Waterford-3

Steam Electric Station

Response to

The Provisions of

10CFR 50.55a(g)

Inservice Testing Plan

for

Class 1, 2, and 3

Pumps and Valves

Revision 0

8/16/82

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1.0 INTRODUCTION

1.1 General

This document is written and presented in accordance with the requirements of the Code of Federal Regulations 10CFR 50.55a(g). The intent of Draft Regulatory Guide, Task MS 901-4 "Identification of Valves for Inclusion in Inservice Testing Programs", was used for guidance in the preparation of this plan. In addition, Regulatory Guide 1.26, Revision 3, was used for classification of pumps.

1.2 Scope

This document provides a description of the inservice testing plan for Waterford-3 Steam Electric Station for safety-related ASME Boiler and Pressure Vessel Code Class 1, 2, and 3 pumps and valves in accordance with the requirements of subsections IWP and IWV of the ASME Boiler and Pressure Vessel Code Section XI, 1980 Edition through the Winter 1980 Addenda. This plan forms a part of Waterford-3 plant Technical Specification 4.0.5.

1.3 Effective Period

This plan includes preoperational testing of pumps and preservice testing of valves as allowed and/or required by ASME Section XI, subsections IWP and IWV. This document shall go into effect beginning with preoperational and preservice testing, and shall then remain in effect through the first 120 month interval of commercial operation.

1.4 Plan Revisions

As a minimum, this plan will be reviewed and revised as necessary for compliance with the ASME Code in effect 12 months prior to the end of the first 120 months of commercial operation. Similarly, this plan will be reviewed and revised for each subsequent 120 month interval. Louisiana Power and Light Company reserves the right to submit plan revisions which may enhance or improve this pump and valve testing plan at any time within the effective period.

2.0 INSERVICE TESTING OF PUMPS

The table entitled "Pumps for Inservice Testing" describes the inservice testing plan for pumps subject to the requirements of subsection IWP of the ASME Boiler and Pressure and Vessel Code Section XI, 1980 Edition through Winter 1980 Addenda. The table provides identification of the pumps to be tested, the ASME Section III Code classes, drawing references, parameters to be measured and test intervals. Relief from the testing requirements of Section XI is requested where full compliance with the requirements of the code is not practical. In such cases, specific information is provided in Section 2.1 which identifies the applicable code requirements, justification for the relief request, and the testing to be used as an alternate. In certain cases, relief is not requested, but the code-required testing is performed in an unusual or complicated manner. In such cases, clarifications are included in Section 2.2 in order to explain how the requirements of Section XI are fulfilled.

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

PUMPS FOR INSERVICE TESTING

WATERFORD 3 S.E.S.

REVISION NO. 0

PUMP IDENTIFICATION	ASME CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	LOCATION ON GENERAL ARRANGEMENT	MEASURED PARAMETERS	TEST INTERVAL	RELIEF REQUESTS/ CLARI-FICATIONS	REMARKS
Containment Spray A	2	LOU-1564-G-163	RAB, El-35.0' Lou-1564 G-137, E-10	1. Inlet Pressure (Pi)	Quarterly	-	
				2. Outlet Pressure (Po)	Quarterly	-	
Containment Spray B	2	G-163	RAB, El-35.0' Lou-1564 G-137, D-10	3. Differential Pressure (ΔP = Po - Pi)	Quarterly	-	
				4. Flow Rate	Quarterly	-	
				5. Vibration Amplitude	Quarterly	-	
				6. Bearing Temperature	Annually	-	
				7. Lubricant Level or Pressure	Observe Quarterly	-	
				8. Speed	Not Applicable	-	

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High-Pressure Safety Injection A	2	LOU-1564-G-167 Sheet 1	RAB, El-35.0' Lou-1564 G-137, E-10	1. Inlet Pressure (Pi)	Quarterly	-	
				2. Outlet Pressure (Po)	Quarterly	-	
High-Pressure Safety Injection B	2	G-167 Sheet 1	RAB, El-35.0' Lou-1564 G-137, D-10	3. Differential Pressure ($\Delta P = Po - Pi$)	Quarterly	-	
				4. Flow Rate	Quarterly	-	
High-Pressure Safety Injection A/B	2	G-167 Sheet 1	RAB, El-35.0' Lou-1564 G-137, E-8	5. Vibration Amplitude	Quarterly	-	
				6. Bearing Temperature	Annually	-	
				7. Lubricant Level or Pressure	Observe Quarterly		
				8. Speed	Not Applicable	-	

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Low-Pressure Safety Injection A	2	LOU-1564-G-167 Sheet 1	RAB, El-35.0' Lou-1564 G-137, E-11	1. Inlet Pressure (Pi)	Quarterly	2.2.1	
				2. Outlet Pressure (Po)	Quarterly	2.2.1	
Low-Pressure Safety Injection B	2	G-167 Sheet 1	RAB, El-35.0' Lou-1564 G-137, D-11	3. Differential Pressure (ΔP = Po - Pi)	Quarterly	2.2.1	
				4. Flow Rate	Quarterly	2.2.1	
				5. Vibration Amplitude	Quarterly	2.2.1	
				6. Bearing Temperature	Annually	2.2.1	
				7. Lubricant Level or Pressure	Observe Quarterly	2.2.1	
				8. Speed	Not Applicable	-	

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PUMP IDENTIFICATION	ASME CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	LOCATION ON GENERAL ARRANGEMENT	MEASURED PARAMETERS	TEST INTERVAL	RELIEF REQUESTS/ CLARI-FICATIONS	REMARKS
Component Cooling Water A	3	LOU-1564-G-160 Sheet 2	RAB, El+21.0' Lou-1564 G-135, C-6	1. Inlet Pressure (Pi)	Quarterly	-	
				2. Outlet Pressure (Po)	Quarterly	-	
Component Cooling Water B	3	G-160 Sheet 2	RAB, El+21.0' LOU-1564 G-135, C-8	3. Differential Pressure (ΔP = Po - Pi)	Quarterly	-	
				4. Flow Rate	Quarterly	-	
Component Cooling Water A/B	3	G-160 Sheet 2	RAB, El+21.0' LOU-1564 G-135, C-7	5. Vibration Amplitude	Quarterly	-	
				6. Bearing Temperature	Annually	-	
				7. Lubricant Level or Pressure	Observe Quarterly		
				8. Speed	Not Applicable	-	

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PUMP IDENTIFICATION	ASME CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	LOCATION ON GENERAL ARRANGEMENT	MEASURED PARAMETERS	TEST INTERVAL	RELIEF REQUESTS/ CLARI-FICATIONS	REMARKS
Auxiliary Component Cooling Water A	3	LOU-1564-G-160 Sheet 2	RAB, El-35.0' LOU-1564, G-145, H-3	1. Inlet Pressure (Pi)	Quarterly	-	
				2. Outlet Pressure (Po)	Quarterly	-	
				3. Differential Pressure (ΔP = Po - Pi)	Quarterly	-	
Auxiliary Component Cooling Water B	3	G-160 Sheet 2	RAB, El-35.0' LOU-1564 G-145, H-15	4. Flow Rate	Quarterly	-	
				5. Vibration Amplitude	Quarterly	-	
				6. Bearing Temperature	Annually	-	
				7. Lubricant Level or Pressure	Observe Quarterly	-	
				8. Speed	Not Applicable	-	

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PUMP IDENTIFICATION	ASME CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	LOCATION ON GENERAL ARRANGEMENT	MEASURED PARAMETERS	TEST INTERVAL	RELIEF REQUESTS/ CLARI-FICATIONS	REMARKS
Emergency Feedwater A (Motor-Driven)	3	LOU-1564 G-153 Sheet 2	RAB, E1-35.0' LOU-1564 G-137, F-7	1. Inlet Pressure (Pi)	Quarterly	-	Tested per Technical Specification 4.7.1.2
				2. Outlet Pressure (Po)	Quarterly	-	
Emergency Feedwater B (Motor-Driven)	3	G-153 Sheet 2	RAB, E1-35.0' LOU-1564 G-137, E-7	3. Differential Pressure (ΔP = Po - Pi)	Quarterly	-	
				4. Flow Rate	Quarterly	-	
				5. Vibration Amplitude	Quarterly	-	
				6. Bearing Temperature	Annually		
				7. Lubricant Level or Pressure	Observe Quarterly	-	
				8. Speed	Not Applicable	-	

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PUMP IDENTIFICATION	ASME CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	LOCATION ON GENERAL ARRANGEMENT	MEASURED PARAMETERS	TEST INTERVAL	RELIEF REQUESTS/ CLARI-FICATIONS	REMARKS
Emergency Feedwater A/B (Turbine-Driven)	3	LOU-1564-G-153 Sheet 2	RAB, El-35.0' LOU-1564-G-137, G-5	1. Inlet Pressure (Pi)	Quarterly	-	Tested per Technical Specification 4.7.1.2
				2. Outlet Pressure (Po)	Quarterly	-	
				3. Differential Pressure (ΔP - Po - Pi)	Quarterly	-	
				4. Flow Rate	Quarterly	-	
				5. Vibration Amplitude	Quarterly	-	
				6. Bearing Temperature	Annually	-	
				7. Lubricant Level or Pressure	Observe Quarterly	-	
				8. Speed	Quarterly	-	

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PUMP IDENTIFICATION	ASME CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	LOCATION ON GENERAL ARRANGEMENT	MEASURED PARAMETERS	TEST INTERVAL	RELIEF REQUESTS/ CLARI-FICATIONS	REMARKS
Charging A	2	LOU-1564-G-168 Sheet 2	RAB, El-30.0' LOU-1564 G-137, F-1	1. Inlet Pressure (Pi)	Quarterly	2.1.1	Positive Displacement Pumps (With Constant-Speed Motors)
				2. Outlet Pressure (Po)	Quarterly	-	
Charging B	2	G-168 Sheet 2	RAB, El-30.0' LOU-1564 G-137, F-4	3. Differential Pressure (ΔP = Po - Pi)	Quarterly	2.1.1	
				4. Flow Rate	Quarterly	2.1.2	
Charging A/B	2	G-168 Sheet 2	RAB, El-30.0' LOU-1564 G-137, F-3	5. Vibration Amplitude	Quarterly	-	
				6. Bearing Temperature	Annually	-	
				7. Lubricant Level or Pressure	Observe Quarterly	-	
				8. Speed	Not Applicable	-	

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PUMP IDENTIFICATION	ASME CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	LOCATION ON GENERAL ARRANGEMENT	MEASURED PARAMETERS	TEST INTERVAL	RELIEF REQUESTS/ CLARI-FICATIONS	REMARKS
Boric Acid A	3	LOU-1564-G-168 Sheet 2	RAB, El-35.0' LOU-1564 G-137, H-6	1. Inlet Pressure (Pi)	Quarterly	-	
				2. Outlet Pressure (Po)	Quarterly	-	
Boric Acid B	3	G-168 Sheet 2	RAB, El-35.0' LOU-1564 G-137, H-6	3. Differential Pressure (ΔP = Po - Pi)	Quarterly	-	
				4. Flow Rate	Quarterly	-	
				5. Vibration Amplitude	Quarterly	-	
				6. Bearing Temperature	Annually	-	
				7. Lubricant Level or Pressure	Observe Quarterly	-	
				8. Speed	Not Applicable	-	

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PUMP IDENTIFICATION	ASME CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	LOCATION ON GENERAL ARRANGEMENT	MEASURED PARAMETERS	TEST INTERVAL	RELIEF REQUESTS/ CLARI-FICATIONS	REMARKS
Chilled Water A	3	LOU-1564-G-853 SO3	RAB, El+46.0' LOU-1564 G-134, E-3	1. Inlet Pressure (Pi)	Quarterly	-	
				2. Outlet Pressure (Po)	Quarterly	-	
Chilled Water B	3	G-853 SO3	RAB, El+46.0' LOU-1564 G-134, D-3	3. Differential Pressure (ΔP = Po - Pi)	Quarterly	-	
Chilled Water C	3	G-853 SO3	RAB, El+46.0' LOU-1564 G-134, E-2	4. Flow Rate	Quarterly	-	
				5. Vibration Amplitude	Quarterly	-	
				6. Bearing Temperature	Annually	-	
				7. Lubricant Level or Pressure	Observe Quarterly	-	
				8. Speed	Not Applicable	-	

2.1 Requests for Relief from ASME Boiler and Pressure Vessel Code Section XI Requirements

2.1.1 Test Requirement

Measure inlet pressure before pump startup and during the inservice test.

Basis for Relief

The Charging Pumps are positive displacement type pumps and do not have a performance curve like centrifugal pumps. Variations in inlet and differential pressure do not effect pump flow as long as the Net Positive Suction Head (NPSH) requirements of the pumps are fulfilled.

