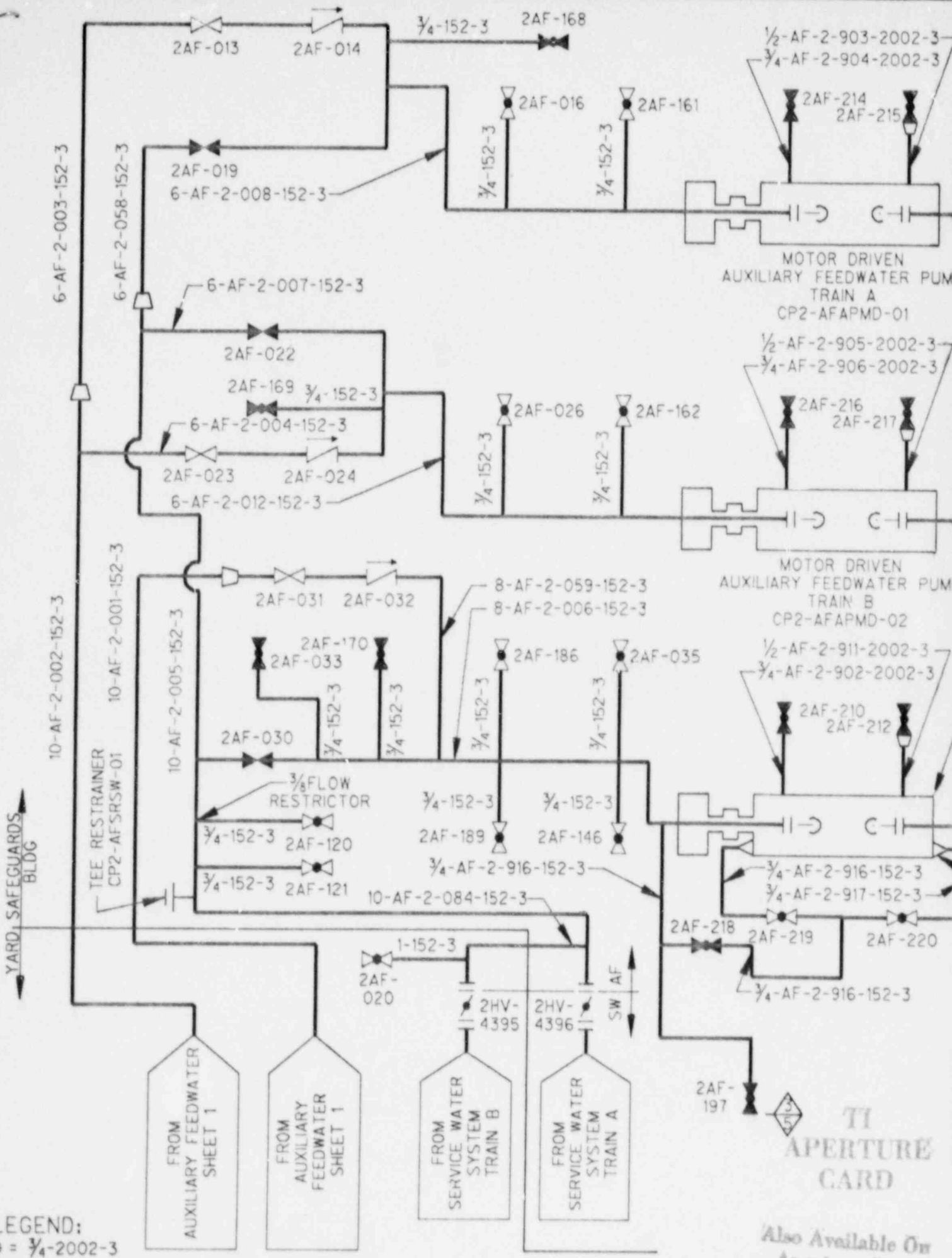


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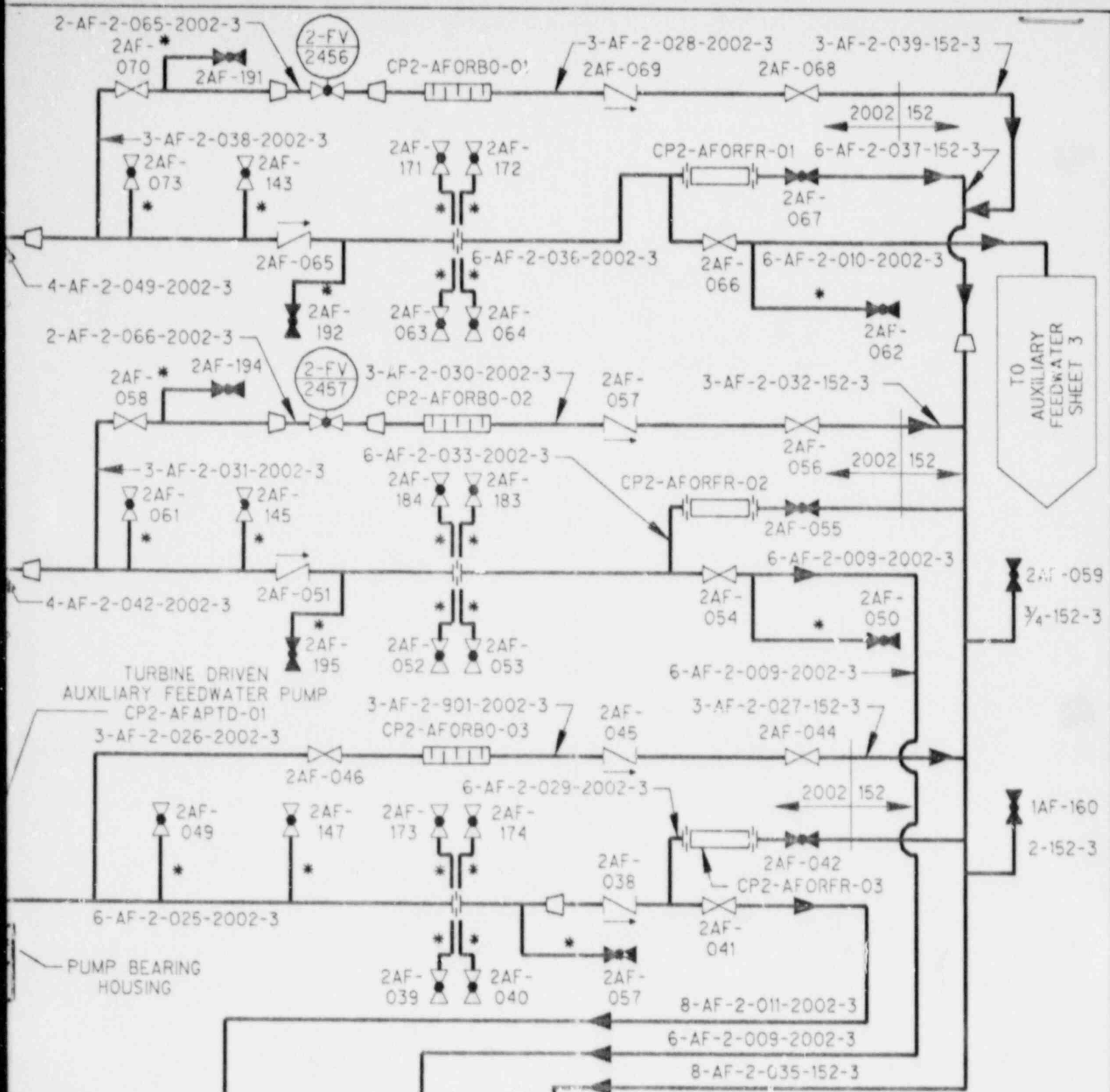
8806070109-01

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TU ELECTRIC CPSES UNIT 2
INSERVICE INSPECTION BOUNDARY DIAGRAM
AUXILIARY FEEDWATER SYSTEM SHEET 1 of 3



LEGEND:
 * = 3/4-2002-3

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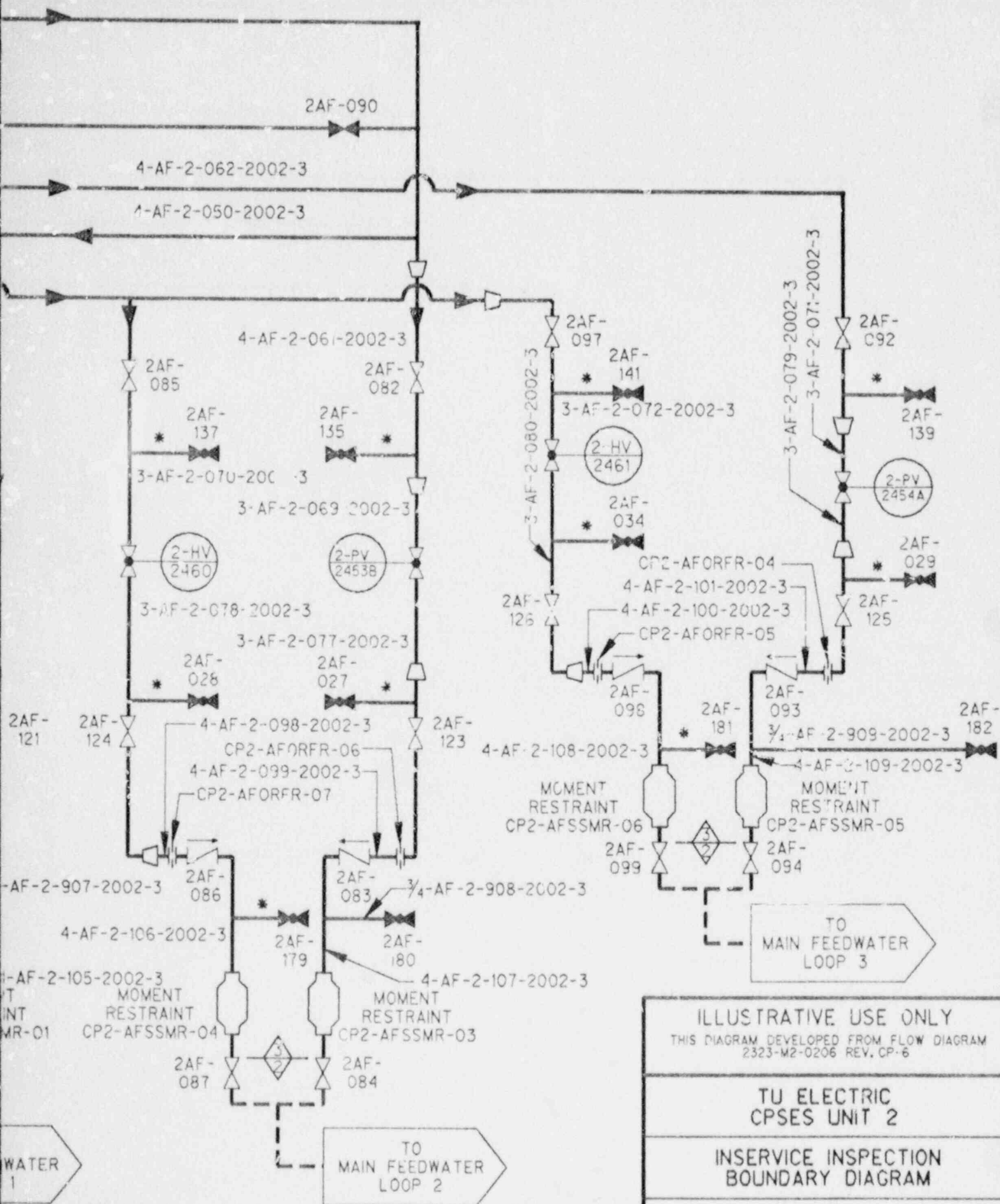
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 2323-M2-0206 REV. CP-6

TU ELECTRIC
 CPSES UNIT 2

INSERVICE INSPECTION
 BOUNDARY DIAGRAM

AUXILIARY FEEDWATER SYSTEM
 SHEET 2 of 3

806070109-02



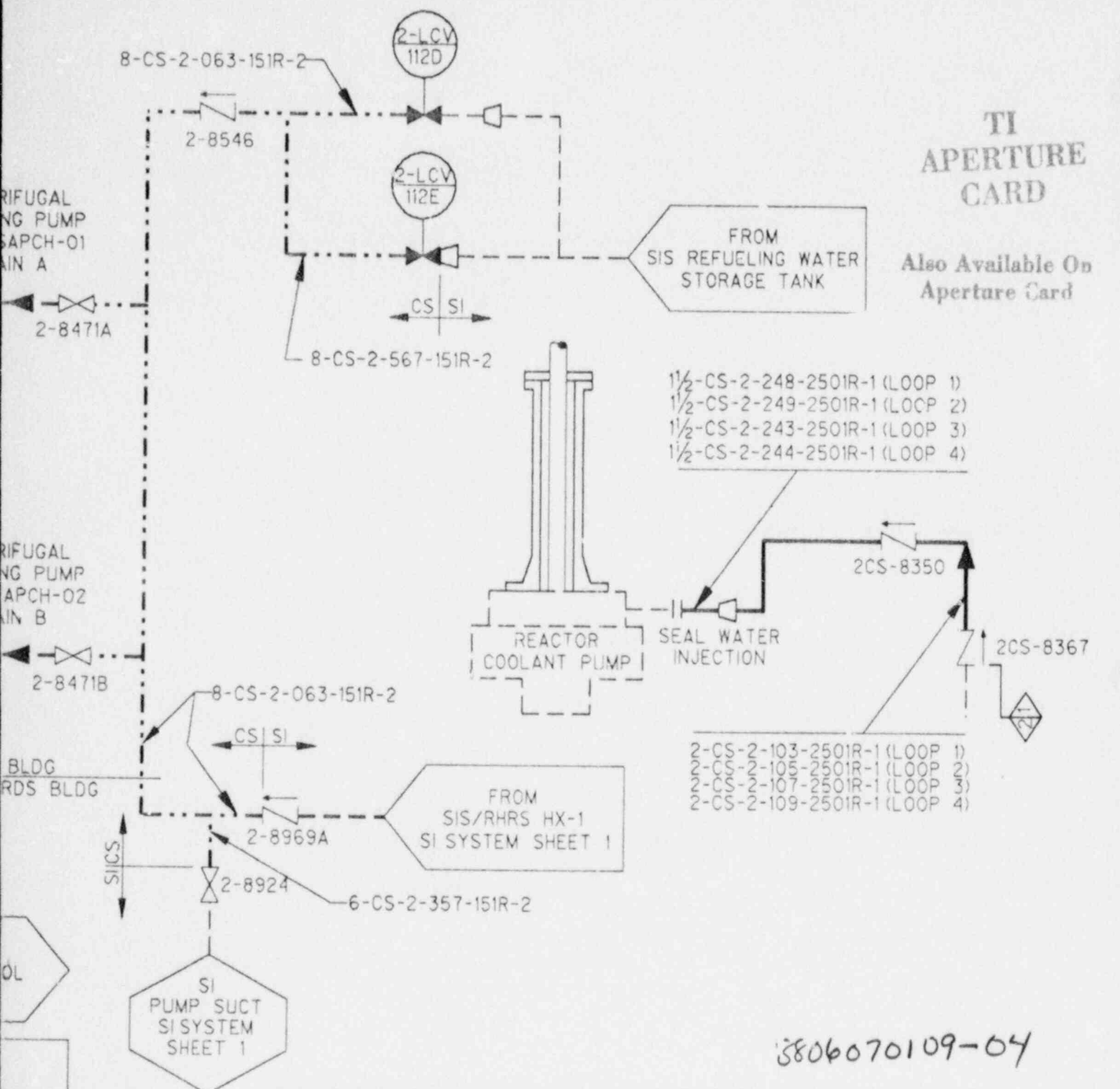
ILLUSTRATIVE USE ONLY
 THIS DIAGRAM DEVELOPED FROM FLOW DIAGRAM
 2323-M2-0206 REV. CP-6

TU ELECTRIC
 CPSES UNIT 2

INSERVICE INSPECTION
 BOUNDARY DIAGRAM

AUXILIARY FEEDWATER SYSTEM
 SHEET 3 of 3

8F06070109-03



REFUGAL
NG PUMP
APCH-01
IN A

REFUGAL
NG PUMP
APCH-02
IN B

BLDG
RDS BLDG

OL

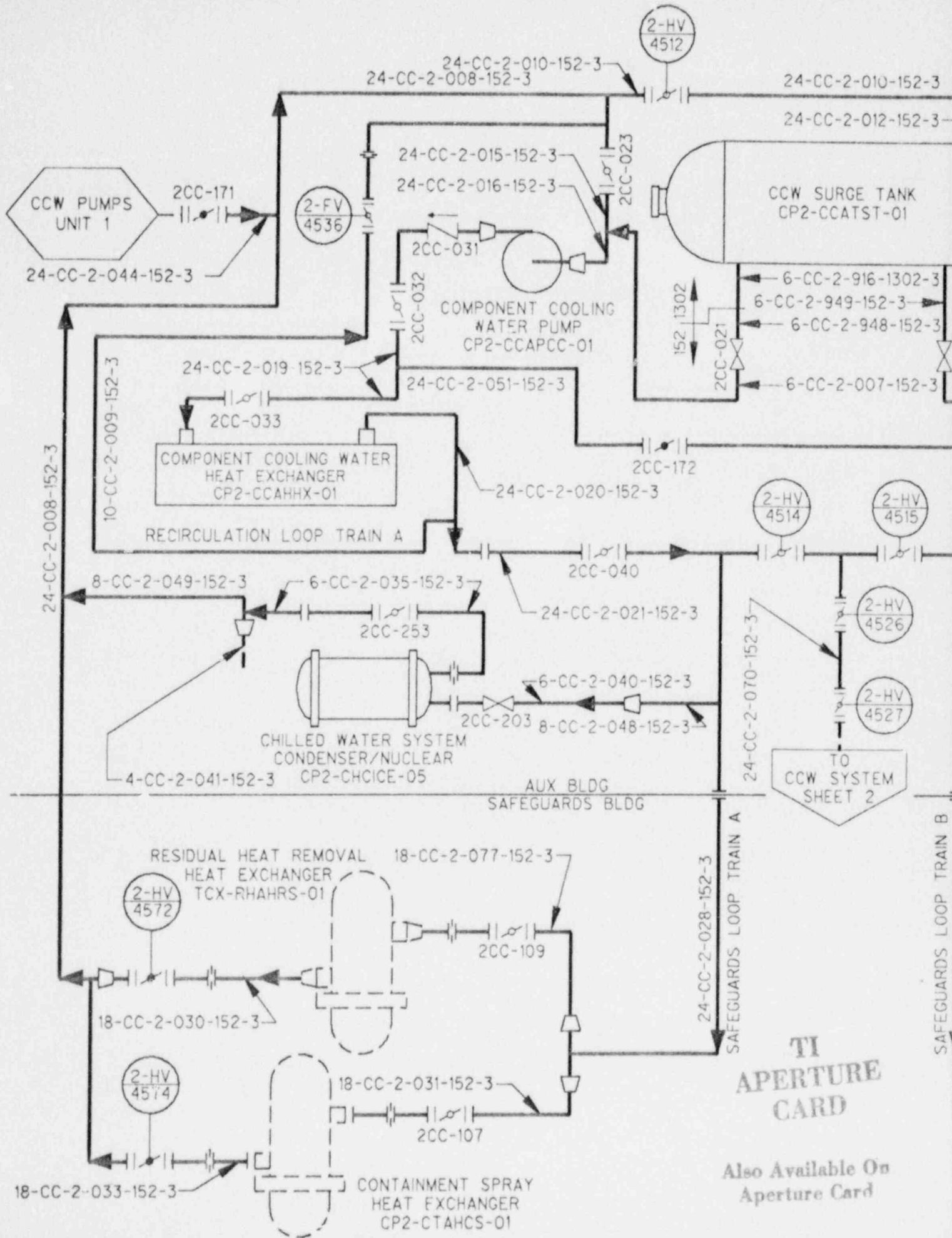
MPS

MPS

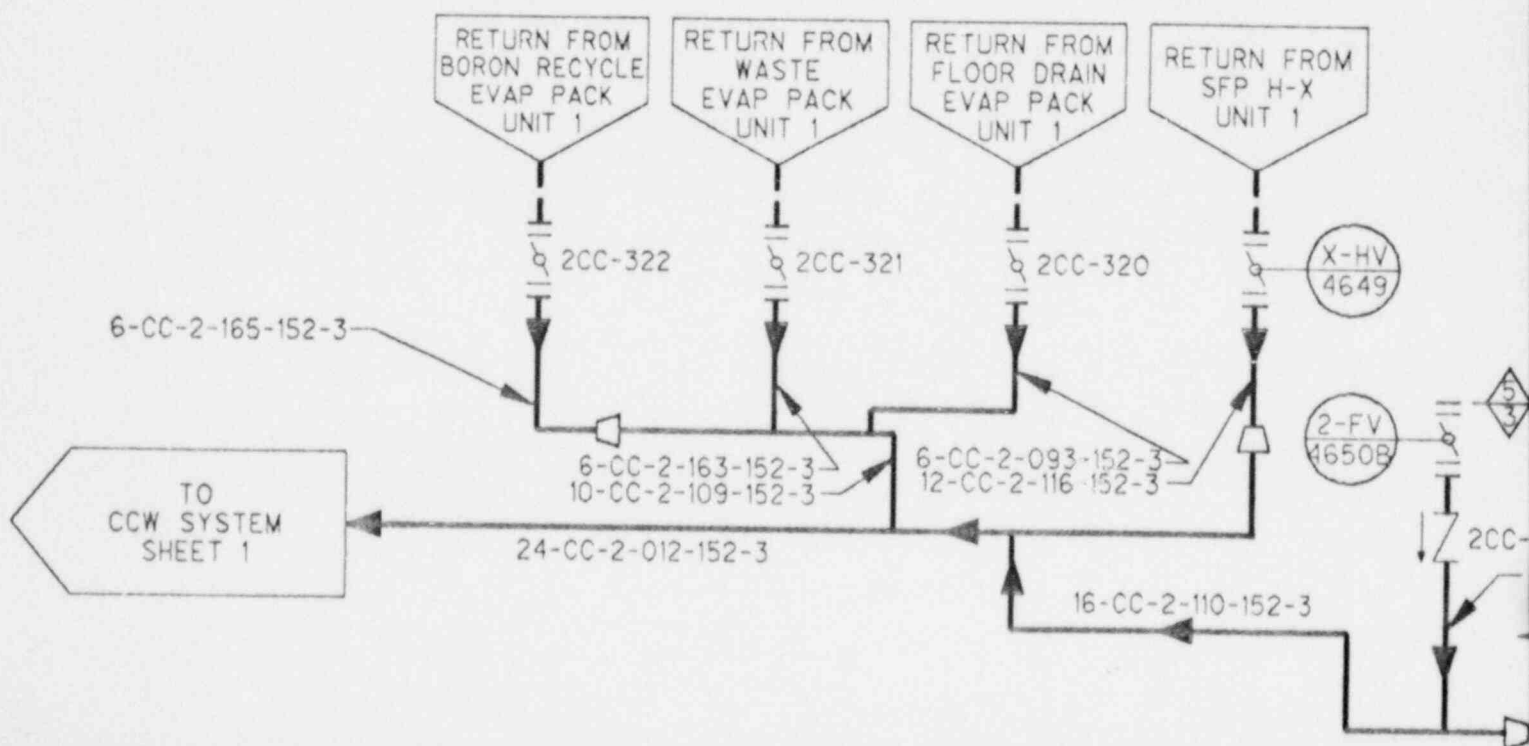
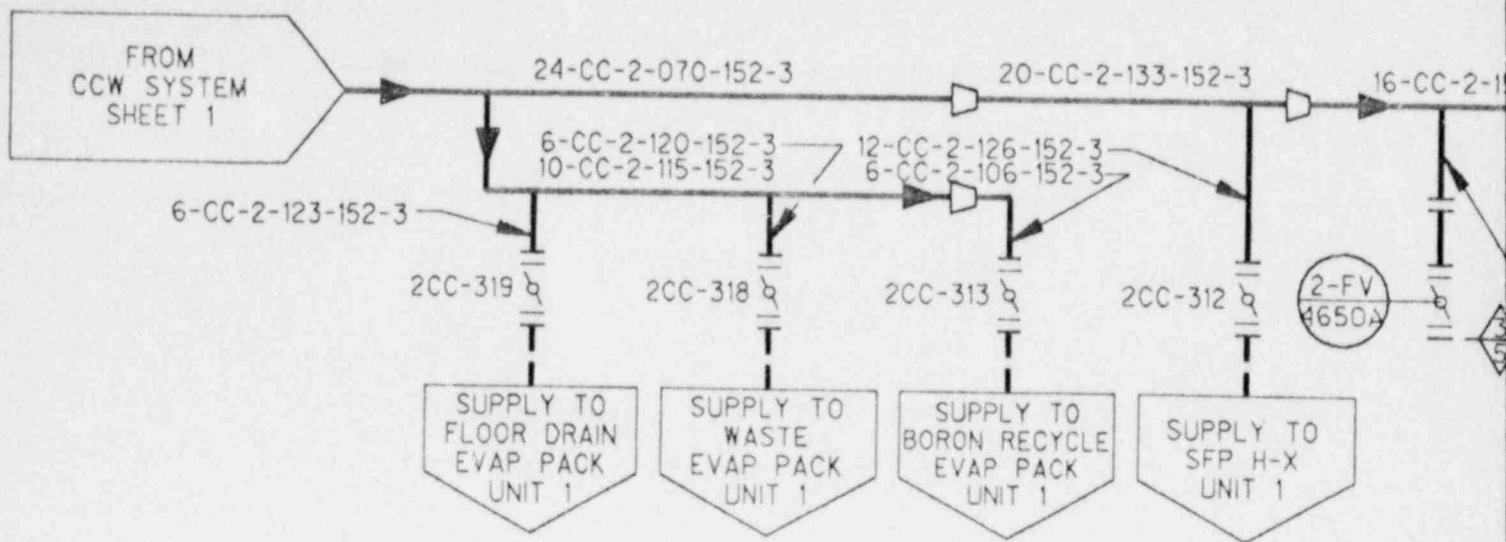
MPS

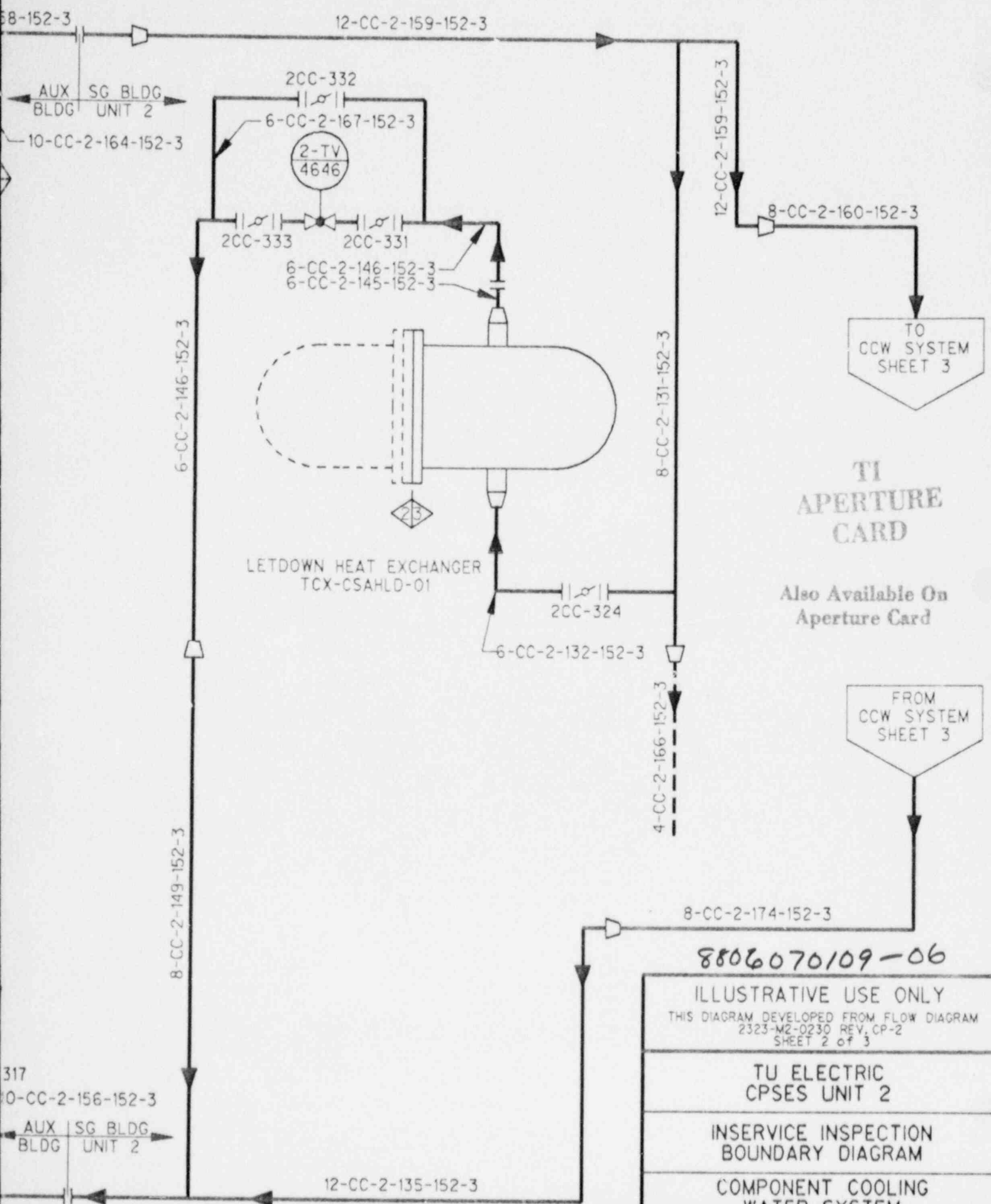
CVCS COMPONENTS CONNECTED TO EXEMPT PIPING ONLY
1. EXCESS LETDOWN HEAT EXCHANGER TCX-CSAHEL-01
2. LETDOWN HEAT EXCHANGER TCX-CSAHLD-01
3. LETDOWN REHEAT HEAT EXCHANGER TCX-TRAHLR-01
4. REGENATIVE HEAT EXCHANGER TCX-CSAHRG-01
5. POSITIVE DISPLACEMENT CHARGING PUMP TCX-CSAPPD-01

ILLUSTRATIVE USE ONLY
THIS DIAGRAM DEVELOPED FROM FLOW DIAGRAM
2323-M2-0253 CP-1 SHEET 1 of 4
2323-M2-0254 CP-1 SHEET 2 of 4
2323-M2-0255 CP-3 SHEET 3 of 4
2323-M2-0256 CP-2 SHEET 4 of 4
TU ELECTRIC CPSES UNIT 2
INSERVICE INSPECTION BOUNDARY DIAGRAM
CHEMICAL & VOLUME CONTROL SYSTEM



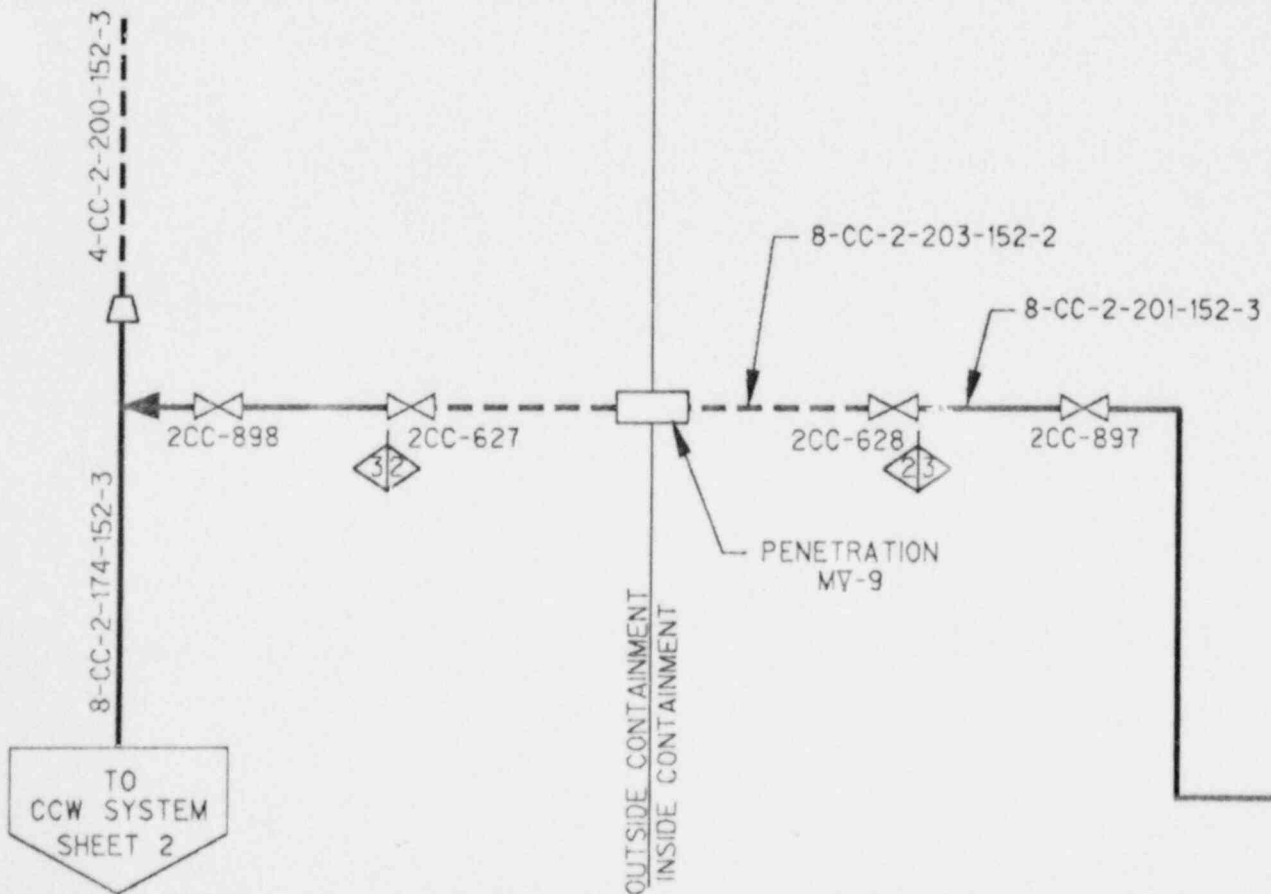
TI APERTURE CARD
 Also Available On Aperture Card

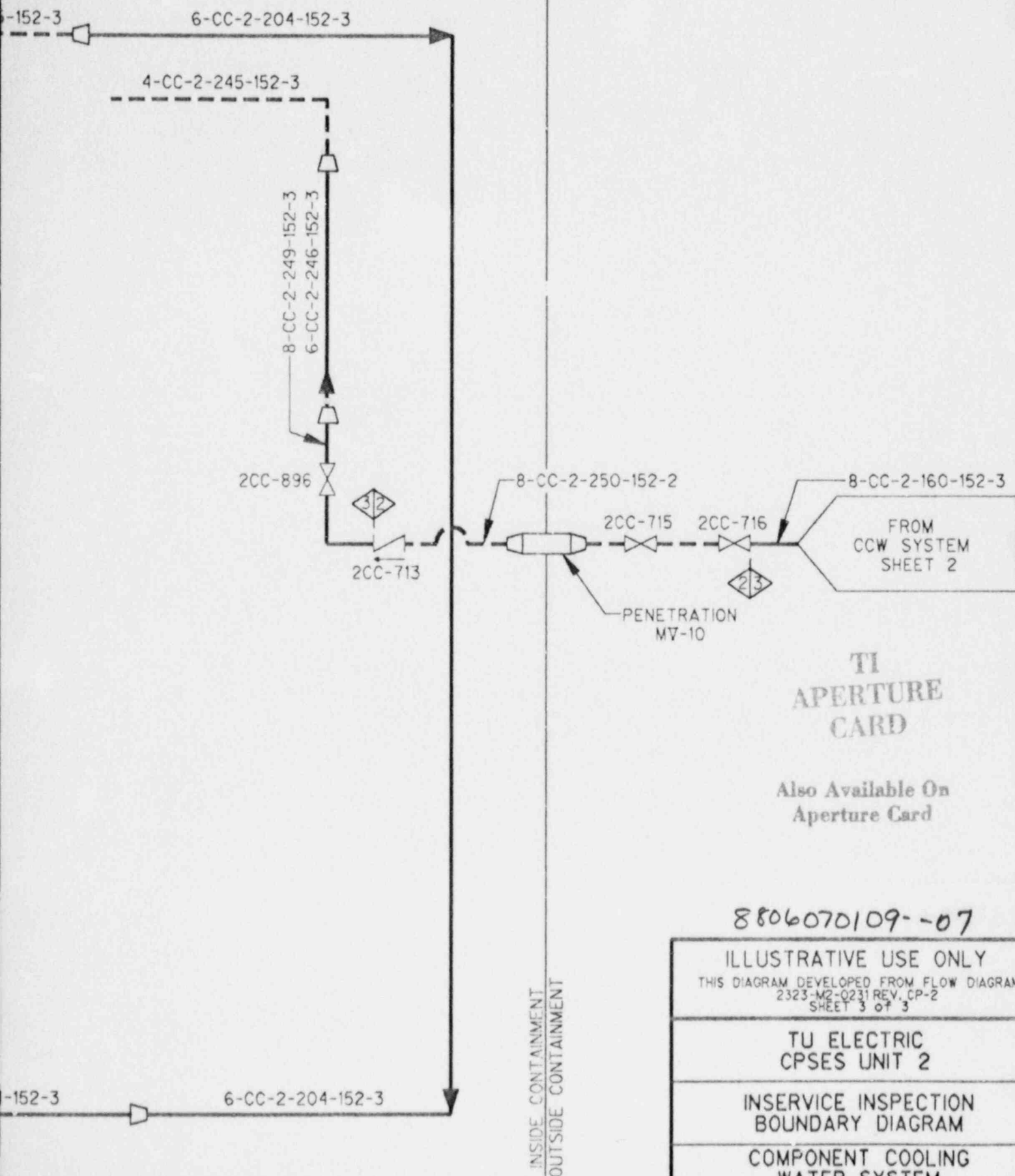




8806070109-06

ILLUSTRATIVE USE ONLY THIS DIAGRAM DEVELOPED FROM FLOW DIAGRAM 2323-M2-0230 REV. CP-2 SHEET 2 of 3
TU ELECTRIC CPSES UNIT 2
INSERVICE INSPECTION BOUNDARY DIAGRAM
COMPONENT COOLING WATER SYSTEM SHEET 2 of 3