Alternate Testing

Inlet pressure of the Charging Pumps will not be measured. Instead, the NPSH requirements will be fulfilled by verifying that the Volume Control Tank contains at least the minimum volume of water as required by Technical Specifications. Since inlet pressure is not measured, differential pressure cannot be measured. As an alternate test, discharge pressure will be used for determining pump operability.

2.1.2 Test Requirement

IWP-4120 requires that the full-scale range of each instrument shall be three times the reference value or less.

Basis for Relief

The Charging Pumps' discharge flow indicator does not comply with this requirement. Each of the three pumps produces a flow of 44 gpm. The flow gauge has a full-scale range of 150 gpm in order to accomodate three-pump flow, such as during safety injection operations. The full-scale range is 3.4 times the reference value. The small difference between the code requirement and the range of this flow gauge is minor.

Alternate Testing

The existing, installed flow indicator will be used for quarterly pump operability testing.

2.2 Clarifications of Pump Testing Methods

2.2.1 Code Requirement

IWP-3112 allows the establishment of an additional set of reference values.

Testing Method

For the LPSI Pumps, either of two sets of reference values may be used to demonstrate pump operability. One set will apply when the pumps are tested using the minimum flow recirculation line to the Refueling Water Storage Pool. The other set will be used when the pumps are aligned for shutdown cooling. The second set of reference values will include the Technical Specification requirement of a measured flow rate that is greater than or equal to 4,000 gallons per minute. Regardless of which test loop is used, all applicable Section XI measurements or observations shall be conducted.

3.0 INSERVICE TESTING OF VALVES

The table entitled "Valves for Inservice Testing" describes the inservice testing plan for valves subject to the requirements of subsection IWV of the ASME Boiler and Pressure Vessel Code Section XI, 1980 Edition through Winter 1980 Addenda. The table provides the identification of the valves to be tested, valve code classes, drawing references, test categories, size, types, positions, stroke time limits, function, test requirements, and any alternate testing necessary. Relief from the testing requirements of Section XI is requested where full compliance with the requirements of the Code is not practical. In such cases, the table refers to a specific relief request number in Section 3.1 for the appropriate valves. The relief request provides specific information which identifies the applicable code requirements, justification for the relief request, and the testing to be used as an alternate. The design of Waterford 3 does not include any valves which would be classified as ASME Section XI Category D valves. In certain cases, relief is not requested, but the code-required testing is performed in an unusual or complicated manner. In such cases, clarifications are included in Section 3.2 in order to explain how the requirements of Section XI are fulfilled.

NOTE: Most valve numbers have only three numerical digits with a few valves having four. Typically, the four digit valves were added after the valves in that system had been given Unique Identification (UNID) numbers by LP&L. Since valves are numbered according to their relative location in the flow path, a newly-added valve is given a fourth digit which maintains the unique numbering system and also reflects relative flow path position. As an example, RC-3183 is situated between RC-318 and RC-3184.

NOTE: In the tables entitled "Valves For Inservice Testing", some spaces have been left blank intentionally. The spaces have to do with either the position of the valve or the stroke time limit. The appropriate information will be inserted in these blanks in a later revision to this document.

LEGEND OF SYMBOLS

Legend for Valve Type

B - Butterfly

CK - Check

D - Diaphragm

GA - Gate

GL - Globe

N - Needle

PR - Pressure Relief or Safety

ANG- Angle

Legend for Actuator Type

AO - Air Operated

M - Manual

MO - Motor Operated

SA - System Actuated

SO - Solenoid Operated

HO - Hydraulic Operated

HP - Hydraulic/Pneumatic Operated

Legend for Valve Testing Requirements

Q - Exercise valves (full stroke) for operability at least once every three (3) months except that when one train of a redundant system is inoperable, then nonredundant valves in the remaining train should not be cycled since their failure would cause a loss of total system function.

* - Remote valve position indicators are used to verify valve stem position.

CV - Exercise check valves to the position required to fulfill their function at least once every three (3) months.

MT - Stroke time measurements are taken and compared to the stroke time limiting value per Section XI Article IWV-3410.

SRV - Safety and relief valves are tested per Section XI Article IWV-3510.

LT - Valves are leak tested per Appendix J to 10CFR50 at each refueling outage.

LTP - Containment Purge valves are leak tested per plant Technical Specifications.

PIV - Reactor Coolant System Pressure Isolation valves are leak tested per plant Technical Specifications.

Legend for Alternate Valve Testing

CS - Exercise valve (full stroke) for operability during each cold shutdown and at each refueling outage. In case of frequent cold shutdowns, valve testing will not be performed more often than once every three (3) months.

Valve testing will commence not later than 48 hours after an unscheduled cold shutdown and continue until complete or until plant is ready to return to power. Completion of all valve testing is not a prerequisite to return to power. Any testing not completed at one cold shutdown should be performed during the subsequent cold shutdowns to meet the code-specified testing frequency.

CSP - Exercise valve (partial stroke) for operability at least once every three (3) months and exercise valve (full stroke) at each cold shutdown.

CSR - Exercise check valve (partial stroke) at each cold shutdown and full stroke at each reactor refueling outage.

RR - Exercise valve for operability at each reactor refueling outage.

PRR - Exercise valve (partial stroke) quarterly, and full stroke at each reactor refueling outage.

PSO - Valve receives partial stroke only. Full stroke testing is not practical.

NT - No testing required.

NST - No stroke time measurements are taken.

NPO - Seat leak tightness is demonstrated during normal plant operation.

TNT - Stroke time not trended due to very short stroke times.

ME - Valves are manually exercised quarterly.

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Reactor Coolant (RC)

WATERFORD 3 S.E.S.
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VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
RC-1014	2	LOU-1564-G-172	E-7	A	1	GL	SO	C	C	Q*	-	-	-	Reactor Pressure Vessel Head Vent	FSAR 5.4.15.1(i)
(2RC-2560B)										MT	TNT	3.1.1	5		
										LT	NPO	3.2.1	-		Leakage Limit 10 GPM
RC-1015	2	G-172	F-7	A	1	GL	SO	C	C	Q*	-	-	-	Reactor Pressure Vessel Head Vent	
(2RC-2559A)										MT	TNT	3.1.1	5		
										LT	NPO	3.2.1	-		10 GPM
RC-1017	2	G-172	E-8	A	1	GL	SO	C	C	Q*	-	-	-	Pressurizer and Reactor Vessel Head Vent to Quench Tank	
(2RC-2562B)										MT	TNT	3.1.1	5		
										LT	NPO	3.2.1	-		10 GPM

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VALVES FOR INSERVICE TESTING

SYSTEM: Reactor Coolant (RC)

WATERFORD 3 S.E.S.
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VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
RC-317A	1	LOU-1564-G-172	H-6	C	6x8	PR	SA	C	-	SRV	-	-	-	Pressurizer Safety	
RC-317B	1	G-172	H-6	C	6x8	PR	SA	C	-	SRV	-	-	-	Pressurizer Safety	
RC-3183	2	G-172	H-7	A	1	GL	SO	C	C	Q*	-	-	-	Pressurizer Head Vent	
(2RC-2558B)										MT	TNT	3.1.1	5		
										LT	NPO	3.2.1	-		10 GPM
RC-3184	2	G-172	G-7	A	1	GL	SO	C	C	Q*	-	-	-	Pressurizer Head Vent	
(2RC-E2557A)										MT	TNT	3.1.1	5		
										LT	NPO	3.2.1	-		10 GPM

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VALVES FOR INSERVICE TESTING

SYSTEM: Reactor Coolant (RC)

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VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
RC-3186	2	LOU-1564 G-172	F-8	A	1	GL	SO	C	C	Q*	-	-	-	Pressurizer and Reactor Vessel Head Vent to	
(2RC-2561A)										MT	TNT	3.1.1	5	Containment Atmosphere	
										LT	NPO	3.2.1	-		10 GPM
RC-606	2	G-168 Sheet 2	H-6	A	2	GL	AO	O	C	Q*	CS	3.1.2 3.1.3 3.1.4	-	Seal Water from RC Pumps to Volume Control Tank	CTMT Isolation
										MT	-	-	10		
										LT	-	-	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Chemical and Volume Control System (CVC) Including Boric Acid Makeup (BAM)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
BAM-113A	3	LOU-1564-G-168 Sheet 2	B-7	B	3	GA	MO	C	AI	Q*	CS	3.1.5	-	Gravity Feed Discharge from Boric Acid Makeup Tank B to Charging Pumps Suction	
												3.1.3	-		
												3.1.4	-		
										MT	-	-	-		
BAM-113B	3	G-168 Sheet 2	B-6	B	3	GA	MO	C	AI	Q*	CS	3.1.5	-	Gravity Feed Discharge from Boric Acid Makeup Tank B to Charging Pumps Suction	
												3.1.3	-		
												3.1.4			
										MT	-	-	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Chemical and Volume Control System (CVC) Including Boric Acid Makeup (BAM)

WATERFORD 3 S.E.S.
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VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
BAM-115	2	G-168 Sheet 2	E-6	C	3	CK	SA	C	-	CV	CS	3.1.6	-	Gravity Feed Discharge from Boric Acid Makeup Tanks to Charging Pumps Suction	
												3.1.3	-		
												3.1.4	-		
BAM-125A	3	G-168 Sheet 2	D-8	B	3/4	N	M	O	O	None	-	-	-	Boric Acid Pump A Minimum Flow Recirculation Line	Passive
BAM-125B	3	G-168 Sheet 2	D-5	B	3/4	N	M	O	O	None	-	-	-	Boric Acid Pump B Minimum Flow Recirculation Line	Passive
BAM-126A	3	G-168 Sheet 2	D-8	B	1	GL	AO	O	C	Q*	-	-	-	Boric Acid Pump A Recirculation Line	Tested with BAM Pump A
										MT	-	-			
BAM-126B	3	G-168 Sheet 2	D-5	B	1	GL	AO	O	C	Q*	-	-	-	Boric Acid Pump B Recirculation Line	Tested with BAM Pump B
										MT	-	-			
BAM-129A	3	G-168 Sheet 2	B-5	C	3	CK	SA	C	-	CV	-	-	-	Boric Acid Pump A Discharge Check Valve	Flow Verification to RWSP

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Chemical and Volume Control Systems (CVC) Including Boric Acid Makeup (BAM)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
BAM-129B	3	G-168 Sheet 2	B-5	C	3	CK	SA	C	-	CV	-	-	-	Boric Acid Pump B Discharge Check Valve	Flow Verification to RWSP
BAM-133	3	G-168 Sheet 2	C-4	B	3	GA	MO	C	AI	Q*	CS	3.1.5	-	Boric Acid Pumps Discharge to Charging Pumps Suction	
												3.1.3	-		
												3.1.4			
										MT	-	-			
BAM-135	2	G-168 Sheet 2	E-4	C	3	CK	SA	C	-	CV	CS	3.1.6	-	Boric Acid Pumps Discharge to Charging Pumps Suction	
												3.1.3	-		
												3.1.4	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Chemical and Volume Control System (CVC) Including Boric Acid Makeup (BAM)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
CVC-101	1	LOU-1564 G-168 Sheet 1	D-7	B	2	GA	AO	O	C	Q*	CS	3.1.7 3.1.3 3.1.4	-	Letdown from RCS Loop 2B to Regenerative Heat Exchanger	
										MT	-	-			
CVC-103	1	G-168 Sheet 1	D-7	A	2	GA	AO	O	C	Q*	CS	3.1.7 3.1.3 3.1.4	-	Letdown from RCS Loop 2B to Regenerative Heat Exchanger	CTMT Isolation
										MT	-	-			
										LT	-	-	-		
CVC-109	2	G-168 Sheet 1	E-7	A	2	GA	AO	O	C	Q*	CS	3.1.7 3.1.3 3.1.4	-	Letdown from Regenerative Heat Exchanger to Letdown Heat Exchanger	CTMT Isolation
										MT	-	-			
										LT	-	-	-		
CVC-183	2	G-168 Sheet 2	F-7	B	4	GA	MO	O	C	Q*	CS	3.1.7 3.1.3 3.1.4	-	Discharge from Volume Control Tank to Charging Pumps Suction	
										MT	-	-			