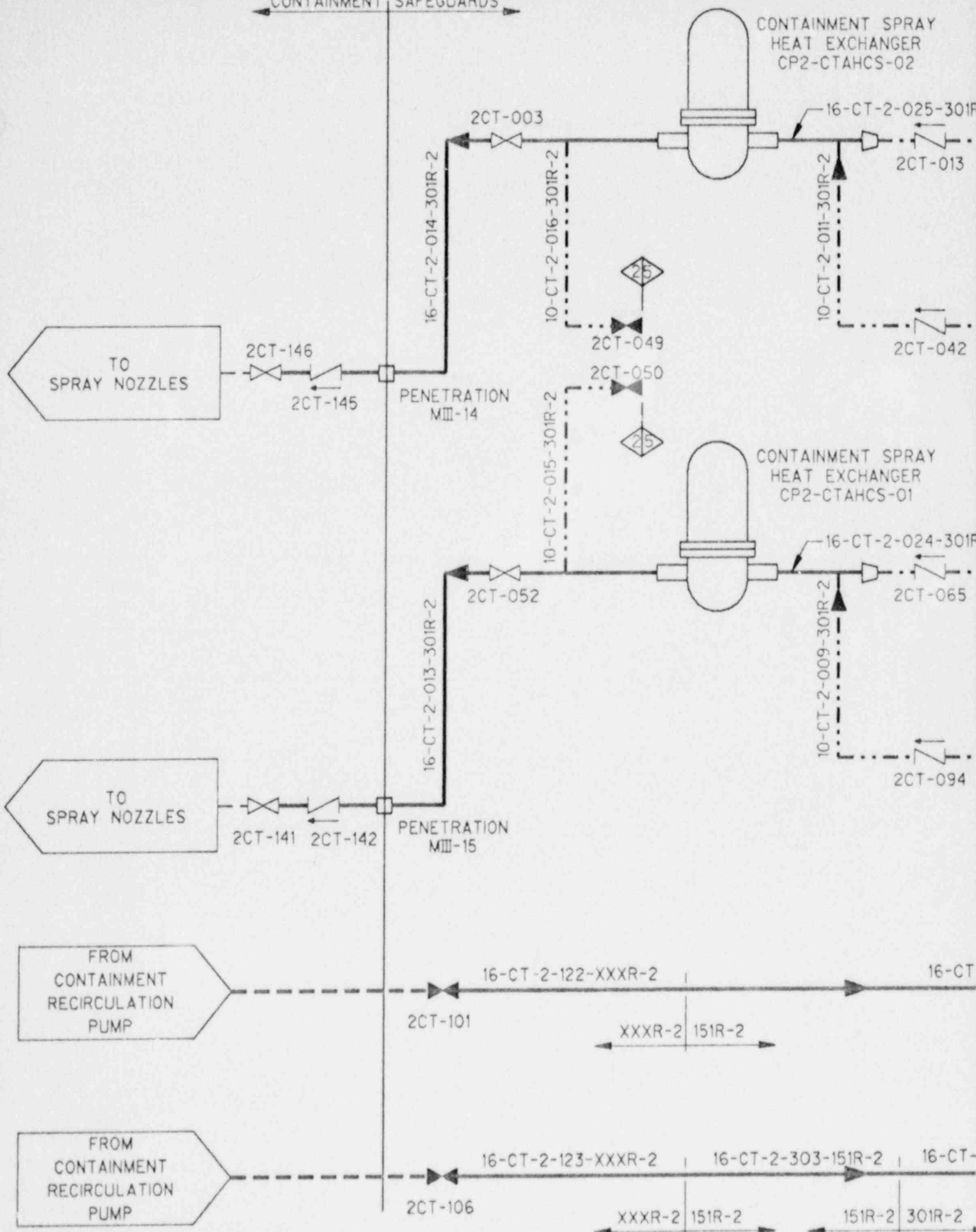
**TI
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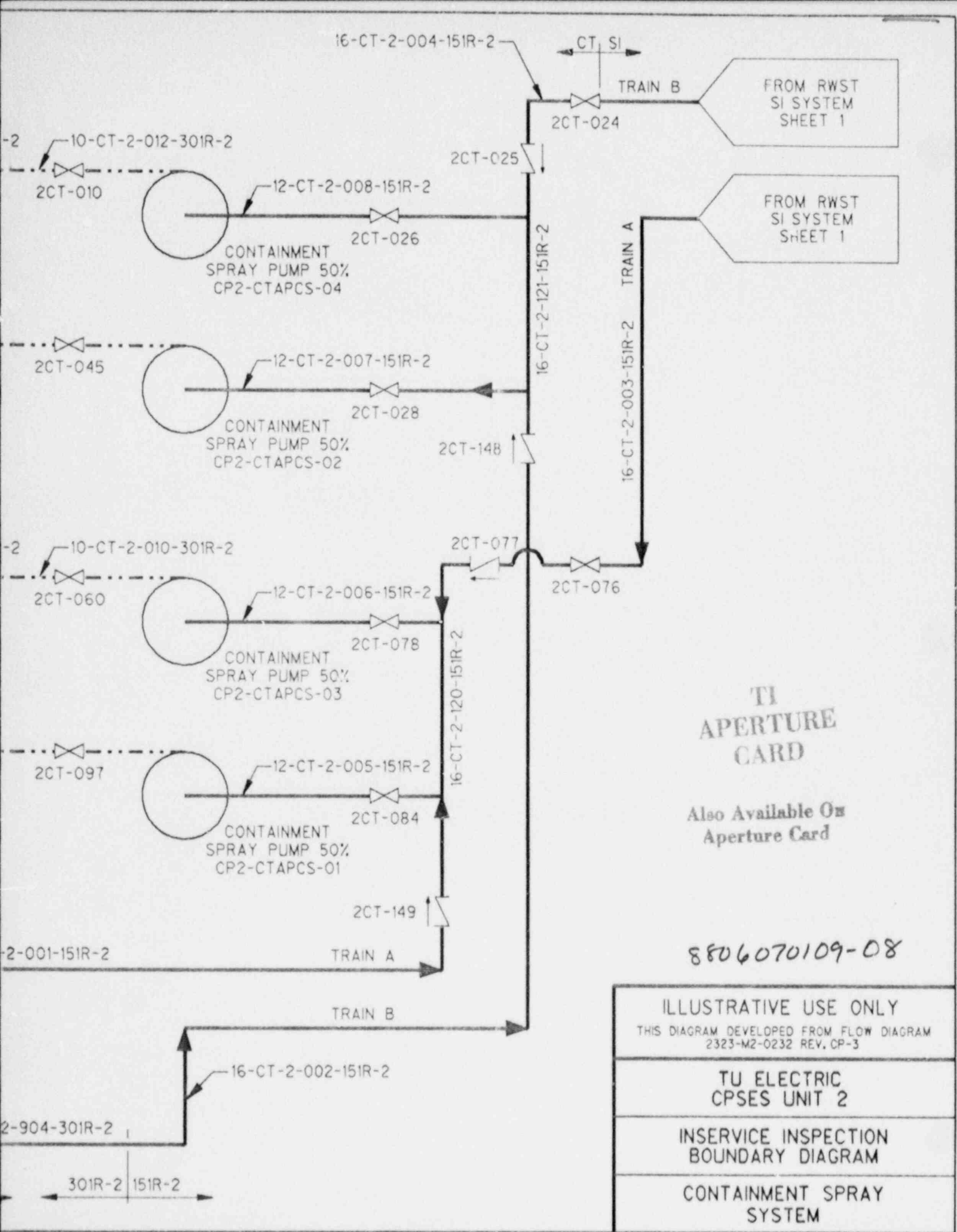
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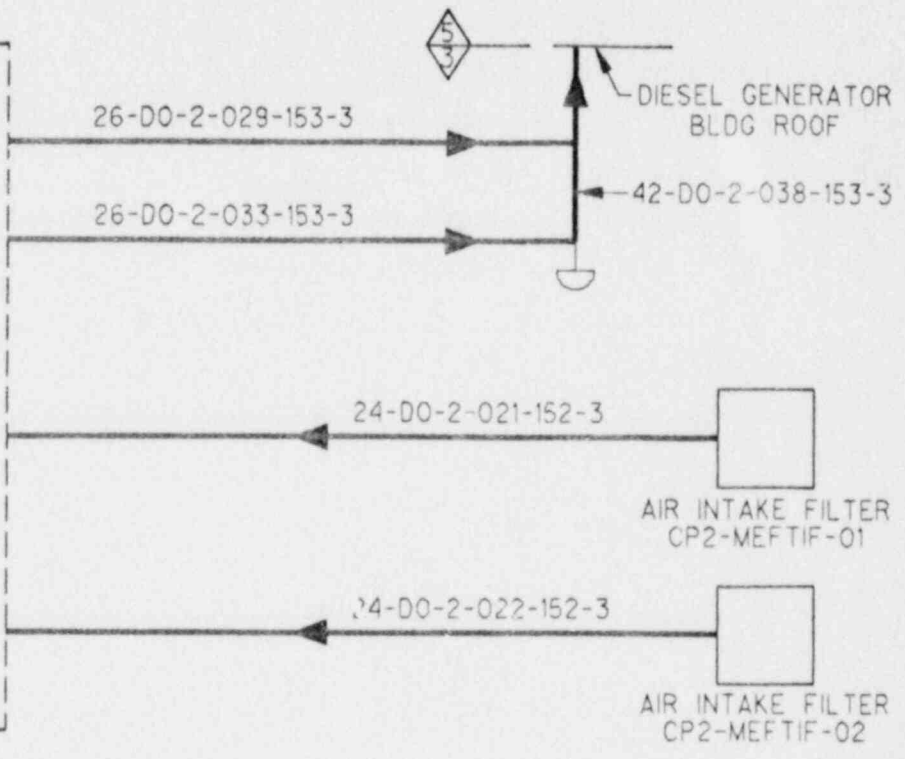
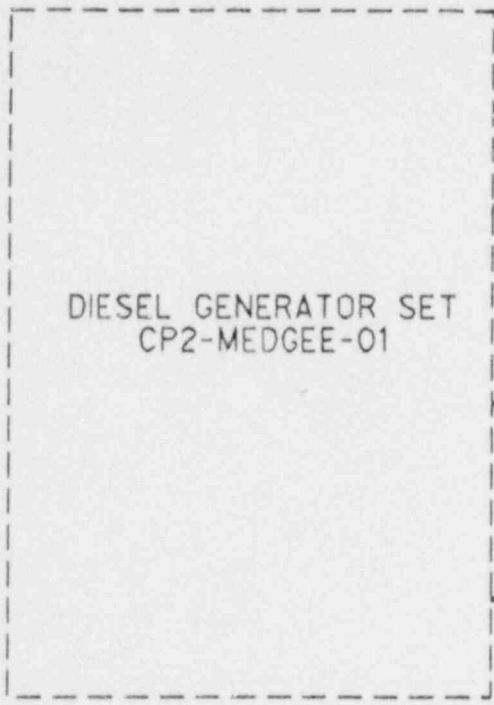
8806070109--07

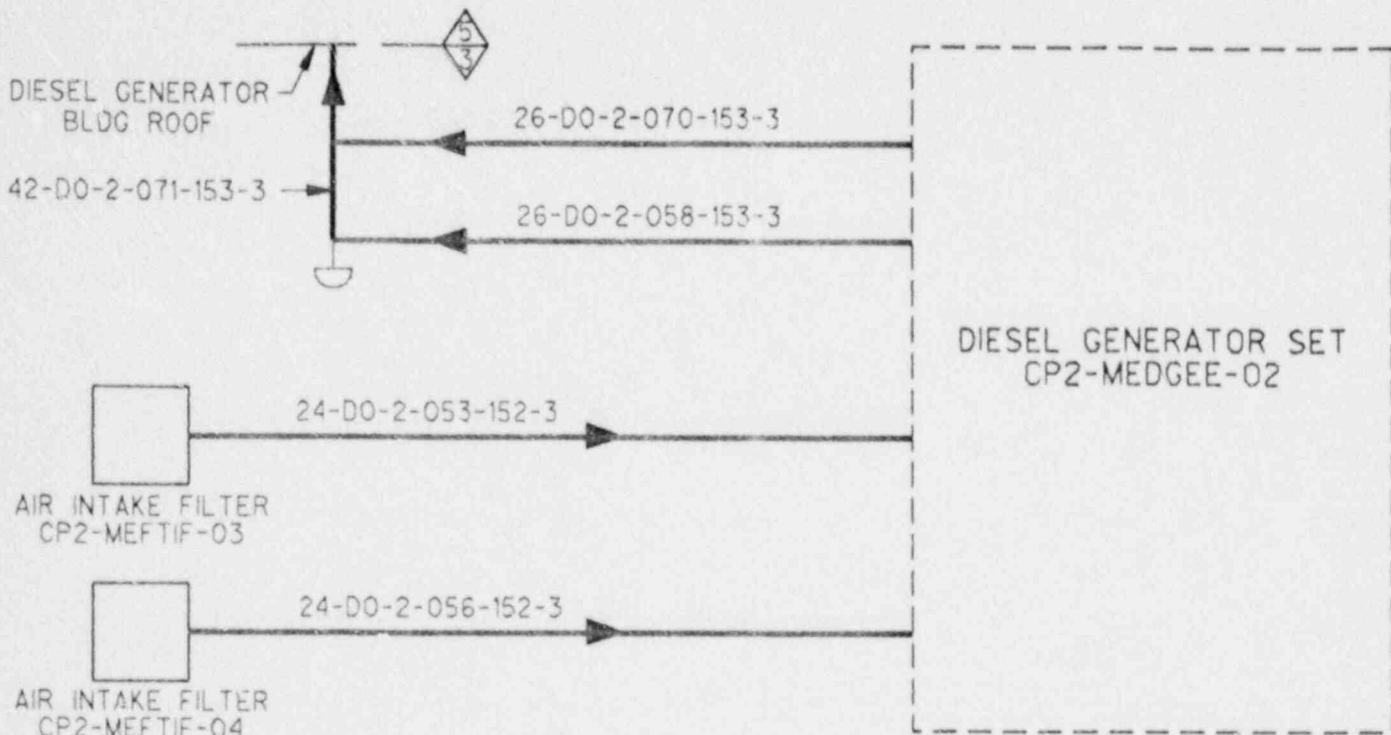
<p>ILLUSTRATIVE USE ONLY THIS DIAGRAM DEVELOPED FROM FLOW DIAGRAM 2323-M2-0231 REV. CP-2 SHEET 3 of 3</p>
<p>TU ELECTRIC CPSES UNIT 2</p>
<p>INSERVICE INSPECTION BOUNDARY DIAGRAM</p>
<p>COMPONENT COOLING WATER SYSTEM SHEET 3 of 3</p>

CONTAINMENT SAFEGUARDS







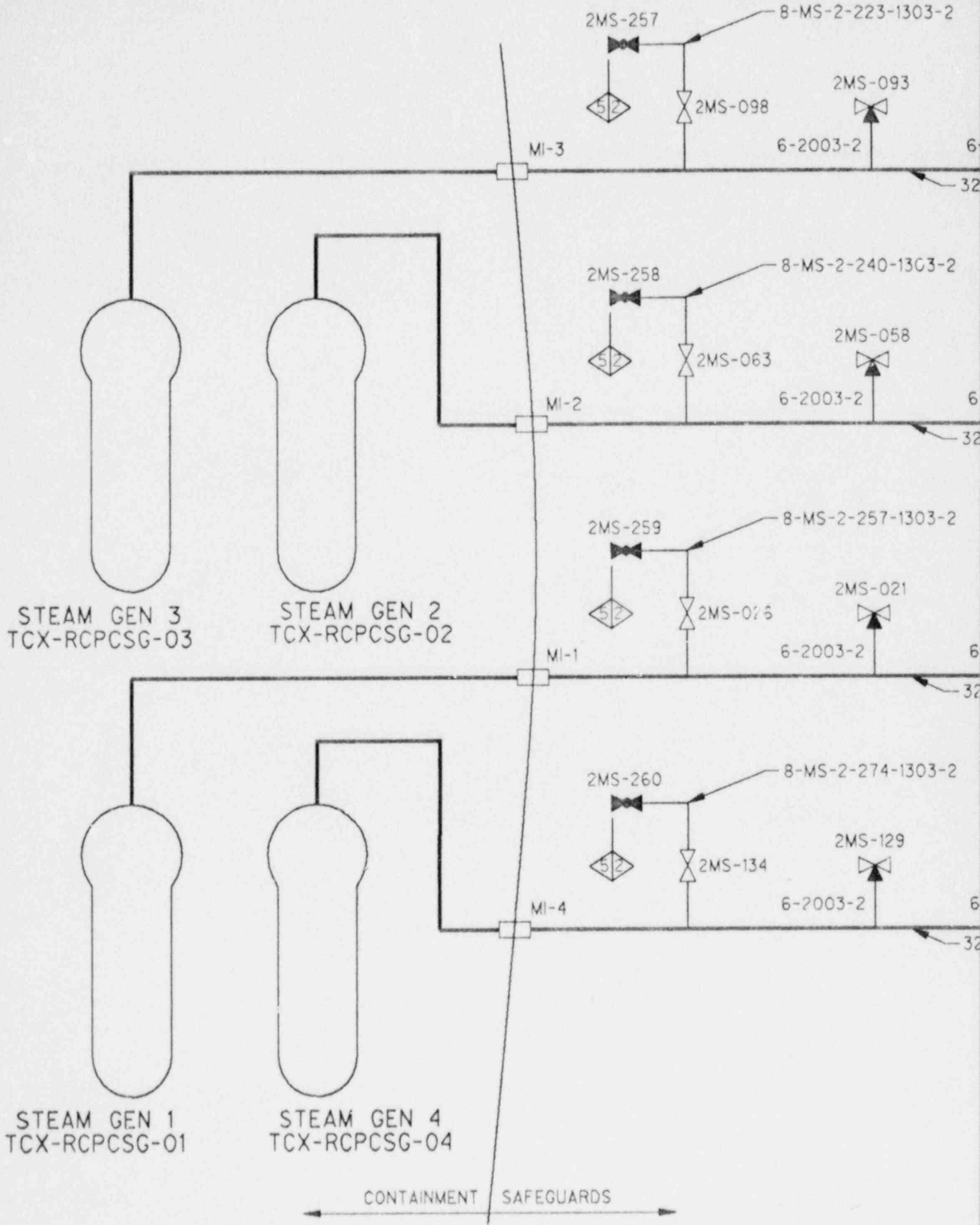


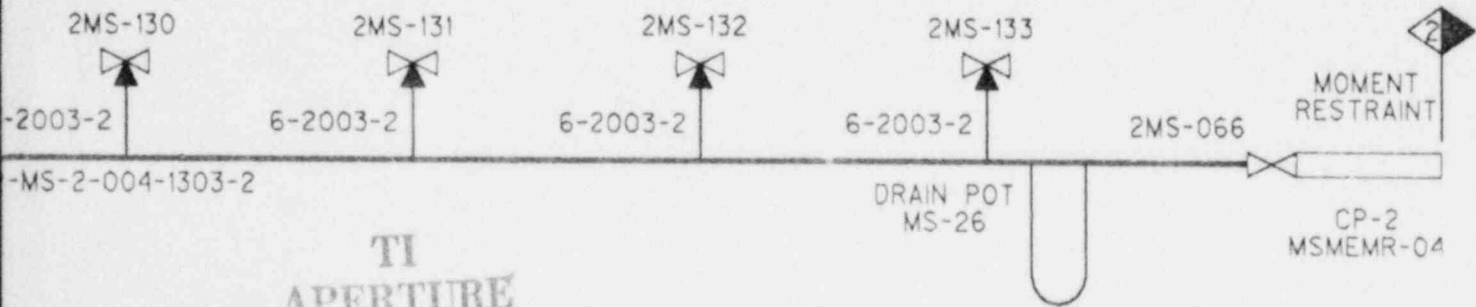
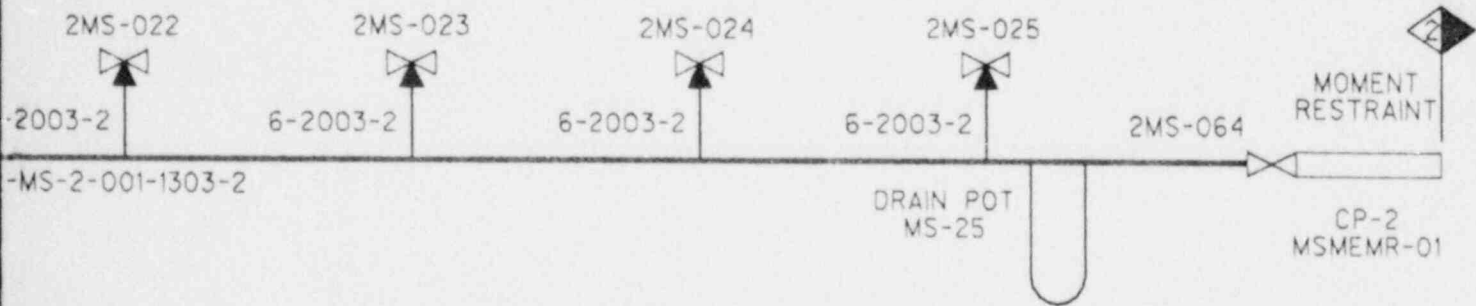
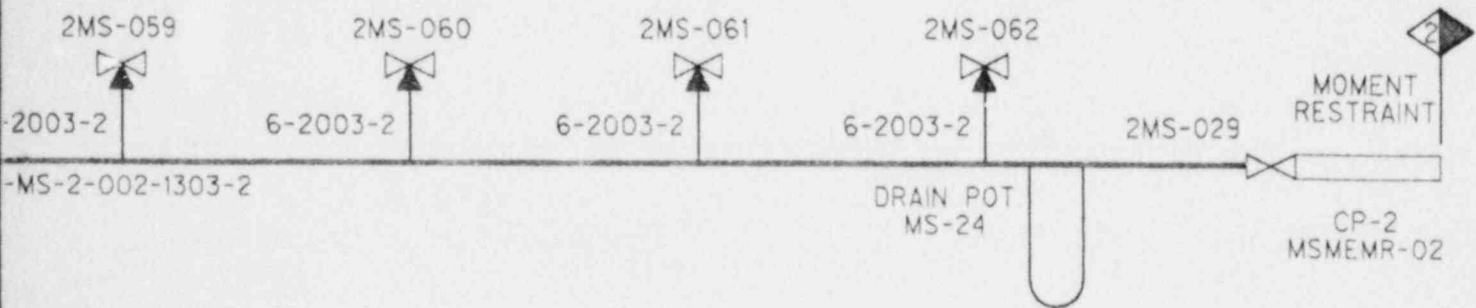
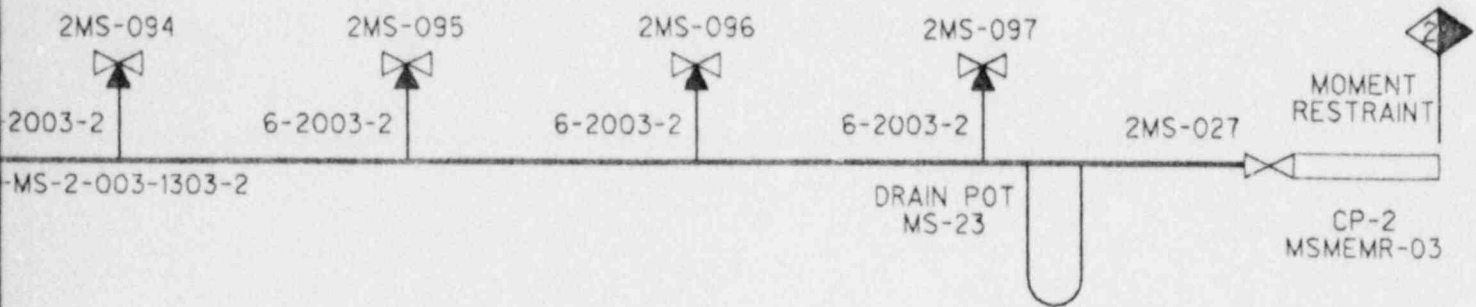
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<p>DO COMPONENTS CONNECTED TO EXEMPT PIPING ONLY</p>	<p>ILLUSTRATIVE USE ONLY THIS DIAGRAM DEVELOPED FROM FLOW DIAGRAMS 2323-M2-0215 REV. CP-3</p>
<p>1. FUEL OIL DAY TANKS CP2-DOATDT-01 CP2-DOATDT-02</p> <p>2. FUEL OIL TRANSFER PUMPS CP2-DOAPFT-01 CP2-DOAPFT-02 CP2-DOAPFT-03 CP2-DOAPFT-04</p> <p>3. STARTING AIR RECEIVERS CP2-MEATAR-01 CP2-MEATAR-02 CP2-MEATAR-03 CP2-MEATAR-04</p>	<p>TU ELECTRIC CPSES UNIT 2</p> <p>INSERVICE INSPECTION BOUNDARY DIAGRAM</p> <p>DIESEL GENERATOR AUXILIARY SYSTEM</p>





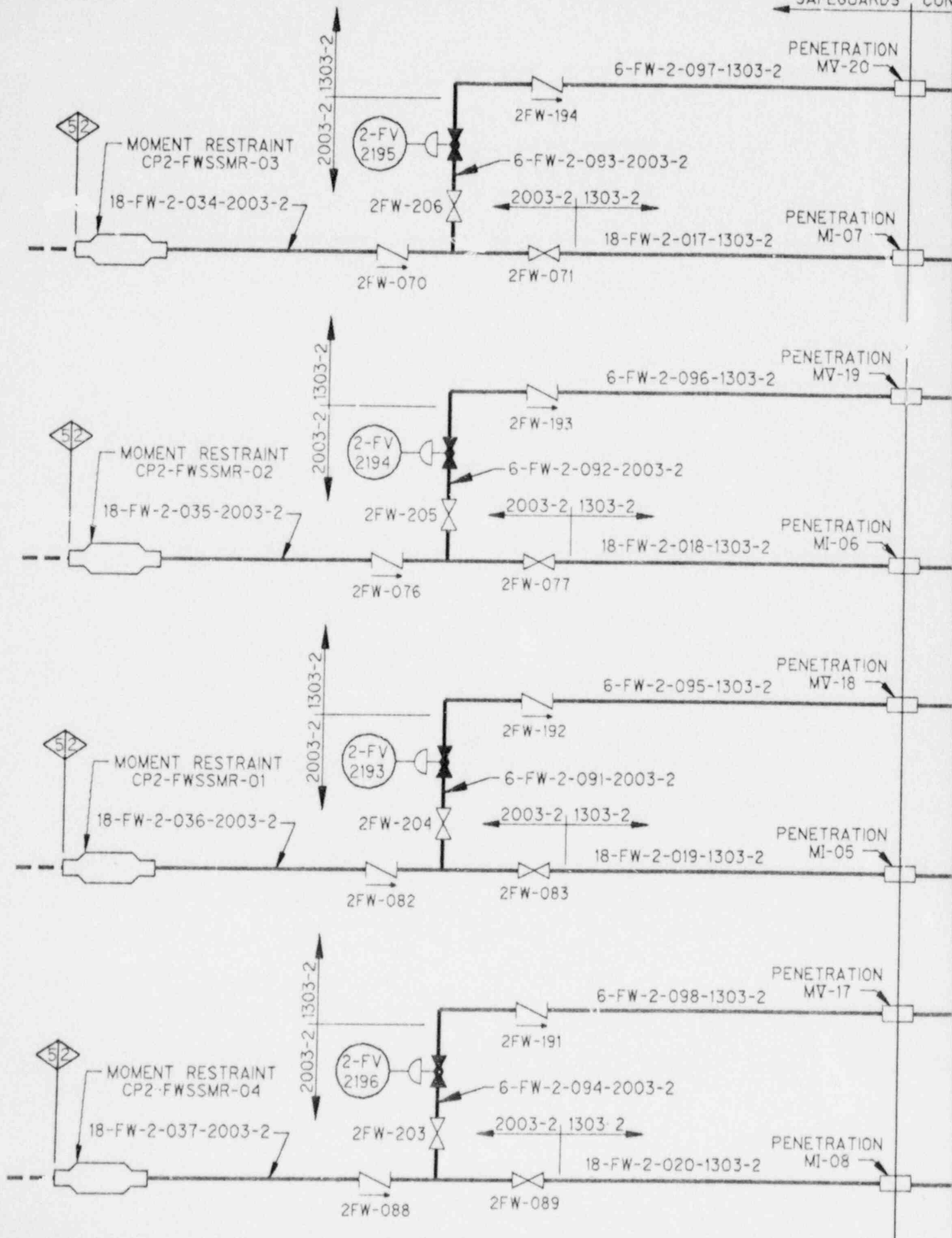
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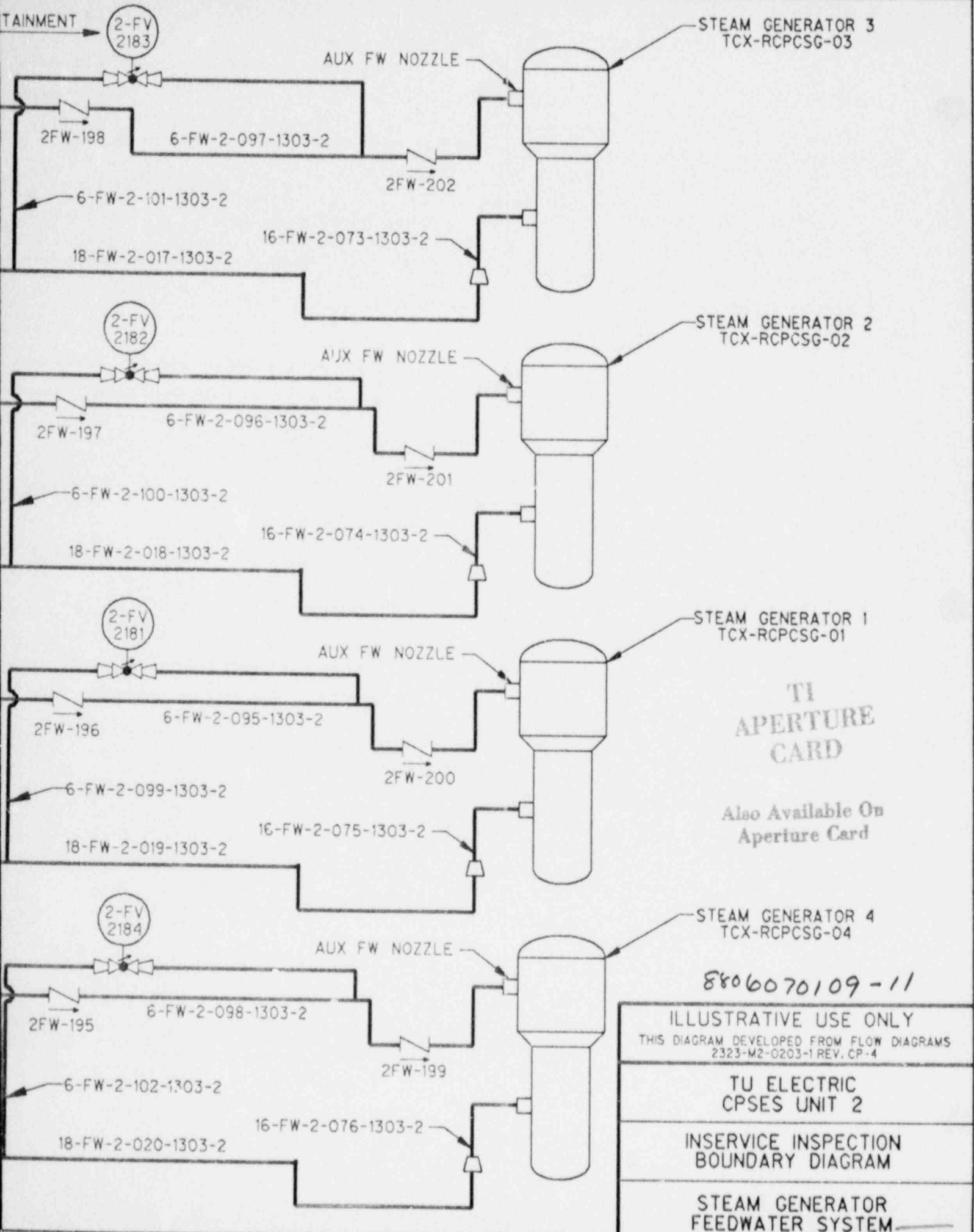
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8806070109-10

ILLUSTRATIVE USE ONLY
THIS DIAGRAM DEVELOPED FROM FLOW DIAGRAMS
2323-M2-0202 REV. CP-3
TNE-M2-0202-02 REV. CP-2

TU ELECTRIC CPSES UNIT 2
INSERVICE INSPECTION BOUNDARY DIAGRAM
MAIN STEAM SYSTEM



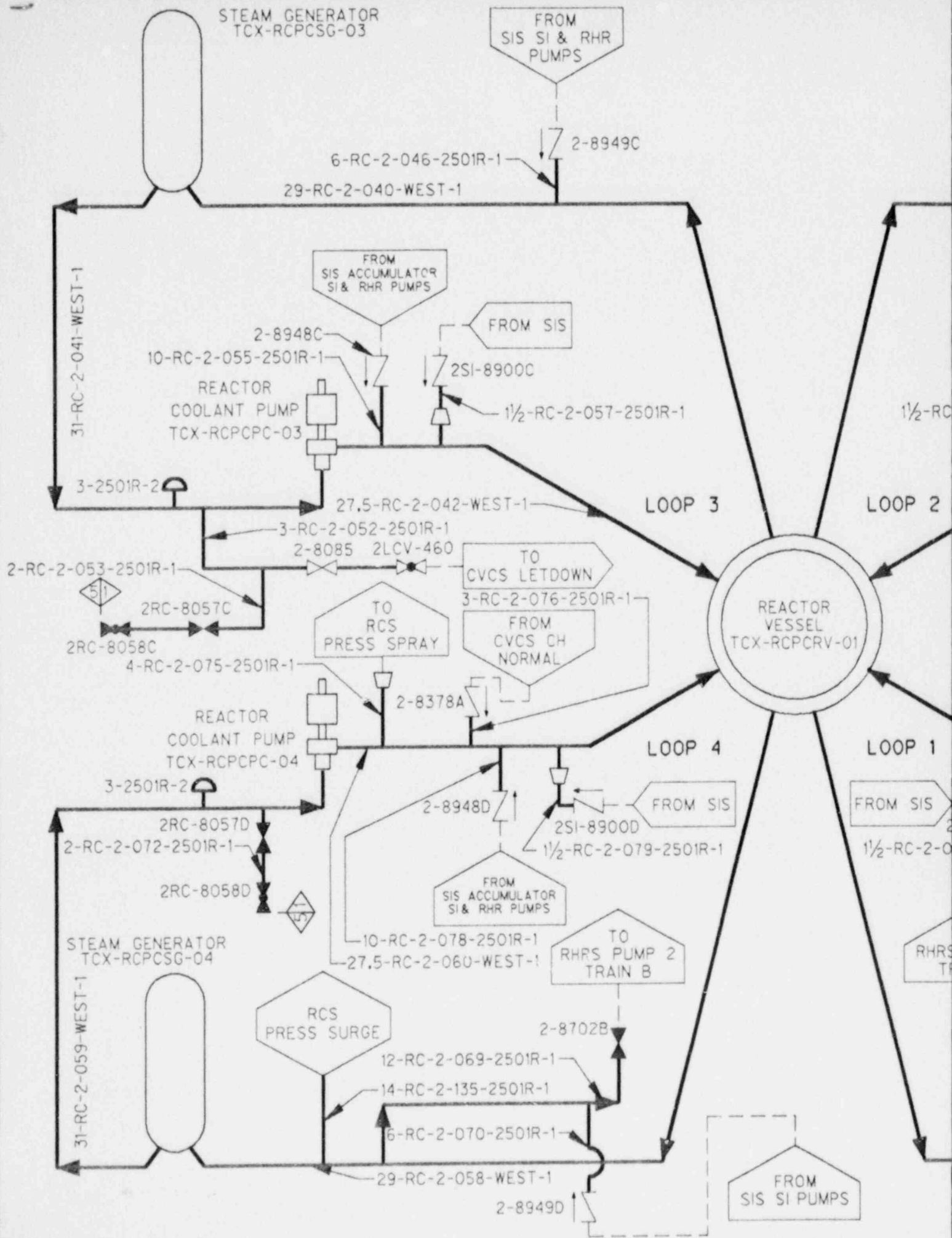


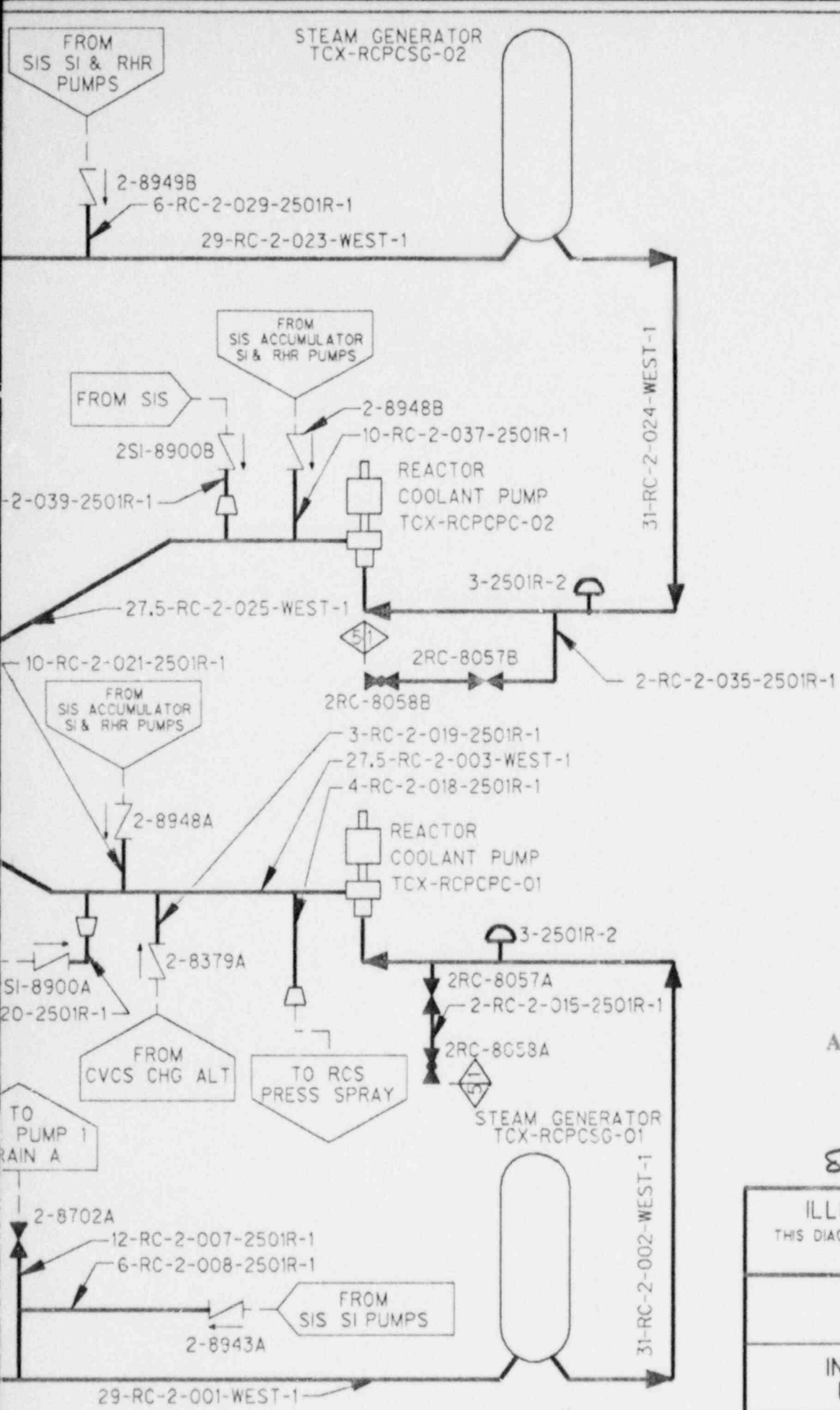
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TU ELECTRIC
 CPSES UNIT 2