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Chemical and Volume Control System (CVC) Including Boric Acid Makeup (BAM)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
CVC-194A	2	LOU-1564-G-168 Sheet 2	G-3	C	2	CK	SA	C	-	CV	-	3.2.2	-	Charging Pump A Discharge	
CVC-194B	2	G-168 Sheet 2	E-3	C	2	CK	SA	C	-	CV	-	3.2.2	-	Charging Pump B Discharge	
CVC-194A/B	2	G-168 Sheet 2	F-3	C	2	CK	SA	C	-	CV	-	3.2.2	-	Charging Pump A/B Discharge	
CVC-216A	1	G-168 Sheet 1	C-7	B	2	GL	SO	C	C	Q*	CS	3.1.8 3.1.3 3.1.4	-	Auxiliary Pressurizer Spray Isolation	
										MT	TNT	3.1.9			
CVC-216B	1	G-168 Sheet 1	C-7	B	2	GL	SO	C	C	Q*	CS	3.1.8 3.1.3 3.1.4	-	Auxiliary Pressurizer Spray Isolation	
(1CH-E2505B)										MT	TNT	3.1.9			
CVC-217A	1	G-168 Sheet 1	C-8	C	2	CK	SA	C	-	CV	CS	3.1.10 3.1.3 3.1.4	-	Auxiliary Pressurizer Spray Check	
CVC-217B	1	G-168 Sheet 1	C-8	C	2	CK	SA	C	-	CV	CS	3.1.10 3.1.3 3.1.4	-	Auxiliary Pressurizer Spray Check	
(1CH-V2502-4)															

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Chemical and Volume Control System (CVCS) Including Boric Acid Makeup (BAM)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
CVC-218A	1	LOU-1564-G-168 Sheet 1	B-7	B	2	GL	SO	O	C	Q*	-	-	-	Normal Charging Isolation	
										MT	TNT	3.1.1			
CVC-218B	1	G-168 Sheet 1	B-7	B	2	GL	SO	O	C	Q*	-	-	-	Normal Charging Isolation	
										MT	TNT	3.1.1			
CVC-219	1	G-168 Sheet 1	A-7	C	2	CK	SA		-	CV	-	-	-	Normal Charging Bypass Check	Three Pump Flow
CVC-221A	1	G-168 Sheet 1	B-8	C	2	CK	SA	O	-	CV	-	-	-	Normal Charging Check	Three Pump Flow
CVC-221B	1	G-168 Sheet 1	B-8	C	2	CK	SA	O	-	CV	-	-	-	Normal Charging Check	Three Pump Flow
CVC-401	2	G-168 Sheet 2	H-7	A	3/4	GL	AO	O	C	Q*	CS	3.1.2 3.1.3 3.1.4	-	Reactor Coolant Pump Seal Leak-Off Return to Volume Control Tank	CTMT Isolation
										MT	-	-	10		
										LT	-	-	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Chemical and Volume Control System (CVC) Including Boric Acid Makeup (BAM)

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REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
CVC-507	3	LOU-1564 G-168 Sheet 2	E-4	B	3	GA	MO	C	A	Q*	CS	3.1.5	-	RWSP to Charging Pump Suction	
												3.1.3	-		
												3.1.4	-		
										MT	-	-			
CVC-508	2	G-168 Sheet 2	E-4	B	3	CK	SA	C	-	CV	CS	3.1.6	-	RWSP to Charging Pump Suction	
												3.1.3	-		
												3.1.4	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Safety Injection (SI)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
SI-106A	2	LOU-1564-G-167 Sheet 1	H-7	B	24	B	AO	O	AI	Q*	-	-	-	RWSP Discharge Isolation	
										MT	-	-			
SI-106B	2	G-167 Sheet 1	H-7	B	24	B	AO	O	AI	Q*	-	-	-	RWSP Discharge Isolation	
										MT	-	-			
SI-107A	2	G-167 Sheet 1	G-7	C	24	CK	SA	O	-	CV	PRR	3.1.12	-	RWSP Discharge Check	
SI-107B	2	G-167 Sheet 1	G-7	C	24	CK	SA	O	-	CV	PRR	3.1.12	-	RWSP Discharge Check	
SI-1061A (2SI-V-354A)	2	G-167 Sheet 1	F-8	C	20	CK	SA	C	-	CV	PRR	3.1.12	-	LPSI Pump A Suction Check	
SI-1071B (2SI-V355B)	2	G-167 Sheet 1	D-8	C	20	CK	SA	C	-	CV	PRR	3.1.12	-	LPSI Pump B Suction Check	
SI-108A	2	G-167 Sheet 1	F-7	C	20	CK	SA	C	-	CV	PRR	3.1.12	-	LPSI Pump A Suction Check	
SI-108B	2	G-167 Sheet 1	D-7	C	20	CK	SA	C	-	CV	PRR	3.1.12	-	LPSI Pump B Suction Check	

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Safety Injection (SI)

WATERFORD 3 S.E.S.
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VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
SI-116A	2	LOU-1564 G-167 Sheet 1	E-6	C	2	CK	SA	C	-	CV	-	3.2.3	-	LPSI Pump A Minimum Flow Check	
SI-116B	2	G-167 Sheet 1	E-5	C	2	CK	SA	C	-	CV	-	3.2.3	-	LPSI Pump B Minimum Flow Check	
SI-1161A	2	G-167 Sheet 1	E-6	B	2	GA	SO	O	O	Q	-	-	-	LPSI Pump A Minimum Flow Isolation	
(2SI-E1587A)										MT	TNT	3.1.1	5		
SI-1161B	2	G-167 Sheet 1	F-5	B	2	GA	SO	O	O	Q	-	-	-	LPSI Pump B Minimum Flow Isolation	
(2SI-E1588B)										MT	TNT	3.1.1	5		
SI-120A	2	G-167 Sheet 1	G-6	B	4	GA	MO	O	AI	Q	-	-	-	LPSI Pump A, HPSI Pumps A and A/B and CSS Pump A Minimum Flow Isolation	
										MT	-	-			
SI-120B	2	G-167 Sheet 1	G-5	B	4	GA	MO	O	AI	Q	-	-	-	LPSI Pump B, HPSI Pump B and CSS Pump B Minimum Flow Isolation	
										MT	-	-			

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Safety Injection (SI)

WATERFORD 3 S.E.S.
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VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
SI-121A	2	LOU-1564-G-167 Sheet 1	H-6	B	4	GA	MO	O	AI	Q	-	-	-	LPSI Pump A, HPSI Pumps A and A/B and CSS Pump A Minimum Flow Isolation	
										MT	-	-			
SI-121B	2	G-167 Sheet 1	H-5	B	4	GA	MO	O	AI	Q	-	-	-	LPSI Pump B, HPSI Pump B and CSS Pump B Minimum Flow Isolation	
										MT	-	-			
SI-122A	2	G-167 Sheet 1	F-5	B	8	CK	SA	C	-	CV	-	3.2.4	-	LPSI Pump A Discharge Check	
SI-122B	2	G-167 Sheet 1	E-5	B	8	CK	SA	C	-	CV	-	3.2.4	-	LPSI Pump B Discharge Check	
SI-125A	2	G-167 Sheet 1	F-5	B	10	GA	MO	C		Q*	-	-	-	LPSI Pump A Discharge to Shutdown Cooling Heat Exchanger A	
										MT	-	-			
SI-125B	2	G-167 Sheet 1	E-5	B	10	GA	MO	C		Q*	-	-	-	LPSI Pump B Discharge to Shutdown Cooling Heat Exchanger B	
										MT	-	-			

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Safety Injection (SI)

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VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
SI-129A	2	LOU-1564-G-167 Sheet 1	F-4	B	10	B	AO	O	O	Q*	-	-	-	Shutdown Cooling Heat Exchanger A Bypass	
										MT	NST	3.1.11	-		
SI-129B	2	G-167 Sheet 1	F-4	B	10	B	AO	O	O	Q*	-	-	-	Shutdown Cooling Heat Exchanger B Bypass	
										MT	NST	3.1.11	-		
SI-135A	2	G-167 Sheet 2	E-6	B	8	GA	MO	C	AI	Q*	-	-	-	LPSI Pump A Recirculation	
										MT	-	-			
SI-135B	2	G-167 Sheet 2	E-7	B	8	GA	MO	C	AI	Q*	-	-	-	LPSI Pump B Recirculation	
										MT	-	-			
SI-138A	2	G-167 Sheet 2	B-7	B	6	GL	MO	C	AI	Q	-	-	-	LPSI Header Discharge	
										MT	-	-			

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Safety Injection (SI)

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VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
SI-138B	2	LOU-1564 - G-167 Sheet 2	F-7	B	6	GL	MO	C	AI	Q	-	-	-	LPSI Header Discharge	
										MT	-	-			
SI-139A	2	G-167 Sheet 2	D-7	B	6	GL	MO	C	AI	Q	-	-	-	LPSI Header Discharge	
										MT	-	-			
SI-139B	2	G-167 Sheet 2	H-7	B	6	GL	MO	C	AI	Q	-	-	-	LPSI Header Discharge	
										MT	-	-			
SI-142A	1	G-167 Sheet 2	B-6	AC	8	CK	SA	C	-	CV	CSR	3.1.13 3.1.3	-	LPSI Header Discharge	
										PIV	-	-	-		
SI-142B	1	G-167 Sheet 2	F-6	AC	8	CK	SA	C	-	CV	CSR	3.1.13 3.1.3	-	LPSI Header Discharge	
										PIV	-	-	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Safety Injection (SI)

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VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
SI-143A	1	LOU-1564-G-167 Sheet 2	D-6	AC	8	CK	SA	C	-	CV	CSR	3.1.13	-	LPSI Header Discharge	
												3.1.3	-		
										PIV	-	-	-		
SI-143B	1	G-167 Sheet 2	H-6	AC	8	CK	SA	C	-	CV	CSR	3.1.13	-	LPSI Header Discharge	
												3.1.3	-		
										PIV	-	-	-		
SI-201A	2	G-167 Sheet 1	D-7	C	10	CK	SA	C	-	CV	-	-	-	HPSI Pumps A and A/B Suction Check	
SI-201B	2	G-167 Sheet 1	B-8	C	10	CK	SA	C	-	CV	-	-	-	HPSI Pump B Suction Check	
SI-205A	2	G-167 Sheet 1	D-5	C	2	CK	SA	C	-	CV	-	3.2.3	-	HPSI Pump A Minimum Flow Check	
SI-205B	2	G-167 Sheet 1	C-5	C	2	CK	SA	C	-	CV	-	3.2.3	-	HPSI Pump B Minimum Flow Check	

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VALVES FOR INSERVICE TESTING

SYSTEM: Safety Injection (SI)

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VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
SI-205A/B	2	LOU-1564-G-167 Sheet 1	D-5	C	2	CK	SA	C	-	CV	-	3.2.3	-	HPSI Pump A/B Minimum Flow Check	
SI-207A	2	G-167 Sheet 1	D-5	C	4	CK	SA	C	-	CV	RR	3.1.14	-	HPSI Pump A Discharge Check	
SI-207B	2	G-167 Sheet 1	B-5	C	4	CK	SA	C	-	CV	RR	3.1.14	-	HPSI Pump B Discharge Check	
SI-207A/B	2	G-167 Sheet 1	C-5	C	4	CK	SA	C	-	CV	RR	3.1.14	-	HPSI Pump A/B Discharge Check	
SI-216	2	G-167 Sheet 1	C-4	C	4	CK	SA	C	-	CV	RR	3.1.14	-	HPSI Pumps A and A/B Discharge Check	
SI-219A	2	G-167 Sheet 1	C-4	B	4	GA	MO	O	AI	Q	-	-	-	HPSI Pumps A and A/B Discharge to HPSI Header A	
										MT	-	-			
SI-219B	2	G-167 Sheet 1	B-4	B	4	GA	MO	O	AI	Q	-	-	-	HPSI Pump B Discharge to HPSI Header B	
										MT	-	-			

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VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
SI-225A	2	LOU-1564-G-167 Sheet 2	G-7	B	2	GL	MO	C	AI	Q	-	-	-	HPSI Header A Discharge	
										MT	-	-			
SI-225B	2	G-167 Sheet 2	G-7	B	2	GL	MO	C	AI	Q	-	-	-	HPSI Header B Discharge	
										MT	-	-	-		
SI-226A	2	G-167 Sheet 2	E-7	B	2	GL	MO	C	AI	Q	-	-	-	HPSI Header A Discharge	
										MT	-	-			
SI-226B	2	G-167 Sheet 2	E-7	B	2	GL	MO	C	AI	Q	-	-	-	HPSI Header B Discharge	
										MT	-	-	-		
SI-227A	2	G-167 Sheet 2	C-7	B	2	GL	MO	C	AI	Q	-	-	-	HPSI Header A Discharge	
										MT	-	-			

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VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
SI-227B	2	LOU-1564-G-167 Sheet 2	C-7	B	2	GL	MO	C	AI	Q	-	-	-	HPSI Header B Discharge	
										MT	-	-			
SI-228A	2	G-167 Sheet 2	A-7	B	2	GL	MO	C	AI	Q	-	-	-	HPSI Header A Discharge	
										MT	-	-			
SI-228B	2	G-167 Sheet 2	B-7	B	2	GL	MO	C	AI	Q	-	-	-	HPSI Header B Discharge	
										MT	-	-			
SI-241	1	G-167 Sheet 2	G-6	AC	3	CK	SA	C	-	CV	RR	3.1.14	-	HPSI Header Discharge Check	
										PIV	-	-	-		
SI-242	1	G-167 Sheet 2	E-6	AC	3	CK	SA	C	-	CV	RR	3.1.14	-	HPSI Header Discharge Check	
										PIV	-	-	-		

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VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
SI-243	1	LOU-1564-G-167 Sheet 2	C-6	AC	3	CK	SA	C	-	CV	RR	3.1.14	-	HPSI Header Discharge Check	
										PIV	-	-	-		
SI-244	1	G-167 Sheet 2	A-6	AC	3	CK	SA	C	-	CV	RR	3.1.14	-	HPSI Header Discharge Check	
										PIV	-	-	-		
SI-245	2	G-167 Sheet 1	D-5	C	2	CK	SA	C	-	CV	-	3.2.3	-	HPSI Pump A/B Minimum Flow Check	
SI-301	1	G-167 Sheet 2	H-5	B	2	GA	AO	C		None	-	-	-	Drain	Passive
SI-302	1	G-167 Sheet 2	A-6	B	2	GA	AO	C		None	-	-	-	Drain	Passive
SI-303A	1	G-167 Sheet 2	F-5	B	1	GL	AO	C	C	None	-	-	-	Drain	Passive
SI-303B	1	G-167 Sheet 2	F-3	B	1	GL	AO	C	C	None	-	-	-	Drain	Passive
SI-304A	1	G-167 Sheet 2	B-5	B	1	GL	AO	C	C	None	-	-	-	Drain	Passive

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Safety Injection (SI)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
SI-304B	1	LOU-1564-G-167 Sheet 2	B-3	B	1	GL	AO	C	C	None	-	-	-	Drain	Passive
SI-323A	2	G-167 Sheet 2	H-4	A	1	GL	SO	C	C	Q*	CS	3.1.15	-	Safety Injection Tank 1-A Vent	
												3.1.3	-		
												3.1.4	-		
										MT	TNT	3.1.9	5		
										LT	NPO	3.2.5	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Safety Injection (SI)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
SI-323B	2	LOU-1564-G-167 Sheet 2	H-2	A	1	GL	SO	C	C	Q*	CS	3.1.15	-	Safety Injection Tank 1-B Vent	
												3.1.3	-		
												3.1.4	-		
										MT	TNT	3.1.9	5		
										LT	NPO	3.2.5	-		
SI-324A	2	G-167 Sheet	D-4	A	1	GL	SO	C	C	Q*	CS	3.1.15	-	Safety Injection Tank 2-A Vent	
												3.1.3			
												3.1.4	-		
										MT	TNT	3.1.9	5		
										LT	NPO	3.2.5	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Safety Injection (SI)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
SI-324B	2	LOU-1564 G-167 Sheet 2	D-2	A	1	GL	SO	C	C	Q*	CS	3.1.15	-	Safety Injection Tank 2-B Vent	
												3.1.3	-		
												3.1.4	-		
										MT	TNT	3.1.9	5		
										LT	NPO	3.2.5	-		
SI-325A	2	G-167 Sheet 2	H-4	A	1	GL	SO	C	C	Q*	CS	3.1.15	-	Safety Injection Tank 1-A Vent	
												3.1.3	-		
												3.1.4	-		
										MT	TNT	3.1.9	5		
										LT	NPO	3.2.5	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Safety Injection (SI)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
SI-325B	2	LOU-1564-G-167 Sheet 2	H-2	A	1	GL	SO	C	C	Q*	CS	3.1.15	-	Safety Injection Tank 1B Vent	
												3.1.3	-		
												3.1.4	-		
										MT	TNT	3.1.9	5		
										LT	NPO	3.2.5	-		
SI-326A	2	G-167 Sheet 2	D-4	A	1	GL	SO	C	C	Q*	CS	3.1.15	-	Safety Injection Tank 2A Vent	
												3.1.3	-		
												3.1.4	-		
										MT	TNT	3.1.9	5		
										LT	NPO	3.2.5	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Safety Injection (SI)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
SI-326B	2	LOU-1564-G-167 Sheet 2	D-2	A	1	GL	SO	C	C	Q*	CS	3.1.15	-	Safety Injection Tank 2B Vent	
												3.1.3	-		
												3.1.4	-		
										MT	TNT	3.1.9	5		
										LT	NPO	3.2.5	-		
SI-329A	1	G-167 Sheet 2	F-5	AC	12	CK	SA	C	-	CV	RR	3.1.16	-	Safety Injection Tank 1A Discharge Check	
										PIV	-	-	-		
SI-329B	1	G-167 Sheet 2	F-2	AC	12	CK	SA	C	-	CV	RR	3.1.16	-	Safety Injection Tank 1B Discharge Check	
										PIV	-	-	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Safety Injection (SI)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
SI-330A	1	LOU-1564-G-167 Sheet 2	B-5	AC	12	CK	SA	C	-	CV	RR	3.1.16	-	Safety Injection Tank 2A Discharge Check	
										PIV	-	-	-		
SI-330B	1	G-167 Sheet 2	B-2	AC	12	CK	SA	C	-	CV	RR	3.1.16	-	Safety Injection Tank 2B Discharge Check	
										PIV	-	-	-		
SI-331A	1	G-167 Sheet 2	F-5	B	12	GA	MO	O	AI	Q	CS	3.1.17	-	Safety Injection Tank 1A Discharge Isolation	
												3.1.3	-		
												3.1.4	-		
										MT	-	-	(OPEN)		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Safety Injection (SI)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
SI-331B	1	LOU-1564-G-167 Sheet 2	F-2	B	12	GA	MO	O	AI	Q	CS	3.1.17	-	Safety Injection Tank 1B Discharge Isolation	
												3.1.3	-		
												3.1.4	-		
										MT	-	-	(OPEN)		
SI-332A	1	G-167 Sheet 2	B-5	B	12	GA	MO	O	AI	Q	CS	3.1.17	-	Safety Injection Tank 2A Discharge Isolation	
												3.1.3	-		
												3.1.4	-		
										MT	-	-	(OPEN)		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Safety Injection (SI)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
SI-332B	1	LOU-1564 G-167 Sheet 2	B-2	B	12	GA	MO	O	AI	Q	CS	3.1.17	-	Safety Injection Tank 2-B Discharge Isolation	
												3.1.3	-		
												3.1.4	-		
										MT	-	-	(Open)		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Safety Injection (SI)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
SI-335A	1	LOU--1564-G-167 Sheet 2	F-4	AC	12	CK	SA	C	-	CV	CSR	3.1.18	-	LPSI,HPSI, and SIT Injection Check	
												3.1.3	-		
										PIV	-	-	-		
SI-335B	1	G-167 Sheet 2	E-2	AC	12	CK	SA	C	-	CV	CSR	3.1.18	-	LPSI, HPSI and SIT Injection Check	
												3.1.3	-		
										PIV	-	-	-		
SI-336A	1	G-167 Sheet 2	B-4	AC	12	CK	SA	C	-	CV	CSR	3.1.18	-	LPSI,HPSI and SIT Injection Check	
												3.1.3	-		
										PIV	-	-	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Safety Injection (SI)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
SI-336B	1	LOU-1564-G-167 Sheet 2	B-2	AC	12	CK	SA	C	-	CV	CSR	3.1.18	-	LPSI, HPSI and SIT Injection Check	
												3.1.3	-		
										PIV	-	-	-		
SI-343	2	G-167 Sheet 2	E-6	A	2	GA	AO	C	C	Q*	-	-	-	SIT Drain to RWSP	CTMT Isolation
										MT	-	-	5		
SI-401A	1	G-167 Sheet 2	E-4	A	14	GA	MO	C	AI	Q	CS	3.1.19	-	Shutdown Cooling Suction from RCS	
												3.1.3	-		
												3.1.4	-		
										MT	-	-			
										PIV	-	-	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Safety Injection (SI)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
SI-401B	1	LOU-1564-G-167 Sheet 2	D-4	A	14	GA	MO	C	AI	Q	CS	3.1.19	-	Shutdown Cooling Suction from RCS	
												3.1.3	-		
												3.1.4			
										MT	-	-			
										PIV	-	-	-		
SI-405A	1	G-167 Sheet 2	E-5	A	14	GA	HP	C	C	Q*	CS	3.1.19	-	Shutdown Cooling Suction from RCS	
												3.1.3	-		
												3.1.4	-		
										MT	-	-			
										PIV	-	-	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Safety Injection (SI)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
SI-405B	1	LOU-1564-G-167 Sheet 2	D-5	A	14	GA	HP	C	C	Q*	CS	3.1.19	-	Shutdown Cooling Suction from RCS	
												3.1.3	-		
												3.1.4	-		
										MT	-	-			
										PIV	-	-	-		
SI-406A	2	G-167 Sheet 2	D-5	C	6x8	PR	SA	C	-	SRV	-	-	-	Shutdown Cooling Suction Relief	
SI-406B	2	G-167 Sheet 2	D-5	C	6x8	PR	SA	C	-	SRV	-	-	-	Shutdown Cooling Suction Relief	
SI-407A	2	G-167 Sheet 2	D-6	B	14	GA	MO	C	AI	Q	-	-	-	Shutdown Cooling Suction from RCS	
										MT	-	-			

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Safety Injection (SI)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS / CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
SI-407B	2	LOU-1564-G-167 Sheet 2	D-6	B	14	GA	MO	C	AI	Q	-	-	-	Shutdown Cooling Suction from RCS	
										MT	-	-			
SI-412A	2	G-167 Sheet 1	G-3	B	10	GA	MO	C	AI	Q*	-	-	-	Shutdown Cooling Heat Exchanger A Discharge Isolation	
										MT	-	-			
SI-412B	2	G-167 Sheet 1	G-3	B	10	GA	MO	C	AI	Q*	-	-	-	Shutdown Cooling Heat Exchanger B Discharge Isolation	
										MT	-	-			
SI-415A	2	G-167 Sheet 1	F-3	B	10	B	MO	C	AI	Q*	-	-	-	Shutdown Cooling Flow Control	
										MT	NST	3.1.11	-		
SI-415B	2	G-167 Sheet 1	F-3	B	10	B	MO	C	AI	Q*	-	-	-	Shutdown Cooling Flow Control	
										MT	NST	3.1.11	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Safety Injection (SI)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
SI-502A	2	LOU-1564-G-167 Sheet 1	D-4	B	3	GA	MO	C	AI	Q	-	-	-	HPSI Discharge to RCS Hot Leg Isolation	
										MT	-	-			
SI-502B	2	G-167 Sheet 1	B-4	B	3	GA	MO	C	AI	Q	-	-	-	HPSI Discharge to RCS Hot Leg Isolation	
										MT	-	-			
SI-506A	2	G-167 Sheet 1	D-4	B	3	GL	MO	C	AI	Q	-	-	-	HPSI Discharge to RCS Hot Leg Isolation	
										MT	-	-			
SI-506B	2	G-167 Sheet 1	B-4	B	3	GL	MO	C	AI	Q	-	-	-	HPSI Discharge to RCS Hot Leg Isolation	
										MT	-	-			
SI-510A	1	G-167 Sheet 2	H-6	AC	3	CK	SA	C	-	CV	RR	3.1.14	-	HPSI Discharge to RCS Hot Leg Check	
										PIV	-	-	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Safety Injection (SI)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
SI-510B	1	LOU-1564-G-167 Sheet 2	A-6	AC	3	CK	SA	C	-	CV	RR	3.1.14	-	HPSI Discharge to RCS Hot Leg Check	
										PIV	-	-	-		
SI-512A	1	G-167 Sheet 2	H-5	AC	3	CK	SA	C	-	CV	RR	3.1.20	-	HPSI Discharge to RCS Hot Leg Check	
										PIV	-	-	-		
SI-512B	1	G-167 Sheet 2	A-5	AC	3	CK	SA	C	-	CV	RR	3.1.20	-	HPSI Discharge to RCS Hot Leg Check	
										PIV	-	-	-		
SI-602A	2	G-167 Sheet 1	B-7	B	24	B	AO	C	AI	Q*	-	-	-	SIS Sump Outlet Isolation	
										MT	-	-			
SI-602B	2	G-167 Sheet 1	A-7	B	24	B	AO	C	AI	Q*	-	-	-	SIS Sump Outlet Isolation	
										MT	-	-			