INSERVICE INSPECTION
 BOUNDARY DIAGRAM

STEAM GENERATOR
 FEEDWATER SYSTEM





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CARD

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Aperture Card

8806070109-12

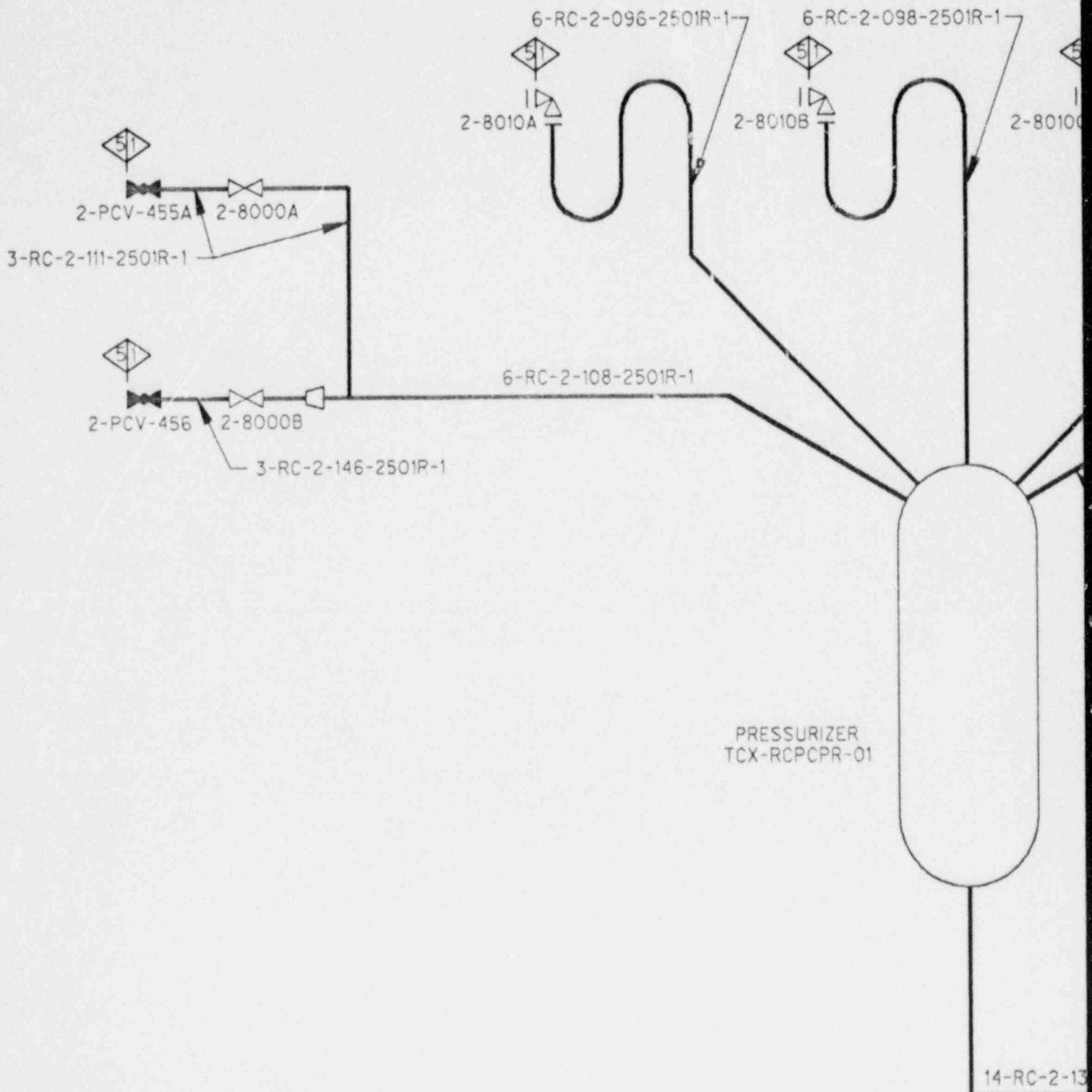
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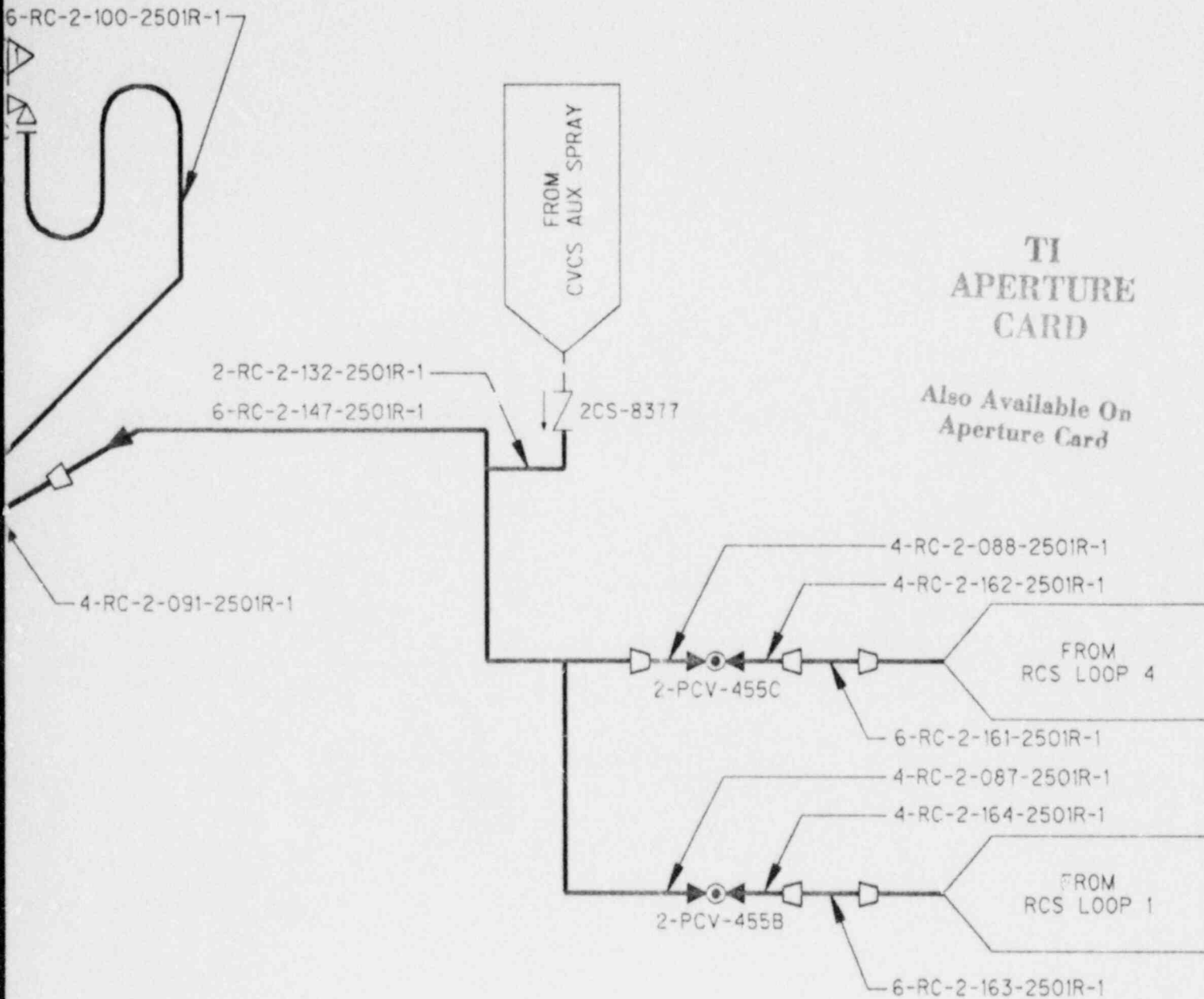
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2323-M2-0250 REV. CP-1
SHEET 1 of 2

TU ELECTRIC
CPSES UNIT 2

INSERVICE INSPECTION
BOUNDARY DIAGRAM

REACTOR COOLANT SYSTEM
SHEET 1 of 2





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CARD

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Aperture Card

8806070109-13

ILLUSTRATIVE USE ONLY

THIS DIAGRAM DEVELOPED FROM FLOW DIAGRAM
2323-M2-0251 REV. CP-2
SHEET 2 of 2

TU ELECTRIC
CPSES UNIT 2

INSERVICE INSPECTION
BOUNDARY DIAGRAM

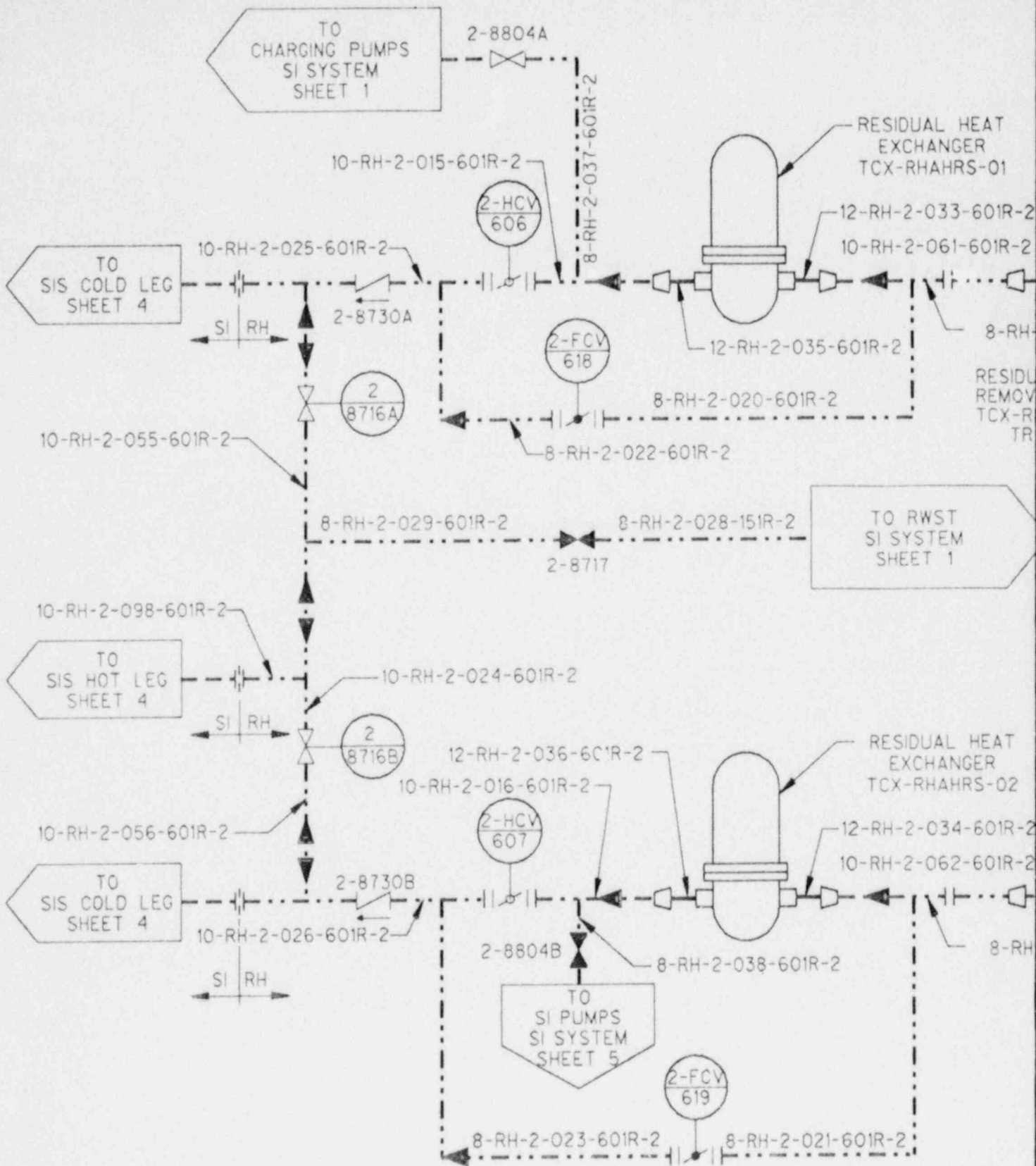
REACTOR COOLANT SYSTEM

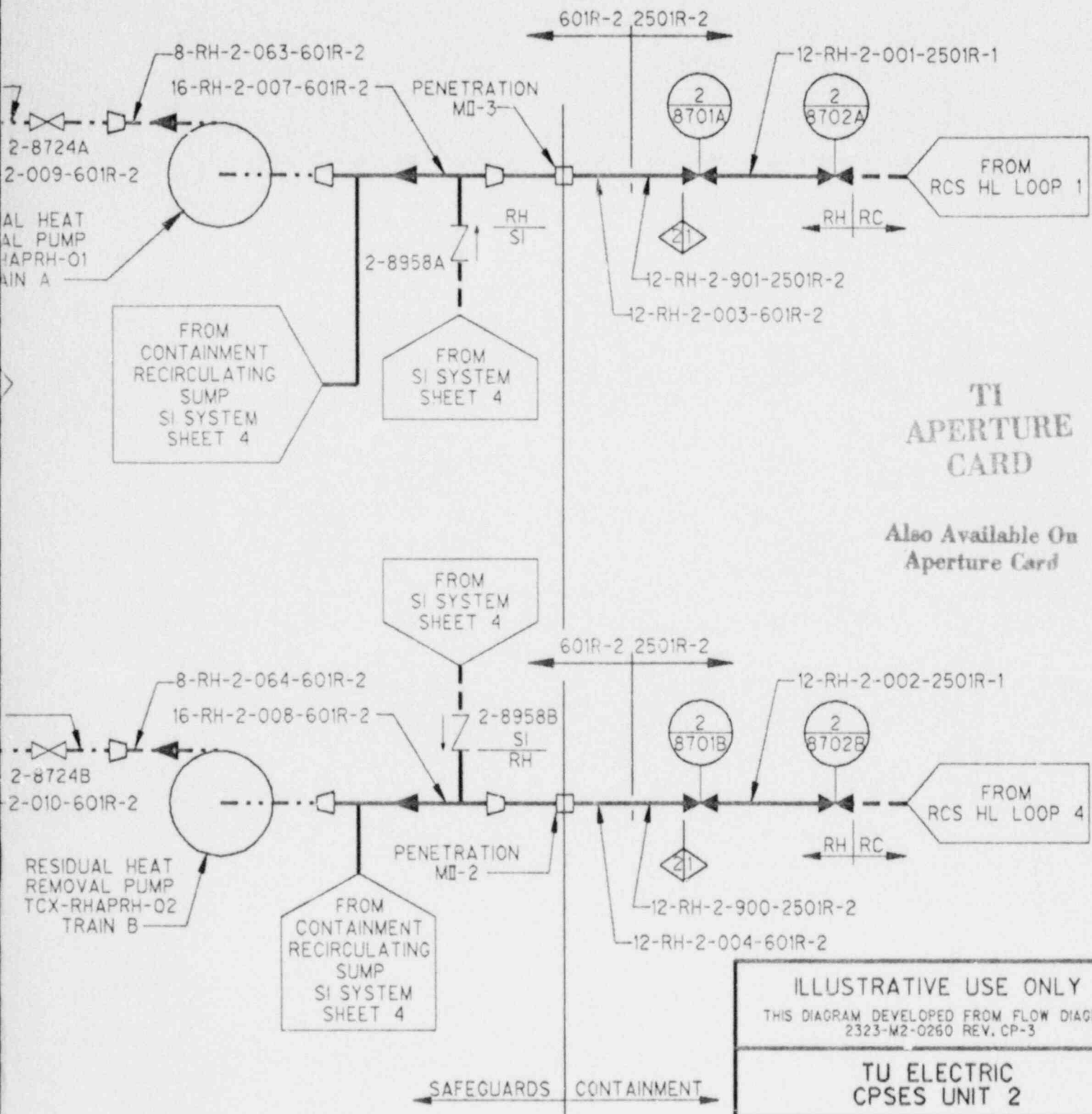
SHEET 2 of 2

5-2501R-1

PRESSURIZER SURGE LINE

RCS LOOP 4



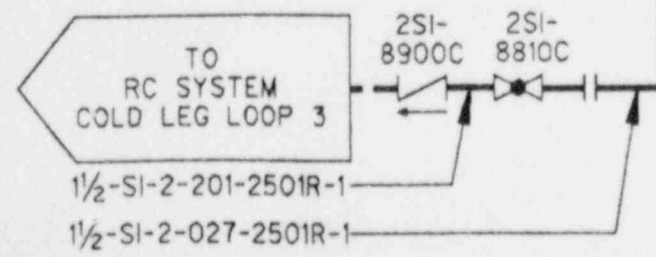
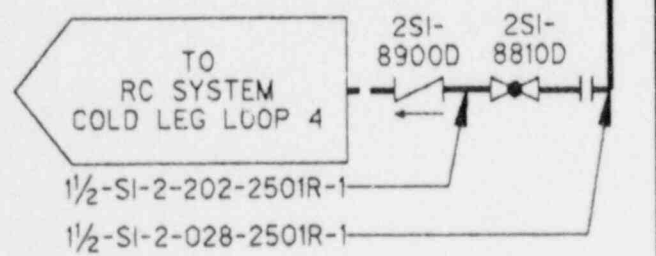
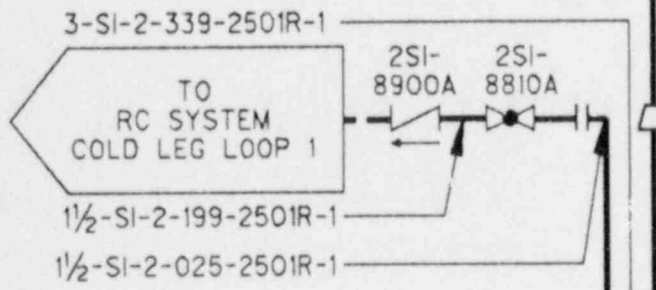
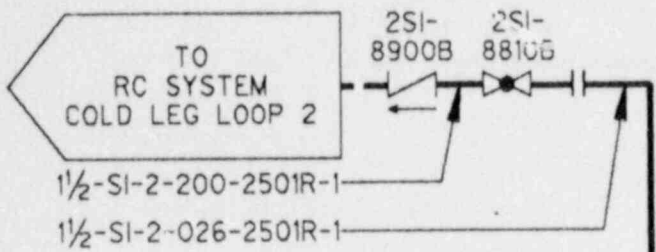


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 2323-M2-0260 REV. CP-3

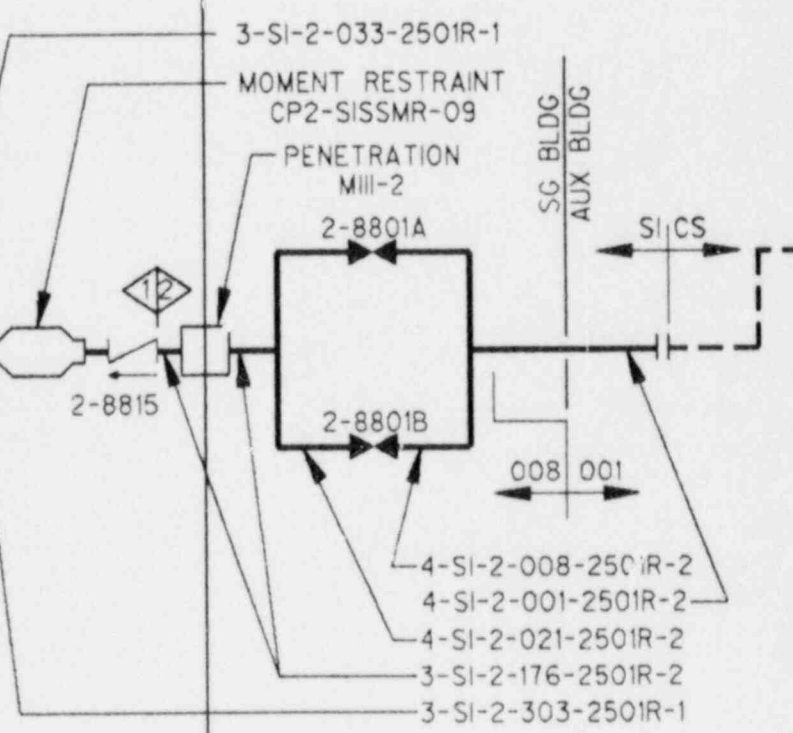
TU ELECTRIC
 CPSES UNIT 2

INSERVICE INSPECTION
 BOUNDARY DIAGRAM

RESIDUAL HEAT
 REMOVAL SYSTEM

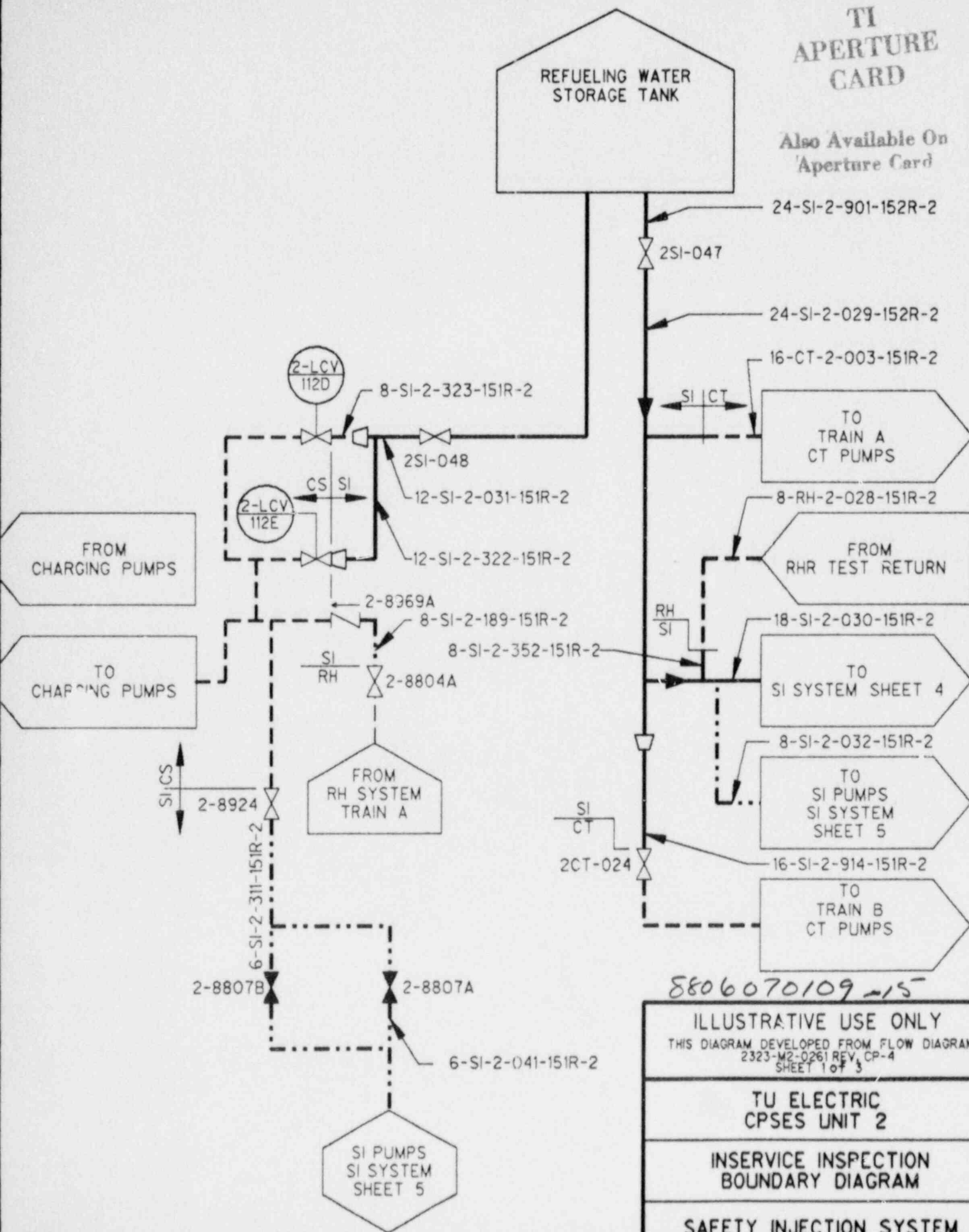


CONTAINMENT SAFEGUARDS



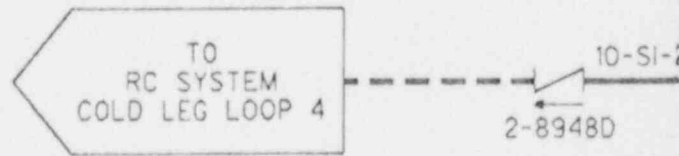
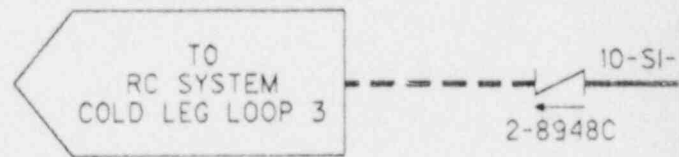
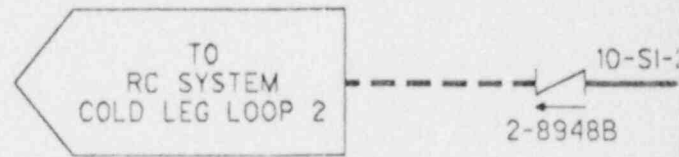
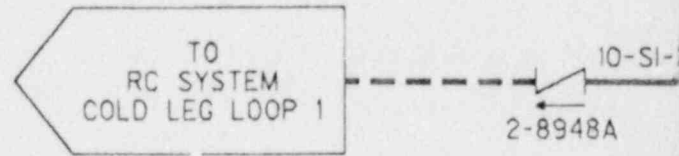
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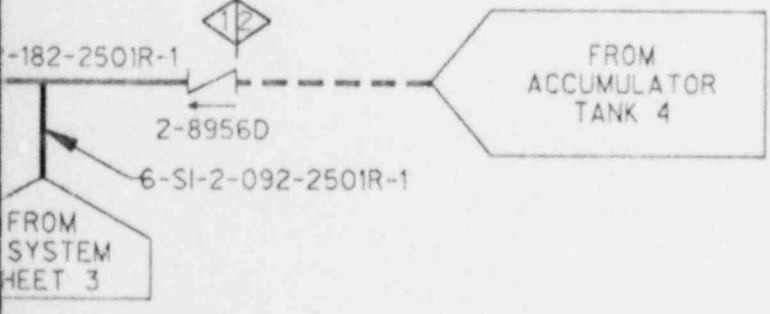
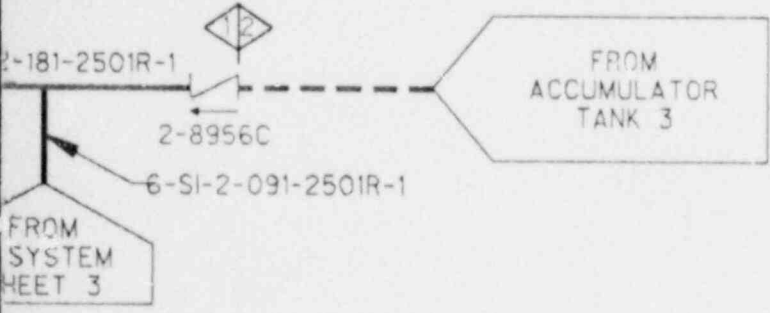
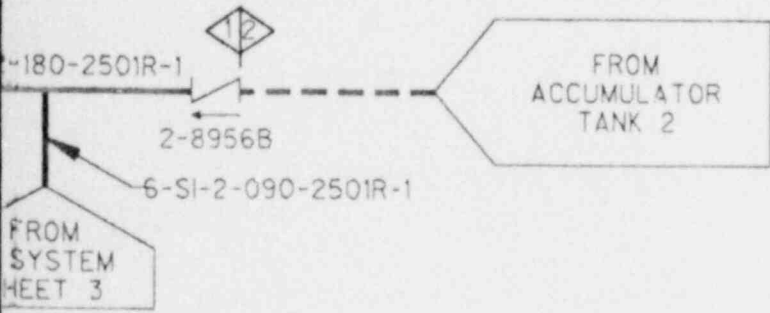
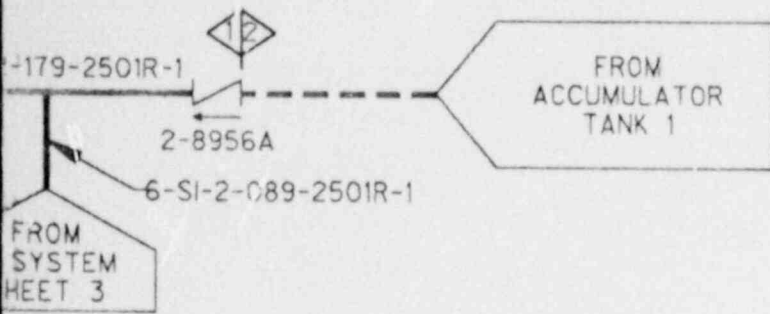
Also Available On Aperture Card



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ILLUSTRATIVE USE ONLY THIS DIAGRAM DEVELOPED FROM FLOW DIAGRAM 2323-M2-0261 REV. CP-4 SHEET 1 of 3
TU ELECTRIC CPSES UNIT 2
INSERVICE INSPECTION BOUNDARY DIAGRAM
SAFETY INJECTION SYSTEM SHEET 1 of 6



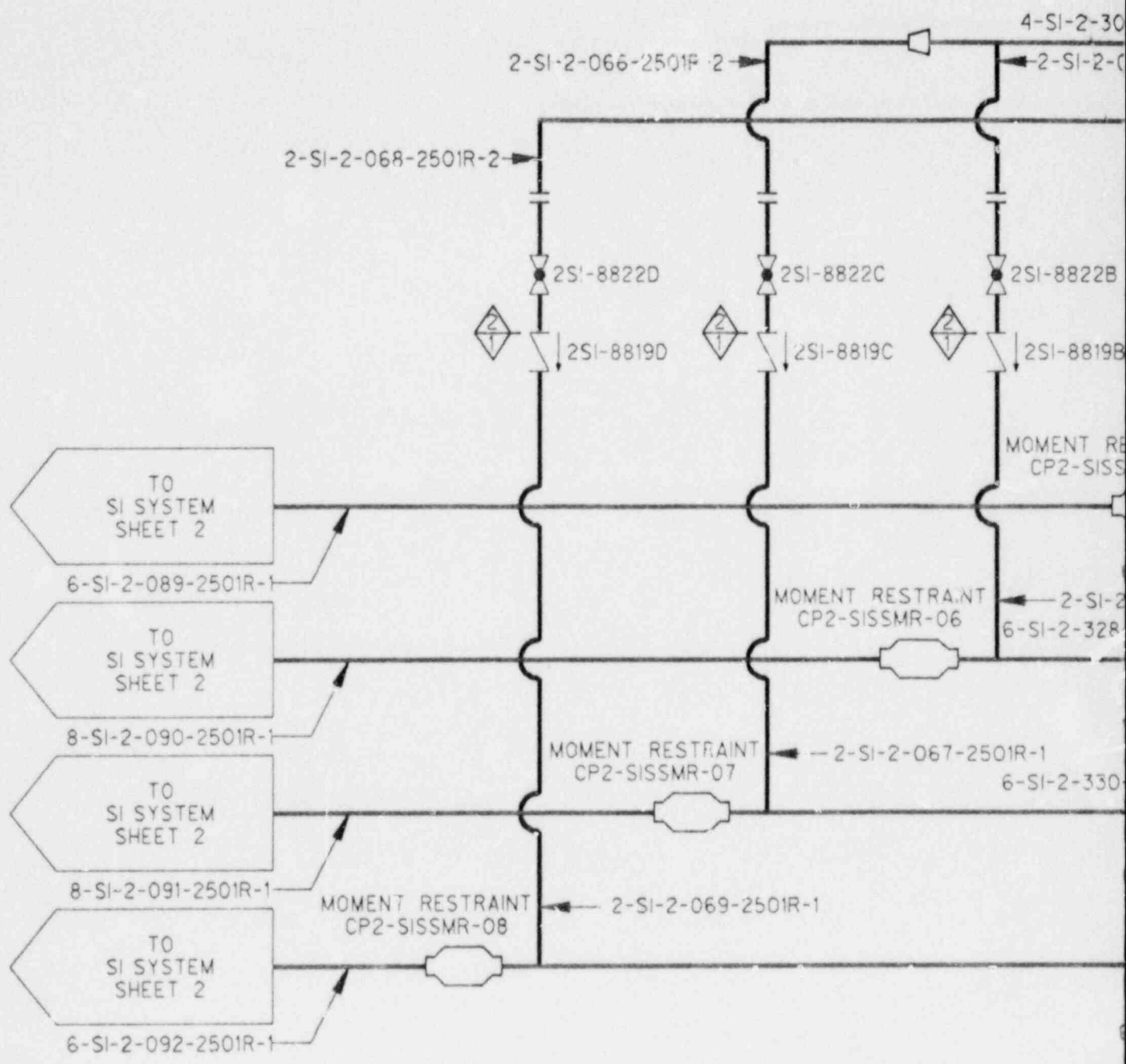


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Also Available On
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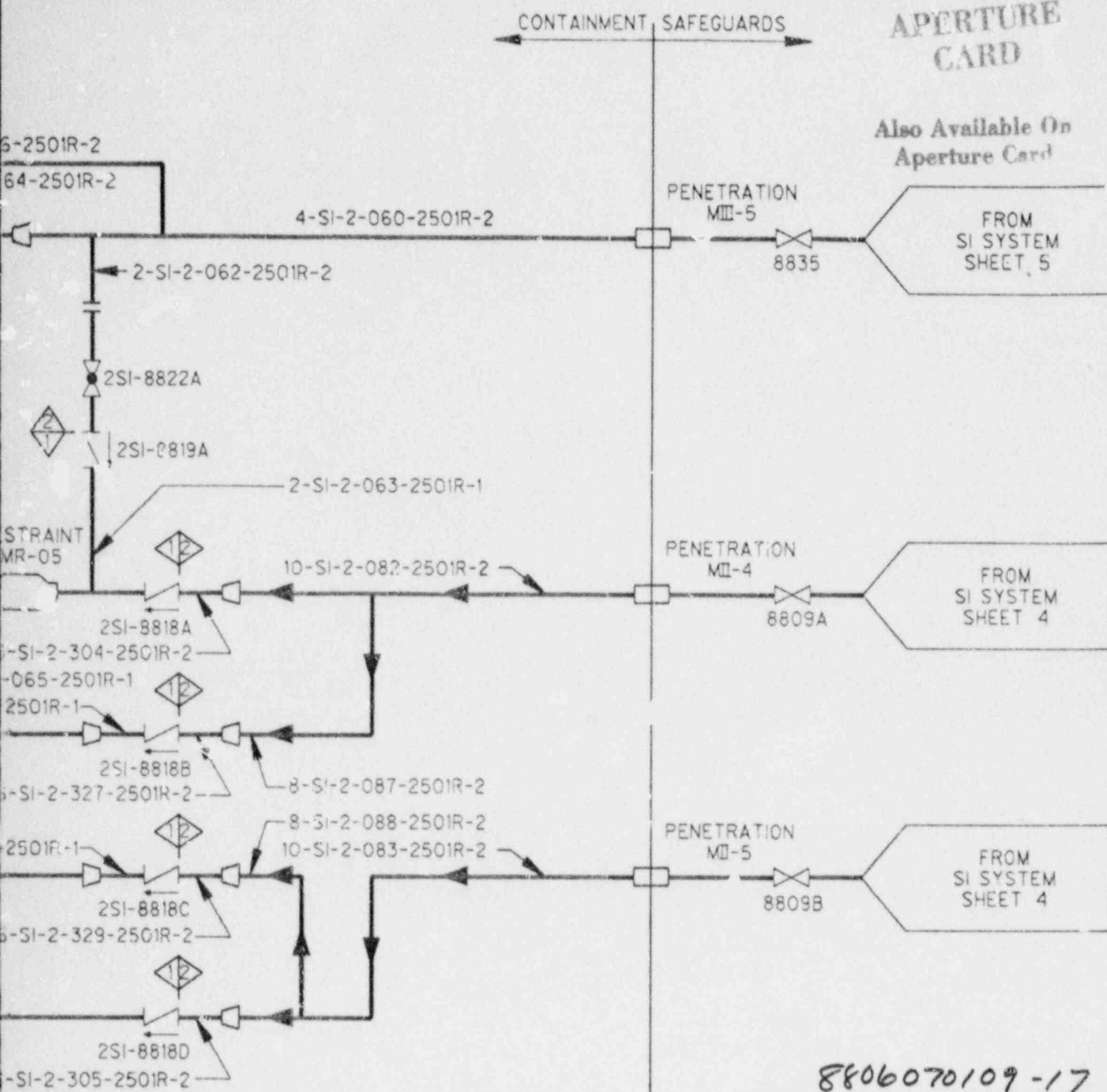
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<p>ILLUSTRATIVE USE ONLY THIS DIAGRAM DEVELOPED FROM FLOW DIAGRAM 2323-M2 0262 REV. CP-2 SHEET 2 OF 3</p>
<p>TU ELECTRIC CPSES UNIT 2</p>
<p>INSERVICE INSPECTION BOUNDARY DIAGRAM</p>
<p>SAFETY INJECTION SYSTEM SHEET 2 of 6</p>