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Safety Injection (SI)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
SI-604A	2	LOU-1564-G-167 Sheet 1	B-8	C	24	CK	SA	C	-	CV	PSO	3.1.21	-	SIS Sump Outlet Check	
SI-604B	2	G-167 Sheet 1	A-8	C	24	CK	SA	C	-	CV	PSO	3.1.21	-	SIS Sump Outlet Check	
SI-701A	3	G-163	B-5	C	16	CK	SA	C	-	CV	ME	3.1.39	-	RWSP Vacuum Relief	
(3SI-V118A)															
SI-701B	3	G-163	C-5	C	16	CK	SA	C	-	CV	ME	3.1.39	-	RWSP Vacuum Relief	
(3SI-V117B)															

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Containment Spray (CS)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
CS-110A	2	LOU-1564 G-163	I-5	C	2	CK	SA	C	-	CV	-	-	-	CS Pump A Minimum Flow Recirculation to RWSP	
CS-110B	2	G-163	F-5	C	2	CK	SA	C	-	CV	-	-	-	CS Pump B Minimum Flow Recirculation to RWSP	
CS-111A	2	G-163	J-5	C	10	CK	SA	C	-	CV	-	-	-	CS Pump A Discharge Check	
CS-111B	2	G-163	F-5	C	10	CK	SA	C	-	CV	-	-	-	CS Pump B Discharge Check	
CS-117A	2	G-163	K-9	C	10	CK	SA	C	-	CV	-	-	-	Shutdown Cooling Heat Exchanger A Discharge Check	
CS-117B	2	G-163	G-9	C	10	CK	SA	C	-	CV	-	-	-	Shutdown Cooling Heat Exchanger B Discharge Check	
CS-125A	2	G-163	H-12	B	10	GA	AO	C	O	Q	-	-	-	CS Pump A Discharge to Header Isolation	
										MT	-	-			
CS-125B	2	G-163	G-12	B	10	GA	AO	C	O	Q	-	-	-	CS Pump B Discharge to Header Isolation	
										MT	-	-			

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Containment Spray (CS)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
CS-128A	2	LOU-1564 G-163	H-13	C	10	CK	SA	C	-	CV	RR	3.1.30	-	CS Pump A Discharge to Header Check	
CS-128B	2	G-163	G-13	C	10	CK	SA	C	-	CV	RR	3.1.30	-	CS Pump B Discharge to Header Check	

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Feedwater (FW)
Including Emergency Feedwater (EFW)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC)	FUNCTION	REMARKS
EFW-204A	3	LOU-1564-G-153 Sheet 2	I-12	C	1	CK	SA	C	-	CV	-	-	-	EFW Pump A Recirculation to CSP	
EFW-204B	3	G-153 Sheet 2	I-17	C	1	CK	SA	C	-	CV	-	-	-	EFW Pump B Recirculation to CSP	
EFW-204A/B	3	G-153 Sheet 2	I-16	C	1½	CK	SA	C	-	CV	-	-	-	EFW Pump A/B Recirculation to CSP	
EFW-207A	3	G-153 Sheet 2	G-13	C	6	CK	SA	C	-	CV	CSP	3.1.22	-	EFW Pump A Discharge Check to Steam Generators	
												3.1.3	-		
EFW-207B	3	G-153 Sheet 2	G-16	C	6	CK	SA	C	-	CV	CSP	3.1.22	-	EFW Pump B Discharge Check to Steam Generators	
												3.1.3	-		
EFW-207A/B	3	G-153 Sheet 2	G-15	C	6	CK	SA	C	-	CV	CSP	3.1.23	-	EFW Pump A/B Discharge Check to Steam Generators	
												3.1.3	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Feedwater (FW)
Including Emergency Feedwater (EFW)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
EFW-2191A	3	LOU-1564-G-153 Sheet 2	E-13	C	6	CK	SA	C	-	CV	CSP	3.1.22	-	EFW Pumps Discharge Check to Steam Generators	
(3FW-V1541A)												3.1.3	-		
EFW-2191B	3	G-153 Sheet 2	E-16	C	6	CK	SA	C	-	CV	CSP	3.1.22	-	EFW Pumps Discharge Check to Steam Generatros	
(3FW-V1542B)												3.1.3	-		
EFW-220A	3	G-153 Sheet 2	E-14	B	4	GA	MO	C	AI	Q	-	-	-	Blowdown Isolation	
										MT	-	-			
EFW-220B	3	G-153 Sheet 2	E-16	B	4	GA	MO	C	AI	Q	-	-	-	Blowdown Isloation	
										MT	-	-			
EFW-223A	2	G-153 Sheet 2	C-14	B	4	GL	AO	C	O	Q*	-	-	-	EFW Flow Control	
										MT	NST	3.1.11	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Feedwater (FW)
Including Emergency Feedwater (EFW)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC)	FUNCTION	REMARKS
EFW-223B	2	LOU-1564 G-153 Sheet 2	D-15	B	4	GL	AO	C	O	Q*	-	-	-	EFW Flow Control	
										MT	NST	3.1.11	-		
EFW-224A	2	G-153 Sheet 2	C-15	B	4	GL	AO	C	O	Q*	-	-	-	EFW Flow Control	
										MT	NST	3.1.11	-		
EFW-224B	2	G-153 Sheet 2	D-16	B	4	GL	AO	C	O	Q*	-	-	-	EFW Flow Control	
										MT	NST	3.1.11	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Feedwater (FW)
Including Emergency Feedwater (EFW)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
EFW-228A	2	G-153 Sheet 2	B-15	B	4	GL	AO	C	O	Q*	-	-	-	EFW Flow Control	
										MT	NST	3.1.11	-		
EFW-228B	2	G-153 Sheet 2	D-16	B	4	GL	AO	C	O	Q*	-	-	-	EFW Flow Control	
										MT	NST	3.1.11	-		
EFW-229A	2	G-153 Sheet 2	B-14	B	4	GL	AO	C	O	Q*	-	-	-	EFW Flow Control	
										MT	NST	3.1.11	-		
EFW-229B	2	G-153 Sheet 2	D-15	B	4	GL	AO	C	O	Q*	-	-	-	EFW Flow Control	
										MT	NST	3.1.11	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Feedwater (FW)
Including Emergency Feedwater (EFW)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
FW-179A	3	LOU-1564-G-153 Sheet 2	B-13	B	4	GA	MO	C	AI	Q	-	-	-	Blowdown Isolation	
										MT	-	-			
FW-179B	3	G-153 Sheet 2	D-14	B	4	GA	MO	C	AI	Q	-	-	-	Blowdown Isolation	
										MT	-	-			
FW-180A	3	G-153 Sheet 2	C-13	C	4	CK	SA	C	-	CV	CS	3.1.24	-	Blowdown Check	
												3.1.3			
FW-180B	3	G-153 Sheet 2	D-14	C	4	CK	SA	C	-	CV	CS	3.1.24	-	Blowdown Check	
												3.1.3	-		
FW-181A	2	G-153 Sheet 2	B-13	B	20	CK	SA	O	-	CV	CS	3.1.25	-	Feedwater Check	
												3.1.3	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Feedwater (FW)
Including Emergency Feedwater (EFW)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
FW-181B	2	LOU-1564-G-153 Sheet 2	D-15	B	20	CK	SA	O	-	CV	CS	3.1.25	-	Feedwater Check	
												3.1.3	-		
FW-184A	2	G-153 Sheet 2	B-14	B	20	GA	HP	O	C	Q	CSP	3.1.26	-	Feedwater Isolation	Hydraulic Opens
												3.1.3	-		Pneumatic Closes
												3.1.4	-		
										MT	-	-	5		
FW-184B	2	G-153 Sheet 2	D-15	B	20	GA	HP	O	C	Q	CSP	3.1.26	-	Feedwater Isolation	Hydraulic Opens
												3.1.3	-		Pneumatic Closes
												3.1.4	-		
										MT	-	-	5		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Main Steam (MS)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
MS-106A	2	LOU-1564-G-151 Sheet 1	B-3	C	8x10 x10	PR	SA	C	-	SRV	-	-	-	Main Steam Safety	
MS-106B	2	G-151 Sheet 1	H-3	C	8x10 x10	PR	SA	C	-	SRV	-	-	-	Main Steam Safety	
MS-108A	2	G-151 Sheet 1	B-4	C	8x10 x10	PR	SA	C	-	SRV	-	-	-	Main Steam Safety	
MS-108B	2	G-151 Sheet 1	H-4	C	8x10 x10	PR	SA	C	-	SRV	-	-	-	Main Steam Safety	
MS-110A	2	G-151 Sheet 1	B-5	C	8x10 x10	PR	SA	C	-	SRV	-	-	-	Main Steam Safety	
MS-110B	2	G-151 Sheet 1	H-5	C	8x10 x10	PR	SA	C	-	SRV	-	-	-	Main Steam Safety	
MS-112A	2	G-151 Sheet 1	B-5	C	8x10 x10	PR	SA	C	-	SRV	-	-	-	Main Steam Safety	
MS-112B	2	G-151 Sheet 1	H-5	C	8x10 x10	PR	SA	C	-	SRV	-	-	-	Main Steam Safety	
MS-113A	2	G-151 Sheet 1	B-6	C	8x10 x10	PR	SA	C	-	SRV	-	-	-	Main Steam Safety	
MS-113B	2	G-151 Sheet 1	H-6	C	8x10 x10	PR	SA	C	-	SRV	-	-	-	Main Steam Safety	

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Main Steam (MS)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC)	FUNCTION	REMARKS
MS-114A	2	LOU-1564-G-151 Sheet 1	B-7	C	8x10 x10	PR	SA	C	-	SRV	-	-	-	Main Steam Safety	
MS-114B	2	G-151 Sheet 1	H-7	C	8x10 x10	PR	SA	C	-	SRV	-	-	-	Main Steam Safety	
MS-116A	2	G-151 Sheet 1	B-8	B	8x12	ANG	AO	C	C	Q	CS	3.1.27	-	Main Steam Atmospheric Dump	Air Opens Spring Closes
												3.1.3	-		Steam Pressure Seats Plug
												3.1.4	-		
										MT	NST	3.1.28	-		
MS-116B	2	G-151 Sheet 1	H-8	B	8x12	ANG	AO	C	C	Q	CS	3.1.27	-	Main Steam Atmospheric Dump	Air Opens Spring Closes
												3.1.3	-		Steam Pressure Seats Plug
												3.1.4	-		
										MT	NST	3.1.28	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Main Steam (MS)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
MS-119A	2	LOU-1564-G-165 Sheet 3	C-17	B	2	GL	MO	C	AI	Q	-	-	-	Drain	CTMT Isolation
										MT	-	-			
MS-119B	2	G-165 Sheet 3	F-18	B	2	GL	MO	C	AI	Q	-	-	-	Drain	CTMT Isolation
										MT	-	-			
MS-120A	2	G-165 Sheet 3	B-17	B	2	GL	MO	O	AI	Q	-	-	-	Drain	CTMT Isolation
										MT	-	-			
MS-120B	2	G-165 Sheet 3	E-8	B	2	GL	MO	O	AI	Q	-	-	-	Drain	CTMT Isolation
										MT	-	-			

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Main Steam (MS)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
MS-124A	2	LOU-1564-G-151 Sheet 1	C-8	B	40	GA	HP	O	AI	Q	CSP	3.1.29	-	Main Steam Isolation Valve (MSIV)	
												3.1.3	-		
												3.1.4	-		
										MT	-	-	3		
MS-124B	2	G-151 Sheet 1	H-8	B	40	GA	HP	O	AI	Q	CSP	3.1.29	-	Main Steam Isolation Valve (MSIV)	
												3.1.3	-		
												3.1.4	-		
										MT	-	-	3		
MS-401A	2	G-151 Sheet 1	F-7	B	6	GA	AO	C	O	Q*	-	-	-	Main Steam to EFW Pump A/B Turbine	
										MT	-	-			

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Main Steam (MS)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
MS-401B	2	LOU-1564-G-151 Sheet 1	J-7	B	6	GA	AO	C	O	Ω*	-	-	-	Main Steam to EFW Pump A/B Turbine	
										MT	-	-			
MS-402A	3	G-151 Sheet 1	F-6	C	6	CK	SA	C	-	CV	-	3.2.6	-	Main Steam to EFW Pump A/B Turbine	
MS-402B	3	G-151 Sheet 1	J-7	C	6	CK	SA	C	-	CV	-	3.2.6	-	Main Steam to EFW Pump A/B Turbine	