TI APERTURE CARD

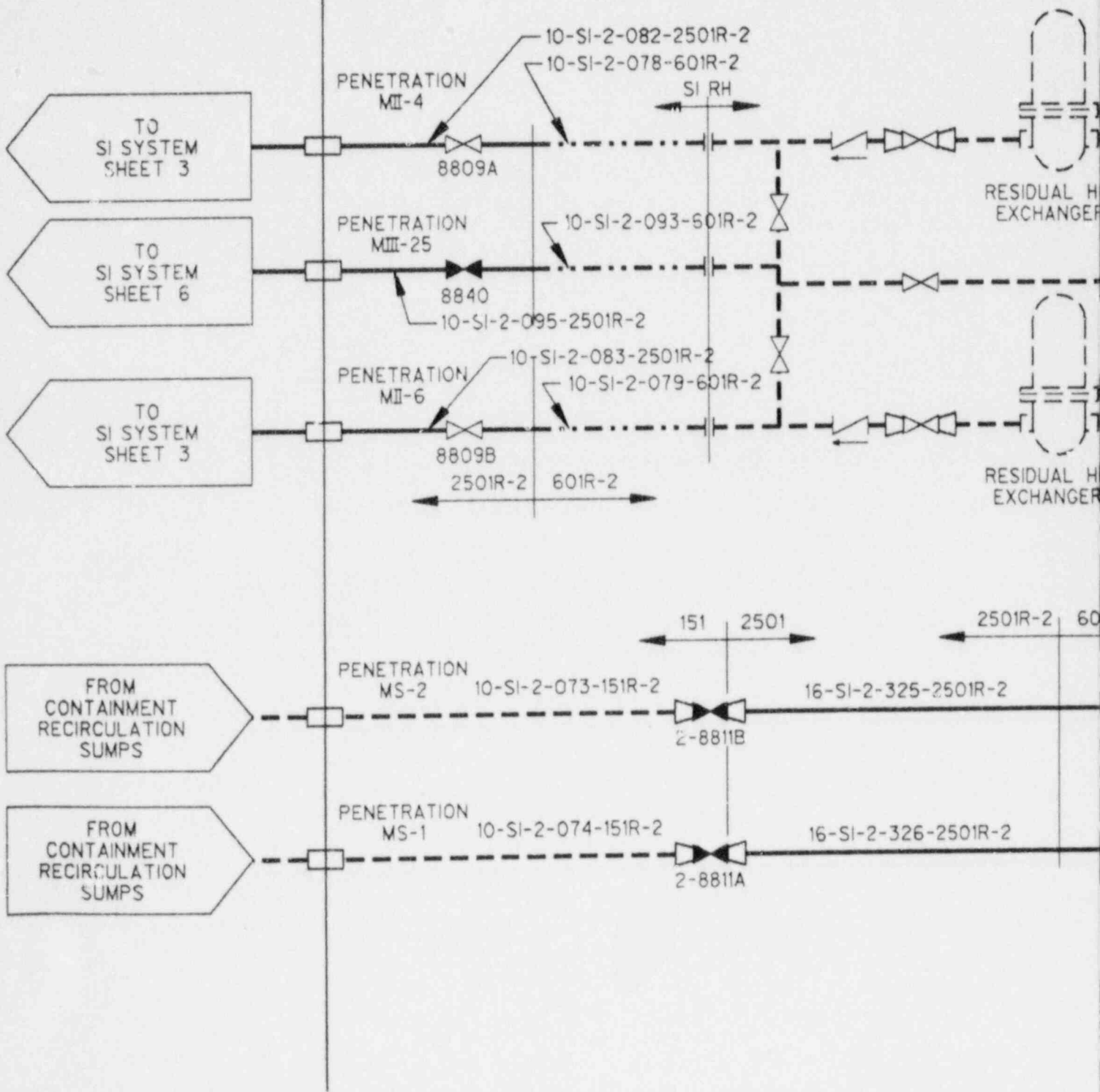
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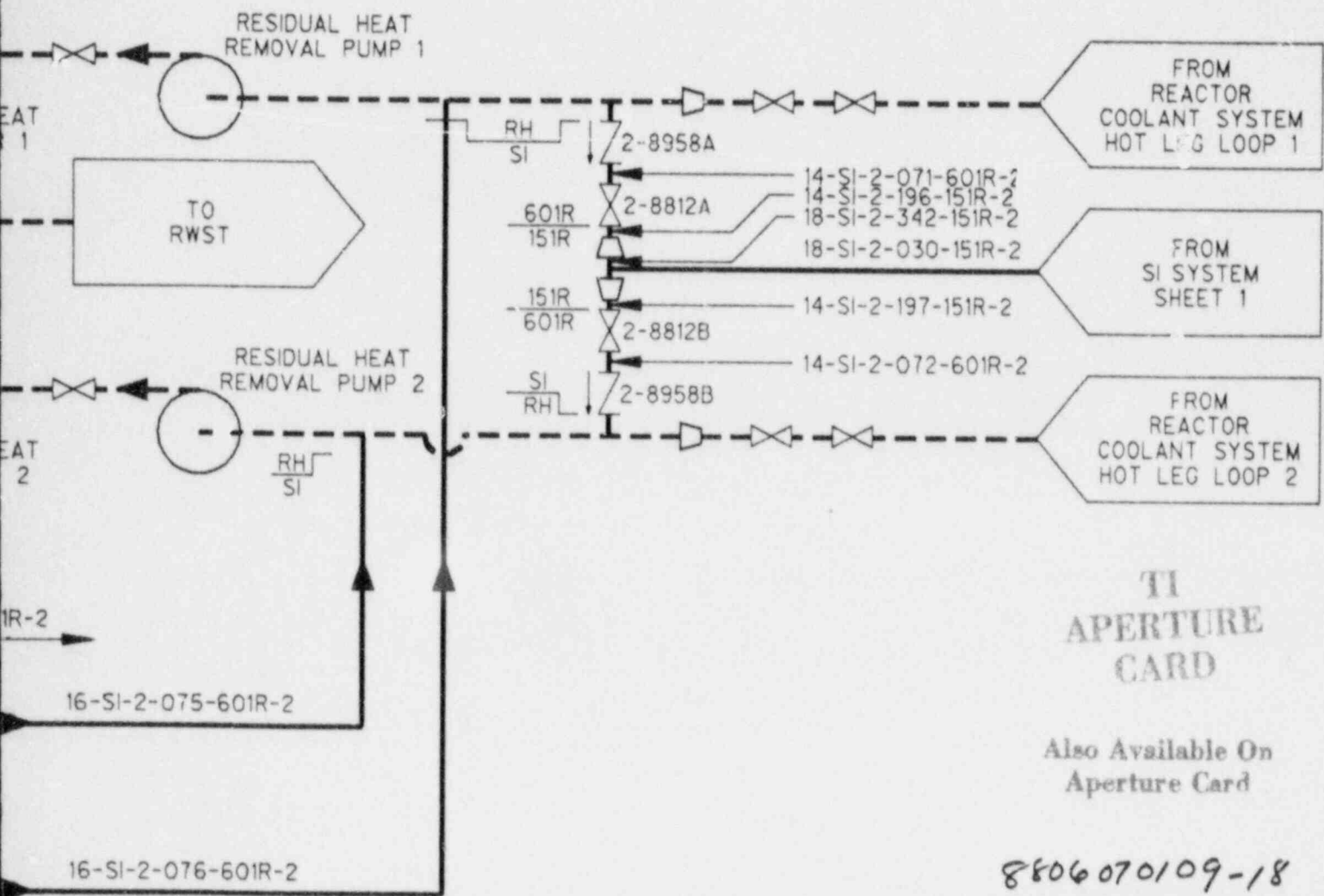


8806070109-17

ILLUSTRATIVE USE ONLY THIS DIAGRAM DEVELOPED FROM FLOW DIAGRAM 2323-M2-0263 REV. CP-5 SHEET 3 of 3
TU ELECTRIC CPSES UNIT 2
INSERVICE INSPECTION BOUNDARY DIAGRAM
SAFETY INJECTION SYSTEM SHEET 3 of 6

CONTAINMENT SAFEGUARDS





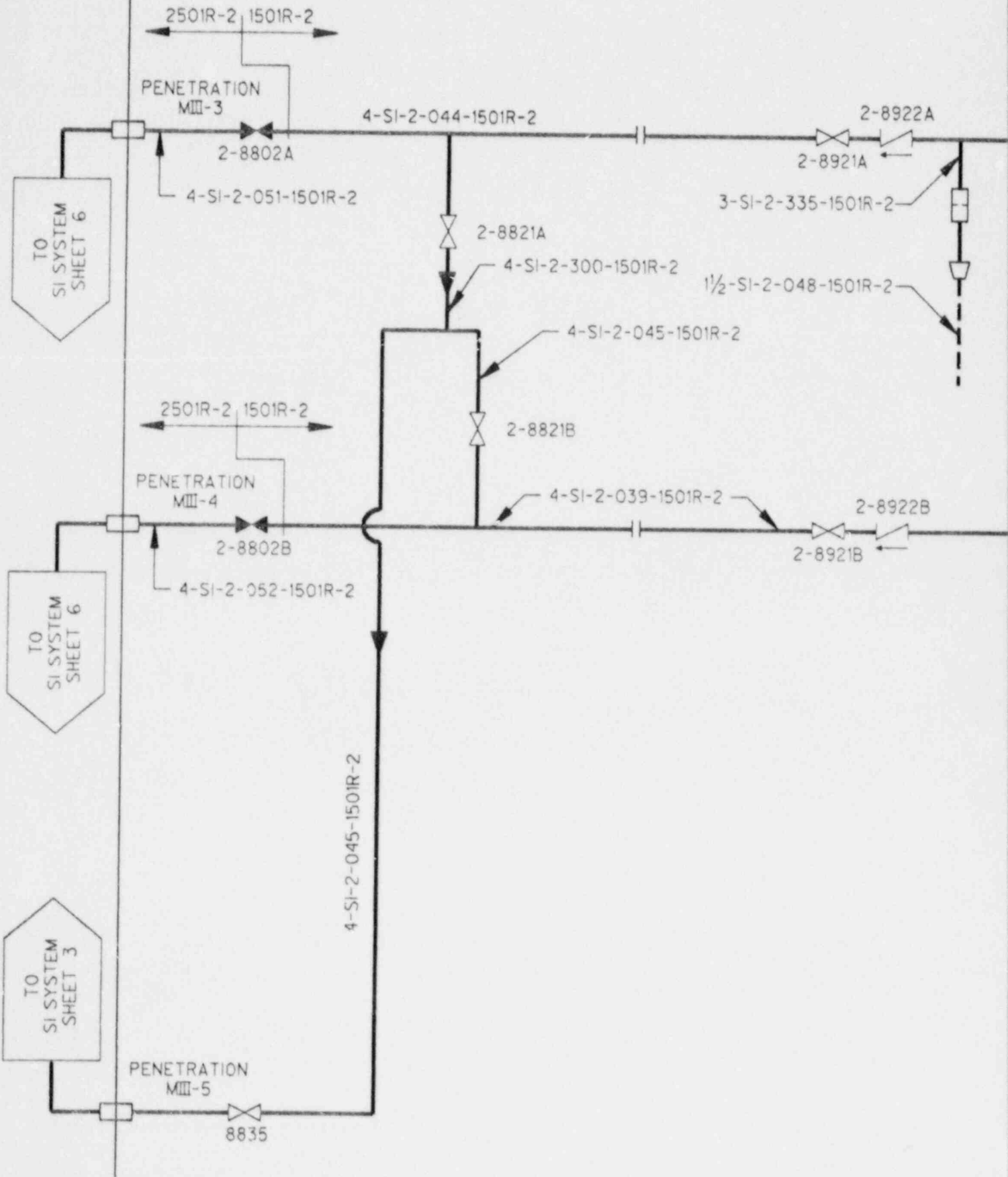
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CARD**

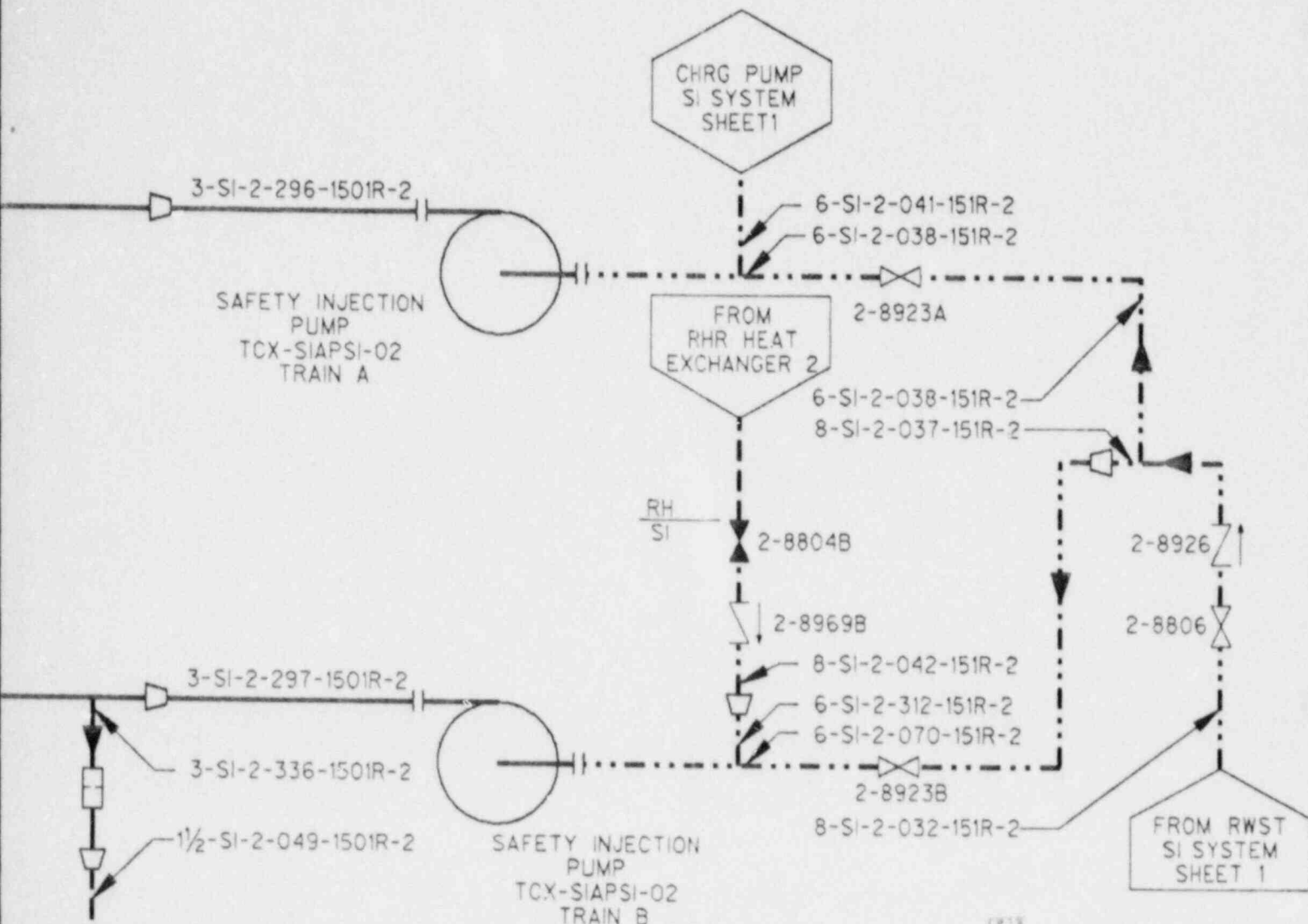
Also Available On
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8806070109-18

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<p>TU ELECTRIC CPSES UNIT 2</p>
<p>INSERVICE INSPECTION BOUNDARY DIAGRAM</p>
<p>SAFETY INJECTION SYSTEM SHEET 4 of 6</p>

CONTAINMENT SAFEGUARDS



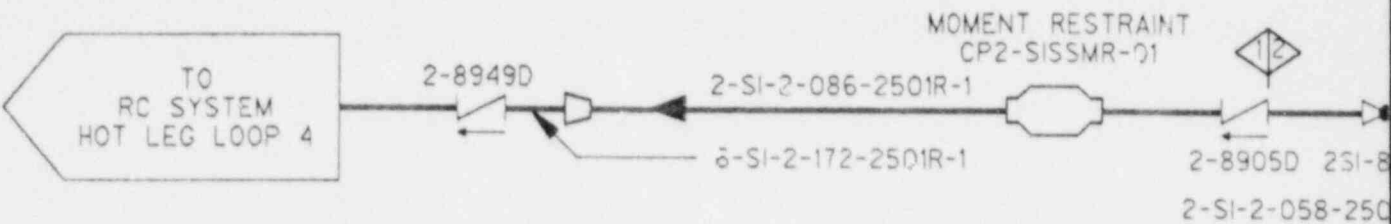
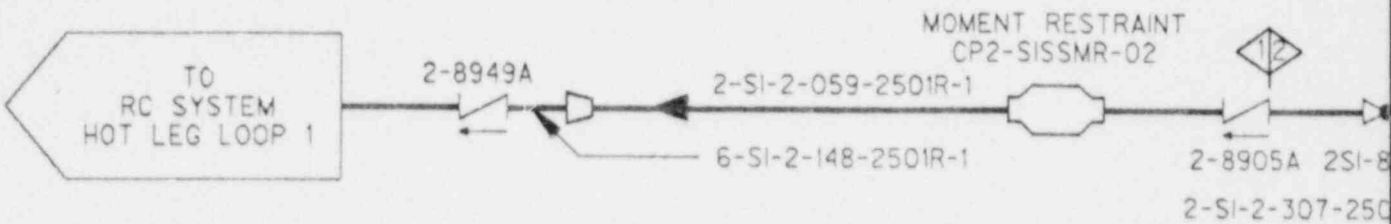
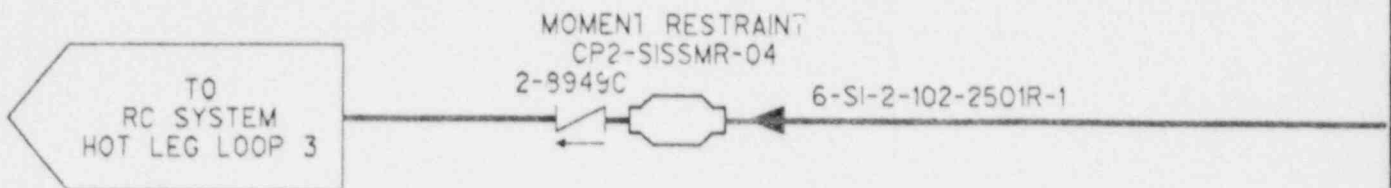
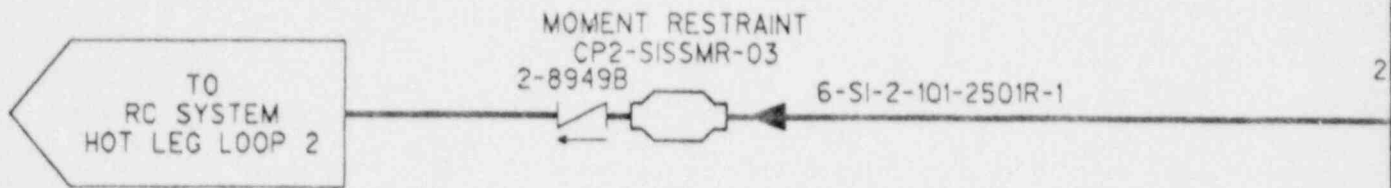


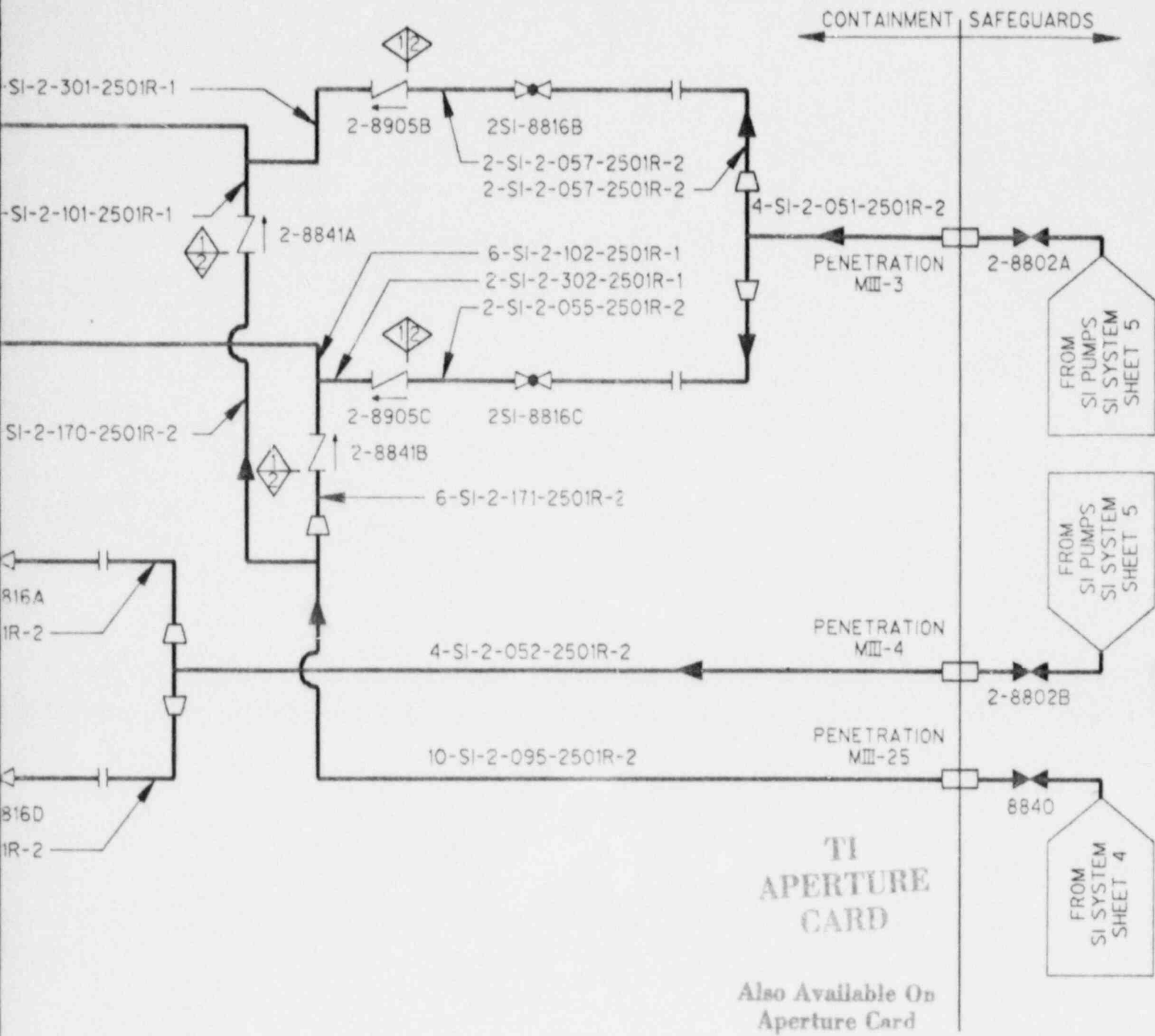
**T1
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CARD**