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Emergency Generator Diesel Fuel (EGF)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION II VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
EGF-109A	3	LOU-1564 G-164 Sheet 1	J-4	C	2	CK	SA	C	-	CV	-	-	-	Diesel Oil Transfer Pump A Discharge Check	
EGF-109B	3	G-164 Sheet 1	M-4	C	2	CK	SA	C	-	CV	-	-	-	Diesel Oil Transfer Pump B Discharge Check	

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Chilled Water (CHW)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC)	FUNCTION	REMARKS
CHW-114A	3	LOU-1564-G-853 SO3	H-1	C	6	CK	SA	C	-	CV	-	-	-	Chilled Water Pump A Discharge Check	
CHW-114B	3	G-853 SO3	H-14	C	6	CK	SA	O	-	CV	-	-	-	Chilled Water Pump B Discharge Check	
CHW-114A/B	3	G-853 SO3	H-6	C	6	CK	SA	O	-	CV	-	-	-	Chilled Water Pump A/B Discharge Check	
CHW-129A	3	G-853 SO3	J-3	B	3	GL	HO	O	O	Q	-	-	-	Chilled Water Pump A Bypass	
										MT	NST	3.1.11	-		
CHW-129B	3	G-853 SO3	J-12	B	3	GL	HO	O	O	Q	-	-	-	Chilled Water Pump B Bypass	
										MT	NST	3.1.11	-		
CHW-129A/B	3	G-853 SO3	J-8	B	3	GL	HO	O	O	Q	-	-	-	Chilled Water Pump A/B Bypass	
										MT	NST	3.1.11	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Chilled Water (CHW)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
CHW-135A	3	LOU-1564-G-853 SO3	L-7	B	10	B	AO	O	C	Q	-	-	-	Essential Chilled Water Train Separation	
										MT	-	-			
CHW-135B	3	G-853 SO3	L-8	B	10	B	AO	O	C	Q	-	-	-	Essential Chilled Water Train Separation	
										MT	-	-			
CHW-303	3	G-853 SO3	L-7	B	4	B	AO	O	C	Q	-	-	-	Non-Essential Chilled Water Isolation	
										MT	-	-			
CHW-304	3	G-853 SO3	M-7	B	4	B	AO	O	C	Q	-	-	-	Non-Essential Chilled Water Isolation	
										MT	-	-			
CHW-780	3	G-853 SO3	N-7	B	4	B	AO	O	C	Q	-	-	-	Non-Essential Chilled Water Isolation	
										MT	-	-			

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Chilled Water (CHW)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
CHW-781	3	LOU-1564-G-853 SO3	N-7	B	4	B	AO	O	C	Q	-	-	-	Non-Essential Chilled Water Isolation	
										MT	-	-			
CHW-783A	3	G-853 SO3	M-6	B	10	B	AO	O	C	Q	-	-	-	Essential Chilled Water Train Separation	
										MT	-	-			
CHW-783B	3	G-853 SO3	M-8	B	10	B	AO	O	C	Q	-	-	-	Essential Chilled Water Train Separation	
										MT	-	-			

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Component Cooling Water (CC)
Including Auxiliary Component Cooling Water ACC

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
CC-102	3	LOU-1564-G-160 Sheet 1	G-1	C	2	CK	SA	C	-	CV	-	-	-	CCW Surge Tank Overflow Check	
CC-114A	3	G-160 Sheet 2	J-9	B	20	B	AO	O	O	Q*	-	-	-	CCW Pumps Suction Header Isolation	
										MT	-	-			
CC-114B	G	G-160 Sheet 2	J-10	B	20	B	AO	O	O	Q*	-	-	-	CCW Pumps Suction Header Isolation	
										MT	-	-			
CC-115A	3	G-160 Sheet 2	J-9	B	20	B	AO	O	O	Q*	-	-	-	CCW Pumps Suction Header Isolation	
										MT	-	-			
CC-115B	3	G-160 Sheet 2	J-10	B	20	B	AO	O	O	Q*	-	-	-	CCW Pumps Suction Header Isolation	
										MT	-	-			

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Component Cooling Water (CC)
Including Auxiliary Component Cooling Water (ACC)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
CC-123A	3	LOU-1564 G-160 Sheet 2	G-9	C	20	CK	SA	O	-	CV	-	-	-	CCW Pump A Discharge Check	
CC-123B	3	G-160 Sheet 2	G-10	C	20	CK	SA	O	-	CV	-	-	-	CCW Pump B Discharge Check	
CC-123 A/B	3	G-160 Sheet 2	G-10	C	20	CK	SA	O	-	CV	-	-	-	CCW Pump A/B Discharge Check	
CC-126A	3	G-160 Sheet 2	F-9	B	20	B	AO	O	O	Q*	-	-	-	CCW Pumps Discharge Header Isolation	
										MT	-	-			
CC-126B	3	G-160 Sheet 2	F-10	B	20	B	AO	O	O	Q*	-	-	-	CCW Pumps Discharge Header Isolation	
										MT	-	-			
CC-127A	3	G-160 Sheet 2	F-9	B	20	B	AO	O	O	Q*	-	-	-	CCW Pumps Discharge Header Isolation	
										MT	-	-			

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Component Cooling Water (CC)
Including Auxiliary Component Cooling Water (ACC)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS / CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
CC-127B	3	LOU-1564-G-160 Sheet 2	F-10	B	20	B	AO	O	O	Q*	-	-	-	CCW Pumps Discharge Header Isolation	
										MT	-	-	-		
CC-134A	3	G-160 Sheet 2	A-5	B	16	B	AO	C	AI	Q*	-	3.2.7	-	Dry Cooling Tower A Bypass	
										MT	-	-			
CC-134B	3	G-160 Sheet 2	A-14	B	16	B	AO	C	AI	Q*	-	3.2.7	-	Dry Cooling Tower B Bypass	
										MT	-	-			
CC-135A	3	G-160 Sheet 2	A-6	B	20	B	AO	O	AI	Q*	-	3.2.7	-	Dry Cooling Tower A Inlet Isolation	
										MT	-	-			
CC-135B	3	G-160 Sheet 2	A-13	B	20	B	AO	O	AI	Q*	-	3.2.7	-	Dry Cooling Tower B Inlet Isolation	
										MT	-	-			

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Component Cooling Water (CC)
Including Auxiliary Component Cooling Water (ACC)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
CC-181A	3	G-160 Sheet 2	A-4	C	20	CK	SA	O	-	CV	-	-	-	Dry Cooling Tower A Outlet Check	

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Component Cooling Water (CC)
Including Auxiliary Component Cooling Water (ACC)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
CC-181B	3	LOU-1564-G-160 Sheet 2	A-15	C	20	CK	SA	O	-	CV	-	-	-	Dry Cooling Tower B Outlet Check	
CC-200A	3	G-160 Sheet 2	K-7	B	16	B	AO	O	C	Q	-	3.2.7	-	Non-Essential CCW Isolation and Essential CCW Train Separation	SIAS Closes
										MT	-	-			
CC-200B	3	G-160 Sheet 2	L-7	B	16	B	AO	O	C	Q	-	3.2.7	-	Non-Essential CCW Isolation and Essential CCW Train Separation	SIAS Closes
										MT	-	-			
CC-301A	3	G-160 Sheet 2	J-2	B	6	B	AO	O	AI	Q	-	-	-	Chiller Inlet Isolation	
										MT	-	-			
CC-301B	3	G-160 Sheet 2	J-4	B	6	B	AO	O	AI	Q	-	-	-	Chiller Inlet Isolation	
										MT	-	-			

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Component Cooling Water (CC)
Including Auxiliary Component Cooling Water (ACC)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
CC-302A	3	LOU-1564-G-160 Sheet 2	K-2	C	6	CK	SA	O	-	CV	-	-	-	Chiller In'et Check	
CC-302B	3	G-160 Sheet 2	K-4	C	6	CK	SA	O	-	CV	-	-	-	Chiller Inlet Check	
CC-320A	3	G-160 Sheet 2	N-1	B	6	B	AO	C	AI	Q	-	-	-	Chiller Discharge to Wet Tower A Isolation	
										MT	-	-			
CC-320B	3	G-160 Sheet 2	N-1	B	6	B	AO	C	AI	Q	-	-	-	Chiller Discharge to Wet Tower B Isolation	
										MT	-	-			
CC-321A	3	G-160 Sheet 2	N-1	C	6	CK	SA	C	-	CV	-	-	-	Chiller Discharge to Wet Tower A Check	
CC-321B	3	G-160 Sheet 2	N-1	C	6	CK	SA	C	-	CV	-	-	-	Chiller Discharge to Wet Tower B Check	
CC-322A	3	G-160 Sheet 2	N-1	B	6	B	AO	O	AI	Q	-	-	-	Chiller Discharge to CCW Pump Suction Header	
										MT	-	-			

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Component Cooling Water (CCW)
Including Auxiliary Component Cooling Water (ACC)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
CC-322B	3	LOU-1564-G-160 Sheet 2	N-6	B	6	B	AO	O	AI	Q	-	-	-	Chiller Discharge to CCW Pump Suction Header	
										MT	-	-			
CC-323A	3	G-160 Sheet 2	N-1	C	6	CK	SA	O	-	CV	-	-	-	Chiller Discharge to CCW Pump Suction Header	
CC-323B	3	G-160 Sheet 2	N-6	C	6	CK	SA	O	-	CV	-	-	-	Chiller Discharge to CCW Pump Suction Header	
CC-413A	3	G-160 Sheet 2	N-7	B	6	B	AO	C	O	Q	-	-	-	CCW from Diesel Generator to CCW Pump Suction Header	
										MT	-	-			
CC-413B	3	G-160 Sheet 2	N-11	B	6	B	AO	C	O	Q	-	-	-	CCW from Diesel Generator to CCW Pump Suction Header	
										MT	-	-			
CC-501	3	G-160 Sheet 2	I-4	B	12	B	AO	O	C	Q	-	-	-	Non-Essential CCW Isolation	
										MT	-	-			

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Component Cooling Water (CCW)
Including Auxiliary Component Cooling Water (ACC)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
CC-562	3	LOU-1564-G-160 Sheet 2	J-9	B	12	B	AO	O	C	Q	-	-	-	Non-Essential CCW Isolation	
										MT	-	-			
CC-563	3	G-160 Sheet 2	J-10	B	16	B	AO	C	C	Q	-	3.2.7	-	Non-Essential CCW Isolation	SIAS Closes
										MT	-	-			
CC-641	2	G-160 Sheet 1	E-4	B	10	B	AO	O	O	Q*	CS	3.1.31	-	CCW to Reactor Coolant Pumps and CEDM's	CIAS Closes,
												3.1.3	-		but has over-ride
												3.1.4	-		
										MT	-	-	5		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Component Cooling Water (CCW)
Including Auxiliary Component Cooling Water (ACC)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
CC-710	2	LOU-1564-G-160 Sheet 1	D-1	B	10	B	AO	O	O	Q*	CS	3.1.31	-	CCW from Reactor Coolant Pumps and CEDM's	CIAS Closes,
												3.1.3	-		but has over-ride
												3.1.4	-		
										MT	-	-	5		
CC-713	2	G-160 Sheet 1	D-1	B	10	B	AO	O	O	Q*	CS	3.1.31	-	CCW from Reactor Coolant Pumps and CEDM's	CIAS Closes
												3.1.3	-		but has over-ride
												3.1.4	-		
										MT	-	-	5		
CC-727	3	G-160 Sheet 2	L-9	B	16	B	AO	O	C	Q	-	3.2.7	-	Essential CCW Train Separation	SIAS Closes
										MT	-	-			

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Component Cooling Water (CCW)
Including Auxiliary Component Cooling Water (ACC)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
CC-807A	2	LOU-1364-G-160 Sheet 1	E-8	B	8	B	AO	O	O	Q*	-	-	-	CCW to CTMT Fan Cooler 3C	
										MT	-	-			
CC-807B	2	G-160 Sheet 1	E-11	B	8	B	AO	O	O	Q*	-	-	-	CCW to CTMT Fan Cooler 3B	
										MT	-	-			
CC-808A	2	G-160 Sheet 1	E-9	B	8	B	AO	O	O	Q*	-	-	-	CCW to CTMT Fan Cooler 3A	
										MT	-	-			
CC-808B	2	G-160 Sheet 1	E-10	B	8	B	AO	O	O	Q*	-	-	-	CCW to CTMT Fan Cooler 3D	
										MT	-	-			
CC-822A	2	G-160 Sheet 1	E-9	B	8	B	AO	O	O	Q*	-	-	-	CCW from CTMT Fan Cooler 3A	
										MT	-	-			

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Component Cooling Water (CCW)
Including Auxiliary Component Cooling Water (ACC)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
CC-822B	2	LOU-1564-G-160 Sheet 1	E-10	B	8	B	AO	O	O	Q*	-	-	-	CCW from CTMT Fan Cooler 3D	
										MT	-	-			
CC-823A	2	G-160 Sheet 1	E-9	B	8	B	AO	O	O	Q*	-	-	-	CCW from CTMT Fan Cooler 3C	
										MT	-	-			
CC-823B	2	G-160 Sheet 1	E-11	B	8	B	AO	O	O	Q*	-	-	-	CCW from CTMT Fan Cooler 3B	
										MT	-	-			
CC-835A	3	G-160 Sheet 1	E-6	B	8	B	AO	O	O	Q*	-	-	-	CCW Flow Controller from CTMT Fan Coolers	
										MT	NST	3.1.11			
CC-835B	3	G-160 Sheet 1	F-9	B	8	B	AO	O	O	Q*	-	-	-	CCW Flow Controller from CTMT Fan Coolers	
										MT	NST	3.1.11			

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Component Cooling Water (CCW)
Including Auxiliary Component Cooling Water (ACC)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
CC-963A	3	LOU-1564-G-160 Sheet 1	M-3	B	10	B	AO	C	O	Q	-	-	-	CCW from Shutdown Heat Exchanger A	
										MT	-	-			
CC-963B	3	G-160 Sheet 1	N-3	B	10	B	AO	C	O	Q	-	-	-	CCW from Shutdown Heat Exchanger B	
										MT	-	-			

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Component Cooling Water (CCW)
Including Auxiliary Component Cooling Water (ACC)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
ACC-108A	3	LOU-1564-G-160 Sheet 2	F-3	C	16	CK	SA	C	-	CV	-	-	-	ACCW Pump A Discharge Check	
ACC-108B	3	G-160 Sheet 2	F-15	C	16	CK	SA	C	-	CV	-	-	-	ACCW Pump B Discharge Check	
ACC-112A	3	G-160 Sheet 2	K-2	B	6	B	AO	C	AI	Q	-	-	-	ACCW Pump A Discharge to Chillers	
										MT	-	-			
ACC-112B	3	G-160 Sheet 2	K-4	B	6	B	AO	C	AI	Q	-	-	-	ACCW Pump B Discharge to Chillers	
										MT	-	-			
ACC-113A	3	G-160 Sheet 2	K-2	C	6	CK	SA	C	-	CV	-	-	-	ACCW Pump A Discharge to Chillers	
ACC-113B	3	G-160 Sheet 2	K-4	C	6	CK	SA	C	-	CV	-	-	-	ACCW Pump B Discharge to Chillers	
ACC-126A	3	G-160 Sheet 2	F-5	B	12	B	AO	O	O	Q	-	-	-	ACCW Train A Temperature Controllers	
										MT	NST	3.1.11	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Component Cooling Water (CCW)
Including Auxiliary Component Cooling Water (ACC)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
ACC-126B	3	LOU-1564-G-160 Sheet 2	F-12	B	12	B	AO	O	O	Q	-	-	-	ACCW Train B Temperature Controller	
										MT	NST	3.1.11	-		

Note: Air Conditioning includes the following systems:

ANP - Annulus Negative Pressure

CAP - Containment Atmospheric Purge

CAR - Containment Atmospheric Release

CVR - Containment Vacuum Relief

HVC - Control Room HVAC

HVR - Reactor Auxiliary Building HVAC

SBV - Shield Building Ventilation

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Annulus Negative Pressure (ANP)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
ANP-101	3	LOU-1564-G-853 SO2	H-7	B	6	B	AO	O	C	Q	-	-	-	Annulus to ANP Fans Suction	Tech. Spec. 4.6.6.2
										MT	-	-			
ANP-102	3	G-853 SO2	H-7	B	6	B	AO	O	C	Q	-	-	-	Annulus to ANP Fans Suction	Tech. Spec. 4.6.6.2
										MT	-	-			

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Containment Atmospheric Purge (CAP)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
CAP-102	2	LOU-1564-G-853 SO2	G-11	B	48	B	AO	C	C	Q	-	-	-	Purge Supply to Containment	
										MT	-	-	5		
CAP-103	2	G-853 SO2	G-10	A	48	B	AO	C	C	Q	-	-	-	Purge Supply to Containment	CTMT Isolation
										MT	-	-	5		
										LTP	-	-	-		
CAP-104	2	G-853 SO2	G-10	A	48	B	AO	C	C	Q	-	-	-	Purge Supply to Containment	CTMT Isolation
										MT	-	-	5		
										LTP	-	-	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Containment Atmospheric Purge (CAP)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
CAP-203	2	LOU-1564-G-853 SO2	G-6	A	48	B	AO	C	C	Q	-	-	-	Purge Exhaust from Containment	CTMT Isolation
										MT	-	-	5		
										LTP	-	-	-		
CAP-204	2	G-853 SO2	G-6	A	48	B	AO	C	C	Q	-	-	-	Purge Exhaust from Containment	CTMT Isolation
										MT	-	-	5		
										LTP	-	-	-		
CAP-205	2	G-853 SO2	H-6	B	48	B	AO	C	C	Q	-	-	-	Purge Exhaust from Containment	
										MT	-	-	5		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Containment Atmospheric Release (CAR)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
CAR-101A	2	LOU-1564-G-853 SO2	H-9	A	4	B	M	C	-	LT	-	-	-	CAR Supply Isolation	CTMT Isolation
CAR-101B	2	G-853 SO2	H-9	A	4	B	M	C	-	LT	-	-	-	CAR Supply Isolation	CTMT Isolation
CAR-102A	2	G-853 SO2	G-9	AC	4	CK	SA	C	-	CV	-	-	-	CAR Supply Check	CTMT Isolation
										LT	-	-	-		
CAR-102B	2	G-853 SO2	G-9	AC	4	CK	SA	C	-	CV	-	-	-	CAR Supply Check	CTMT Isolation
										LT	-	-	-		
CAR-201A	2	G-853 SO2	E-4	A	4	B	MO	C	AI	Q	-	-	-	CAR Exhaust Isolation	CTMT Isolation
										MT	-	-	5		
										LT	-	-	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Containment Atmospheric Release (CAR)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
CAR-201B	2	LOU-1564-G-853 SO2	E-4	A	4	B	MO	C	AI	Q	-	-	-	CAR Exhaust Isolation	CTMT Isolation
										MT	-	-	5		
										LT	-	-	-		
CAR-202A	2	G-853 SO2	E-3	A	4	B	M	C	-	LT	-	-	-	CAR Exhaust Isolation	CTMT Isolation
CAR-202B	2	G-853 SO2	E-3	A	4	B	M	C	-	LT	-	-	-	CAR Exhaust Isolation	CTMT Isolation
CAR-204A	2	G-853 SO2	E-3	B	4	B	MO	C	AI	Q	-	-	-	CAR Exhaust Isolation	CTMT Isolation
										MT	-	-			
CAR-204B	2	G-853 SO2	E-3	B	4	B	MO	C	AI	Q	-	-	-	CAR Exhaust Isolation	CTMT Isolation
										MT	-	-			

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Containment Vacuum Relief (CVR)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
CVR-101	2	LOU-1564-G-853 SO2	E-10	A	24	B	AO	C	C	Q	-	-	-	Vacuum Relief Isolation	CTMT Isolation
										MT	-	-	5		
										LT	-	-	-		
CVR-102	2	G-853 SO2	E-10	AC	24	CK	SA	C	-	CV	-	-	-	Vacuum Relief Isolation	CTMT Isolation
										LT	-	-	-		
CVR-201	2	G-853 SO2	H-8	A	24	B	AO	C	C	Q	-	-	-	Vacuum Relief Isolation	CTMT Isolation
										MT	-	-	5		
										LT	-	-	-		
CVR-202	2	G-853 SO2	H-8	AC	24	CK	SA	C	-	CV	-	-	-	Vacuum Relief Check	CTMT Isolation
										LT	-	-	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Control Room HVAC (HVC)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
HVC-101	3	LOU-1564 G-853 SO1	J-13	B	16	B	AO	O	C	Q	-	-	-	Normal AH-12 Supply Isolation	
										MT	-	-			
HVC-102	3	G-853 SO1	J-13	B	16	B	AO	O	C	Q	-	-	-	Normal AH-12 Supply Isolation	
										MT	-	-			
HVC-201A	3	G-853 SO1	J-11	B	8	B	MO	C	AI	Q	-	-	-	Emergency AH-12 Supply Isolation	
										MT	-	-			
HVC-201B	3	G-853 SO1	J-11	B	8	B	MO	C	AI	Q	-	-	-	Emergency AH-12 Supply Isolation	
										MT	-	-			
HVC-202A	3	G-853 SO1	J-11	B	8	B	MO	C	AI	Q	-	-	-	Emergency AH-12 Supply Isolation	
										MT	-	-			

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Control Room HVAC (HVC)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
HVC-202B	3	LOU-1564-G-853 SO1	J-11	B	8	B	MO	C	AI	Q	-	-	-	Emergency AH-12 Supply Isolation	
										MT	-	-			
HVC-203A	3	G-853 SO1	J-11	B	8	B	MO	C	AI	Q	-	-	-	Emergency S-8 Supply Isolation	
										MT	-	-			
HVC-203B	3	G-853 SO1	K-11	B	8	B	MO	C	AI	Q	-	-	-	Emergency S-8 Supply Isolation	
										MT	-	-			
HVC-204A	3	G-853 SO1	J-11	B	8.	B	MO	C	AI	Q	-	-	-	Emergency S-8 Supply Isolation	
										MT	-	-			
HVC-204B	3	G-853 SO1	K-11	B	8	B	MO	C	AI	Q	-	-	-	Emergency S-8 Supply Isolation	
										MT	-	-			

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Control Room HVAC (HVC)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
HVC-306	3	LOU-1564-G-853 SO1	J-17	B	12	B	AO	O	C	Q	-	-	-	E-34 (3A and 3E) Discharge Isolation	
										MT	-	-			
HVC-307	3	G-853 SO1	J-17	B	12	B	AO	O	C	Q	-	-	-	E-34 (3A and 3B) Discharge Isolation	
										MT	-	-			
HVC-313	3	G-853 SO1	I-14	B	12	B	AO	O	C	Q	-	-	-	E-42 Discharge Isolation	
										MT	-	-			
HVC-314	3	G-853 SO1	I-14	B	12	B	AO	O	C	Q	-	-	-	E-42 Discharge Isolation	
										MT	-	-			

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Reactor Auxiliary Building HVAC (HVR)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
HVR-104	3	LOU-1564-G-853 SO1	E-5	B	30	B	AO	O	C	Q	-	-	-	Pipe Penetration Area Isolation	
										MT	-	-			
HVR-105	3	G-853 SO1	E-5	B	30	B	AO	O	C	Q	-	-	-	Pipe Penetration Area Isolation	
										MT	-	-			
HVR-106	3	G-853 SO1	I-6	B	36	B	AO	O	C	Q	-	-	-	Controlled Ventilation Area Isolation	
										MT	-	-			
HVR-107	3	G-853 SO1	I-6	B	36	B	AO	O	C	Q	-	-	-	Controlled Ventilation Area Isolation	
										MT	-	-			
HVR-108	3	G-853 SO1	E-1	B	42	B	AO	O	C	Q	-	-	-	Controlled Ventilation Area Isolation	
										MT	-	-			

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Reactor Auxiliary Building HVAC (HVR)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
HVR-109	3	LOU-1564-G-853 SO1	D-1	B	42	B	AO	O	C	Q	-	-	-	Controlled Ventilation Area Isolation	
										MT	-	-			
HVR-110	3	G-853 SO1	D-1	B	12	B	AO	O	C	Q	-	-	-	Pipe Chase Area Isolation	
										MT	-	-			
HVR-111	3	G-853 SO1	D-1	B	12	B	AO	O	C	Q	-	-	-	Pipe Chase Area Isolation	
										MT	-	-			
HVR-301	3	G-853 SO1	I-5	B	18	B	AO	C	O	Q	-	-	-	Controlled Ventilation Area Isolation	
										MT	-	-			
HVR-302	3	G-853 SO1	E-1	B	14	B	AO	C	O	Q	-	-	-	Controlled Ventilation Area Isolation	
										MT	-	-			