Also Available On
Aperture Card

8406 070109-19

<p>ILLUSTRATIVE USE ONLY THIS DIAGRAM DEVELOPED FROM FLOW DIAGRAM 2323-M2-0263 REV. CP-5 SHEET 3 of 3</p>
<p>TU ELECTRIC CPSES UNIT 2</p>
<p>INSERVICE INSPECTION BOUNDARY DIAGRAM</p>
<p>SAFETY INJECTION SYSTEM SHEET 5 of 6</p>





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<p>ILLUSTRATIVE USE ONLY THIS DIAGRAM DEVELOPED FROM FLOW DIAGRAM 2323-M2-0263 REV. CP-5 SHEET 3 OF 3</p>
<p>TU ELECTRIC CPSES UNIT 2</p>
<p>INSERVICE INSPECTION BOUNDARY DIAGRAM</p>
<p>SAFETY INJECTION SYSTEM SHEET 6 of 6</p>

COMPONENT COOLING
WATER HEAT EXCHANGER
CP2-CCAHHX-02

2SW-022

COMPONENT
WATER HEAT E
CP2-CCAHI

2SW-037

24-SW-2-013-150-3

30-SW-2-012-150-3

30-SW-2-011-150-3

24-SW-2-006-150-3

24-SW-2-031-150-3

24-SW-X-002-150-3

XSW-028

XSW-029

2SW-373

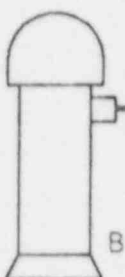
CP2-SWEXSW-02

10-SW-2-027-150-3

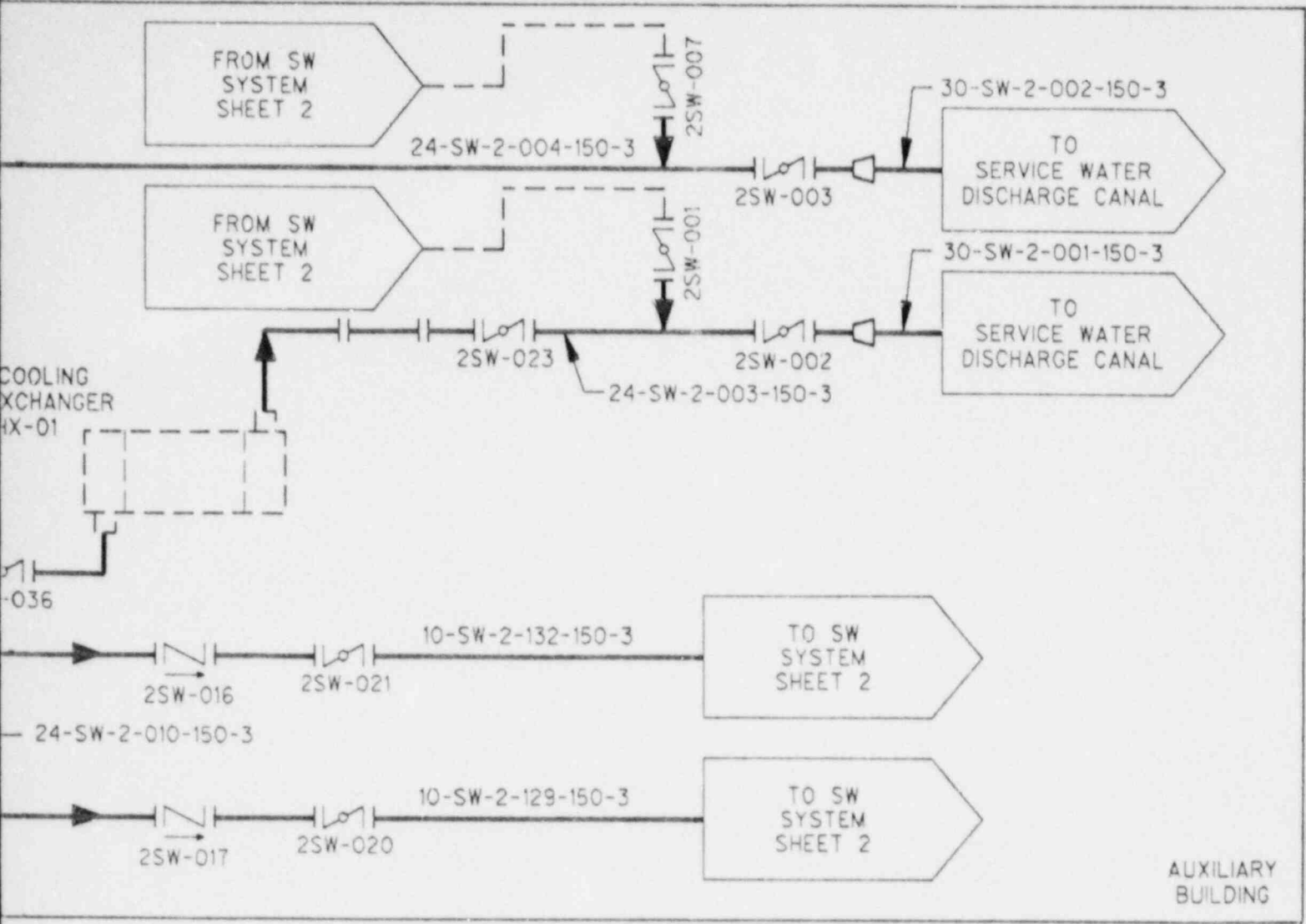
2-PV
4253

SSW PUMPS
UNIT 1

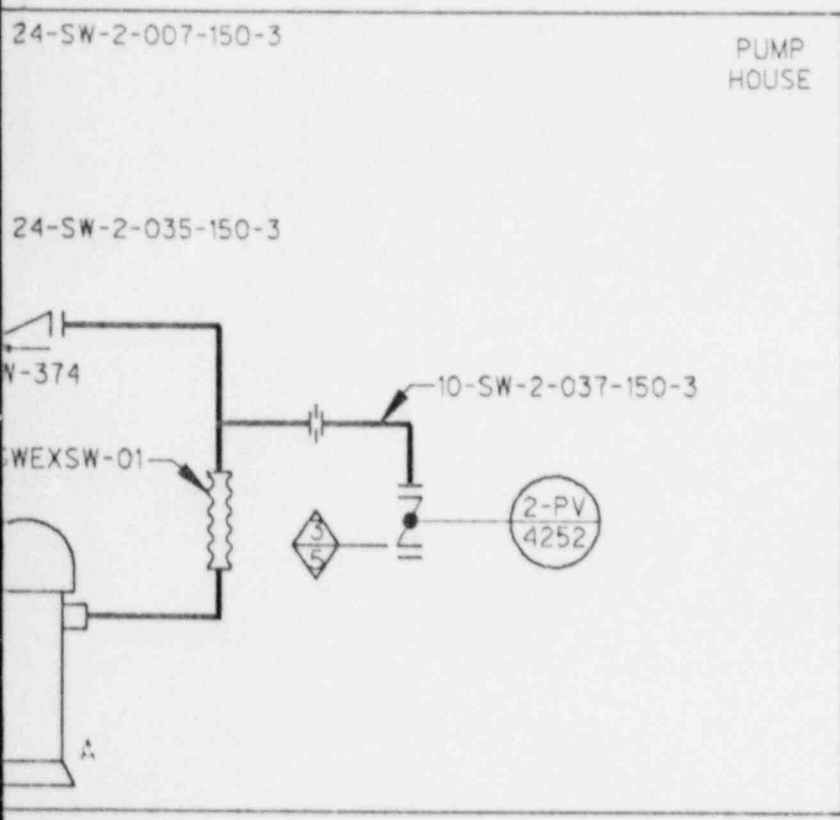
STATION SERVICE
WATER PUMP
CP2-SWAPSW-02
TRAIN 2B



STATION SERVICE
WATER PUMP
CP2-SWAPSW-01
TRAIN 2A



AUXILIARY BUILDING

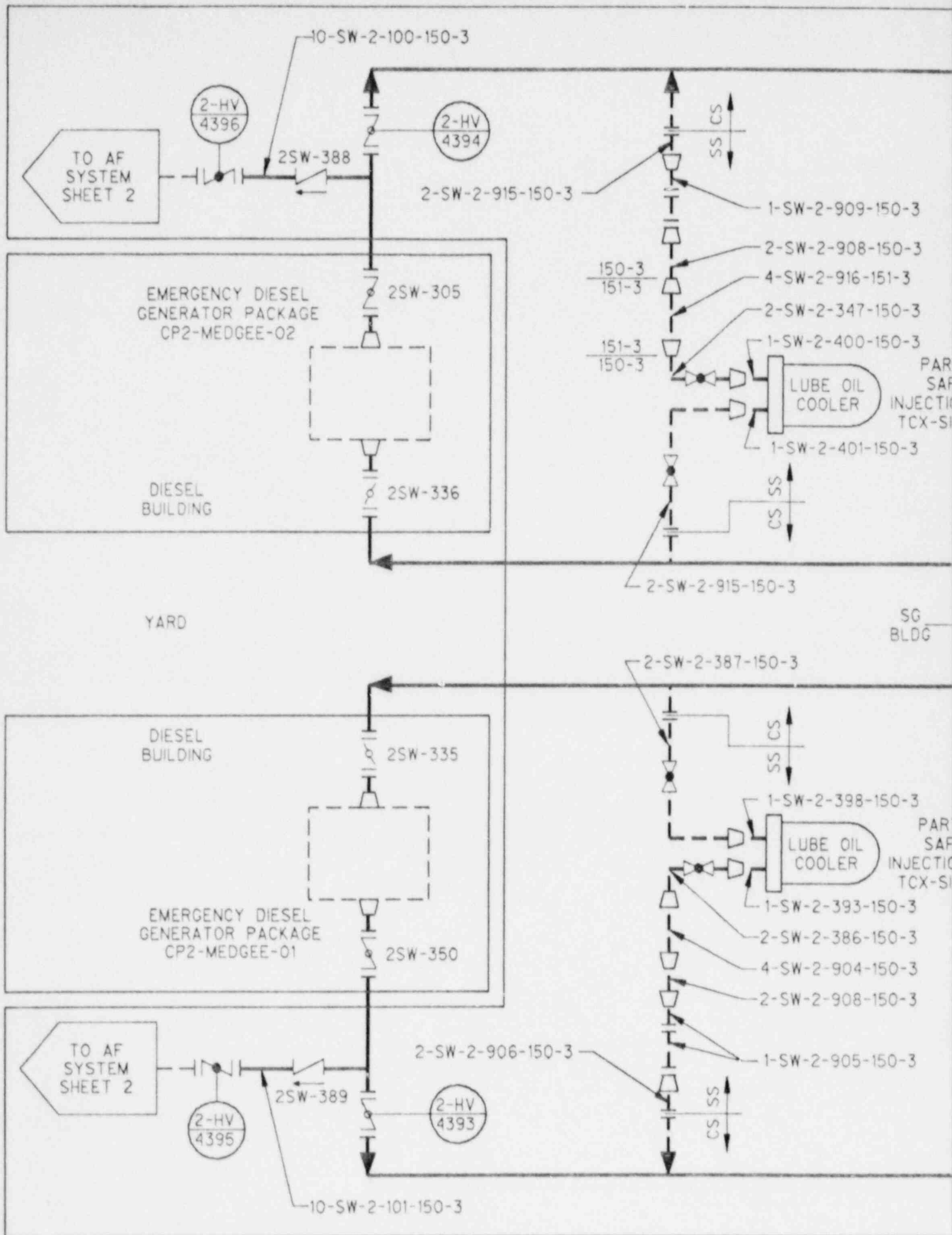


TI APERTURE CARD

Also Available On
Aperture Card

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<p>ILLUSTRATIVE USE ONLY THIS DIAGRAM DEVELOPED FROM FLOW DIAGRAM 2323-M2-0233 REV. CP-2 SHEET 1 of 2</p>
<p>TU ELECTRIC CPSES UNIT 2</p>
<p>INSERVICE INSPECTION BOUNDARY DIAGRAM</p>
<p>STATION SERVICE WATER SYSTEM SHEET 1 of 2</p>

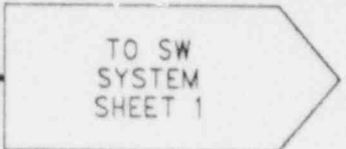
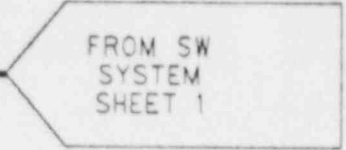
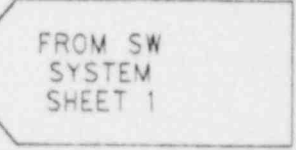
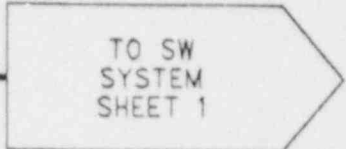
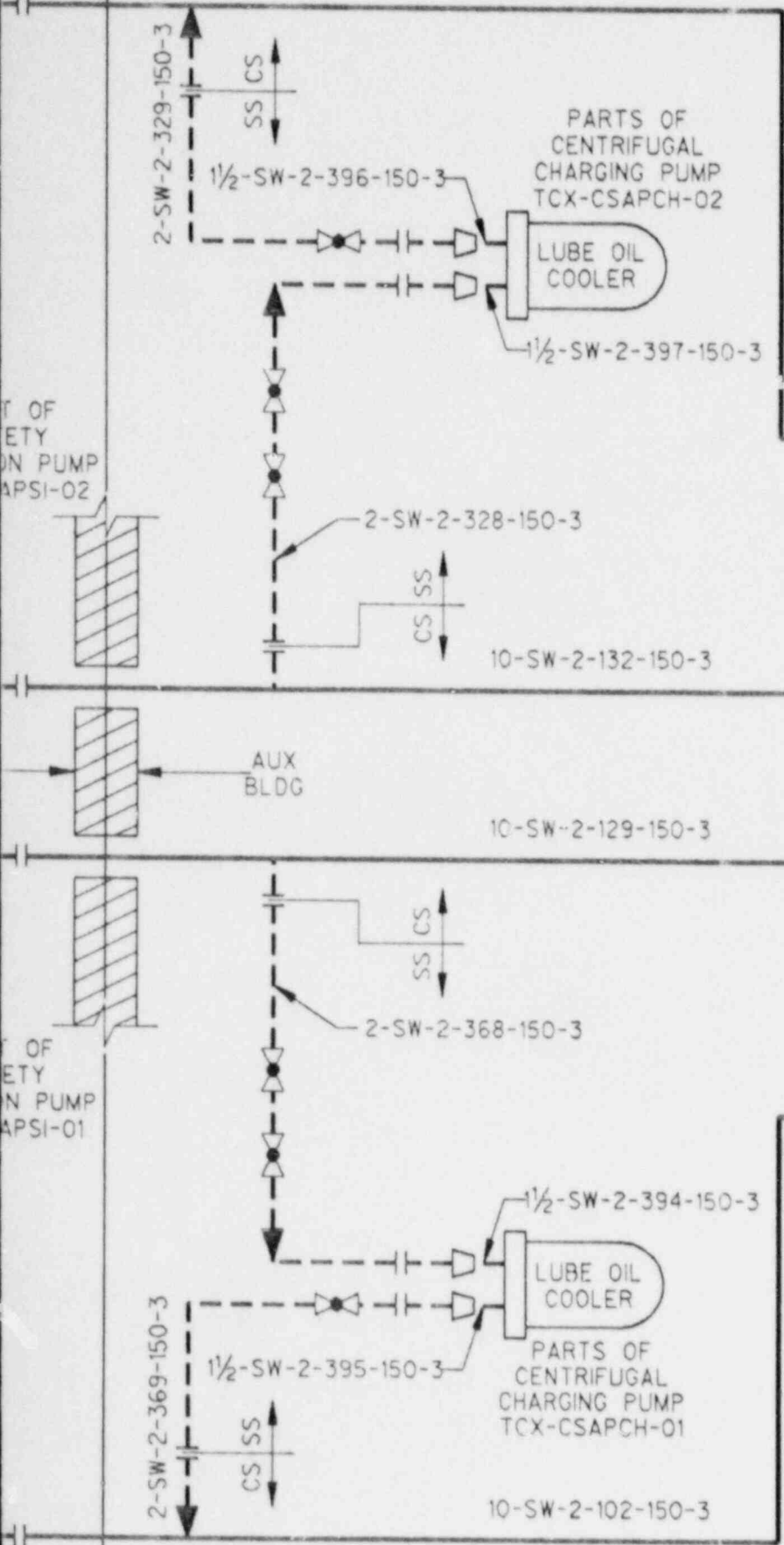


TI APERTURE CARD

Also Available On Aperture Card

OF
ETY
ON PUMP
APSI-02

OF
ETY
ON PUMP
APSI-01



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ILLUSTRATIVE USE ONLY
 THIS DIAGRAM DEVELOPED FROM FLOW DIAGRAM
 2323-M2-0234 REV. CP-1
 SHEET 2 of 2

TU ELECTRIC
 CPSES UNIT 2

INSERVICE INSPECTION
 BOUNDARY DIAGRAM

STATION SERVICE WATER SYSTEM
 SHEET 2 of 2

REQUESTS FOR RELIEF

In this section are requests for relief from impractical ASME Section XI requirements. It is determined that performance of these examinations would result in hardship or unusual difficulties without a compensating increase in the level of quality and safety. Thus, relief is requested from the Code requirements as described in this section.

RELIEF REQUEST

D-1

A. Item for which relief is requested:

Integral Attachments.

B. Item Code Class:

3.

C. Examination requirement from which relief is requested:

The VT-3 examinations of Table IWD-2500-1.

D. Basis for Relief Request:

Visual examinations conducted during construction ensure that conditions qualifying as unacceptable under a VT-3 examination do not exist. Personnel performing these examinations are trained and certified under a program which meets the requirements of ANSI N45.2.6 as endorsed and supplemented by Regulatory Guide 1.58, Revision 1. These examinations are documented and the records maintained as permanent plant records.

Additionally, Table IWD-2500-1 allows for the examination of only one of the multiple components within a system of similar design, function and service whereas the visual examinations conducted during construction are conducted on all Class 3 integral attachments.

E. Alternative examinations:

None.

F. Anticipated impact on the overall level of plant quality and safety:

None.