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Reactor Auxiliary Building HVAC (HVR)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
HVR-304A	3	LOU-1564-G-853 SO1	B-1	B	18	B	MO	C	AI	Q	-	-	-	E-23(3A) Suction Isolation	
										MT	-	-			
HVR-304B	3	G-853 SO1	A-1	B	18	B	MO	C	AI	Q	-	-	-	E-23 (3B) Suction Isolation	
										MT	-	-			
HVR-313A	3	G-853 SO1	B-2	B	18	B	MO	C	AI	Q	-	-	-	E-23 (3A) Suction Isolation	
										MT	-	-			
HVR-313B	3	G-853 SO1	A-2	B	8	B	MO	C	AI	Q	-	-	-	E-23 (3B) Suction Isolation	
										MT	-	-			

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Shield Building Ventilation (SBV)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
SBV-101A	2	LOU-1564-G-853 SO2	F-4	B	30	B	MO	C	AI	Q	-	-	-	SBV Fan A Suction Isolation	
										MT	-	-			
SBV-101B	2	G-853 SO2	G-4	B	30	B	MO	C	AI	Q	-	-	-	SBV Fan B Suction Isolation	
										MT	-	-			
SBV-110A	2	G-853 SO2	H-2	B	30	B	MO	C	AI	Q	-	-	-	SBV Fan A Suction Isolation	
										MT	-	-			
SBV-110B	2	G-853 SO2	H-3	B	30	B	MO	C	AI	Q	-	-	-	SBV Fan B Suction Isolation	
										MT	-	-			
SBV-112A	2	G-853 SO2	F-2	C	30	CK	SA	C	-	CV	-	-	-	SBV Fan A Discharge to Shield Building Check	
SBV-112B	2	G-853 SO2	F-2	C	30	CK	SA	C	-	CV	-	-	-	SBV Fan B Discharge to Shield Building Check	

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Shield Building Ventilation (SBV)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
SBV-113A	2	LOU-1564-G-853 SO2	F-4	B	30	B	MO	C	AI	Q	-	-	-	SBV Fan A Discharge to Shield Building Isolation	
										MT	-	-			
SBV-113B	2	G-853 SO2	F-4	B	30	B	MO	C	AI	Q	-	-	-	SBV Fan B Discharge to Shield Building Isolation	
										MT	-	-			
SBV-114A	2	G-853 SO1	D-16	B	30	B	MO	C	AI	Q	-	-	-	SBV Fan A Discharge to Stack Isolation	
										MT	-	-			
SBV-114B	2	G-853 SO1	D-18	B	30	B	MO	C	AI	Q	-	-	-	SBV Fan B Discharge to Stack Isolation	
										MT	-	-			
SBV-115A	2	G-853 SO1	E-16	B	4	B	MO	C	AI	Q	-	-	-	SBV Fan A Discharge to Stack Isolation	
										MT	-	-			

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Shield Building Ventilation (SBV)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
SBV-115B	2	LOU-1564-G-853 SO1	D-18	B	4	B	MO	C	AI	Q	-	-	-	SBV Fan B Discharge to Stack Isolation	
										MT	-	-			

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Instrument Air (IA)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
IA-908	2	LOU-1564-G-157 Sheet 1	D-12	A	2	GL	AO	O	C	Q	CS	3.1.32	-	Containment Instrument Air Supply Isolation	CTMT Isolation
												3.1.3	-		
												3.1.4	-		
										MT	-	-	5		
										LT	-	-	-		
IA-909	2	G-157 Sheet 1	D-12	AC	2	CK	SA	O	-	CV	RR	3.1.33	-	Containment Instrument Air Supply Check	CTMT Isolation
										LT	-	-			

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Station Air (SA)
Including Leak Rate Testing (LRT)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
SA-908	2	LOU-1564-G-157 Sheet 2	E-12	A	2	GA	M	LC	-	Q	NT	3.1.34	-	Containment Station Air Supply Isolation	CTMT Isolation
										LT	-	-	-		
SA-909	2	G-157 Sheet 2	D-12	AC	2	CK	SA	C	-	CV	NT	3.1.35	-	Containment Station Air Supply Check	CTMT Isolation
										LT	-	-	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Leak Rate Testing (LRT)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
LRT-101	2	LOU-1564-G-164 Sheet 1	N-12	A	10	GA	M	LC	-	Q	NT	3.1.34	-	Containment Leak Rate Test Valve	CTMT Isolation
										LT	-	-	-		
LRT-102	2	G-164 Sheet 1	N-12	A	1	GL	M	LC	-	Q	NT	3.1.34	-	Containment Leak Rate Test Valve	CTMT Isolation
										LT	-	-	-		
LRT-103	2	G-164 Sheet 1	N-12	A	10	GA	M	LC	-	Q	NT	3.1.34	-	Containment Leak Rate Test Valve	CTMT Isolation
										LT	-	-	-		
LRT-201	2	G-164 Sheet 1	M-14	A	1	GL	M	LC	1	Q	NT	3.1.34	-	Integiated Leakage Rate Test (ILRT) Pressure Test Tap	CTMT Isolation
										LT	-	-	-		
LRT-202	2	G-164 Sheet 1	M-14	A	1	GL	M	LC	1	Q	NT	3.1.34	-	Integrated Leakage Rate Test (ILRT) Pressure Test Tap	CTMT Isolation
										LT	-	-	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Leak Rate Testing (LRT)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
LRT-203	2	LOU-1564-G-164 Sheet 1	M-14	A	1	GL	M	LC	-	Q	NT	3.1.34	-	Controlled Leakage Rate Test Bleedoff	CTMT Isolation
										LT	-	-	-		
LRT-204	2	G-164 Sheet 1	M-14	A	1	GL	M	LC	-	Q	NT	3.1.34	-	Controlled Leakage Rate Test Bleedoff	CTMT Isolation
										LT	-	-	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Area Radiation Monitoring (ARM)
(Ebasco Designation - Containment Air (CA))

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
ARM-103	2	LOU-1564-G-164 Sheet 2	J-15	A	3/4	GL	SO	O	C	O	CS	3.1.37	-	Containment Radiation Monitor Isolation	CTMT Isolation
(2CA-E606A)												3.1.3	-		
												3.1.4	-		
										MT	-	-			
										LT	-	-	-		
ARM-104	2	G-164 Sheet 2	J-15	AC	3/4	CK	SA	O	-	CV	RR	3.1.33	-	Containment Radiation Monitor Check	CTMT Isolation
(2CA V607)										LT	-	-	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Area Radiation Monitoring (ARM)
(Ebasco Designation - Containment Air (CA))

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
ARM-109	2	LOU-1564-G-164 Sheet 2	J-15	A	3/4	GL	SO	O	C	Q	CS	3.1.37	-	Containment Radiation Monitor Isolation	CTMT Isolation
(2CA-E604B)												3.1.3	-		
												3.1.4	-		
										MT	-	-			
										LT	-	-	-		
ARM-110	2	G-164 Sheet 2	J-15	A	3/4	GL	SO	O	C	Q	CS	3.1.37	-	Containment Radiation Monitor Isolation	CTMT Isolation
(2CA-E605A)												3.1.3	-		
												3.1.4	-		
										MT	-	-			
										LT	-	-	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Fuel Pool Cooling and Purification (FS)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
FS-405	2	LOU-1564-G-163	H-13	A	3	GA	M	LC	-	Q	NT	3.1.34	-	Refueling Cavity Inlet Isolation	CTMT Isolation
										LT	-	-	-		
FS-406	2	G-163	H-14	A	3	GA	M	LC	-	Q	NT	3.1.34	-	Refueling Cavity Inlet Isolation	CTMT Isolation
										LT	-	-	-		
FS-415	2	G-163	I-14	A	6	D	M	LC	-	Q	NT	3.1.34	-	Refueling Cavity Drain Pump Discharge Isolation	CTMT Isolation
										LT	-	-	-		
FS-416	2	G-163	I-13	A	6	D	M	LC	-	Q	NT	3.1.34	-	Refueling Cavity Drain Pump Discharge Isolation	CTMT Isolation
										LT	-	-	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Gaseous Waste Management (GWM) Including Sump Pump (SP)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS / CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
GWM-104	2	LOU-1564-G-170 Sheet 2	F-7	A	1	D	AO	O	C	Q*	-	-	-	Reactor Coolant Drain Tank Vent to Gas Surge Tank	CTMT Isolation
										MT	-	-			
										LT	-	-	-		
GWM-105	2	G-170 Sheet 2	F-7	A	1	D	AO	O	C	Q*	-	-	-	Reactor Coolant Drain Tank Vent to Gas Surge Tank	CTMT Isolation
										MT	-	-			
										LT	-	-	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Sump Pump (SP)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
SP-105	2	LOU-1564-G-173	D-9	A	1½	D	AO	O	C	Q	-	-	-	Containment Sump Pumps Discharge Isolation	CTMT Isolation
										MT	-	-			
										LT	-	-	-		
SP-106	2	G-173	D-10	A	1½	D	AO	O	C	Q	-	-	-	Containment Sump Pumps Discharge Isolation	CTMT Isolation
										MT	-	-			
										LT	-	-	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Boron Management (BM)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
BM-109	2	LOU-1564-G-171 Sheet 1	E-6	A	3	D	AO	O	C	Q*	-	-	-	Reactor Drain Tank Discharge to Reactor Drain Tank Pump Suction	CTMT Isolation
										MT	-	-			
										LT	-	-	-		
BM-110	2	G-171 Sheet 1	E-6	A	3	D	AO	O	C	Q*	-	-	-	Reactor Drain Tank Discharge tc Reactor Drain Tank Pump Suction	CTMT Isolation
										MT	-	-			
										LT	-	-	-		

Note: Demineralized Water includes the following systems:

CMU - Condensate Makeup and Storage

PMU - Primary Makeup

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Condensate Makeup & Storage (CMU)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
CMU-244	2	LOU-1564 G-161 Sheet 2	E-12	A	1½	GL	M	LC	-	Q*	NT	3.1.34	-	Condensate Supply to Containment	CTMT Isolation
										LT	-	-	-		
CMU-245	2	G-161 Sheet 2	E-12	AC	1½	CK	SA	C	-	CV	NT	3.1.35	-	Condensate Supply to Containment	CTMT Isolation
(2DW-V643)										LT	-	-	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Primary Makeup (PMU)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
PMU-151	2	LOU-1564-G-161 Sheet 2	E-15	A	2	GL	M	LC	-	Q	NT	3.1.34	-	Primary Makeup Supply to Containment	CTMT Isolation
										LT	-	-	-		
PMU-152	2	G-161 Sheet 2	E-15	AC	2	CK	SA	C	-	CV	NT	3.1.35	-	Primary Makeup Supply to Containment	CTMT Isolation
										LT	-	-	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Nitrogen Gas (NG)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
NG-157	2	LOU-1564-G-166 Sheet 1	F-9	A	1	GL	AO	O	C	Q*	-	-	-	Nitrogen Supply to Containment	CTMT Isolation
										MT	-	-			
										LT	-	-	-		
NG-158	2	G-166 Sheet 1	F-10	AC	1	CK	SA	C	-	CV	CS	3.1.35	-	Nitrogen Supply to Containment	CTMT Isolation
												3.1.3	-		
												3.1.4	-		
										LT	-	-	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Nitrogen Gas (NG)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
NG-161A	2	G-167 Sheet 2	G-4	A	1	GL	AO	C	C	Q*	CS	3.1.36	-	Nitrogen Supply to Safety Injection Tank 1-A	Passive
												3.1.3	-		
												3.1.4	-		
										MT	-	-			
										LT	NPO	3.2.5	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Nitrogen Gas (NG)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
NG-161B	2	LOU-1564 G-167 Sheet 2	G-2	A	1	GL	AO	C	C	Q*	CS	3.1.36	-	Nitrogen Supply to Safety Injection Tank 1-B	Passive
												3.1.3	-		
												3.1.4	-		
										MT	-	-			
										LT	NPO	3.2.5	-		
NG-162A	2	G-167 Sheet 2	C-4	A	1	GL	AO	C	C	Q*	CS	3.1.36	-	Nitrogen Supply to Safety Injection Tank 2-A	Passive
												3.1.3	-		
												3.1.4	-		
										MT	-	-			
										LT	NPO	3.2.5	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Nitrogen Gas (NG)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
NG-162B	2	LOU-1564-G-167 Sheet 2	C-2	A	1	GL	AO	C	C	Q*	CS	3.1.36	-	Nitrogen Supply to Safety Injection Tank 2-B	Passive
												3.1.3	-		
												3.1.4	-		
										MT	-	-			
										LT	NPO	3.2.5	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Hydrogen Recombiner & Analyzer (HRA)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
HRA-101A	2	LOU-1564 B-430 SP-01	-	B	3/8	GL	SO	C	C	Q	-	3.2.8	-	Containment Dome Sample A	
(2HA-E601A)										MT	NST	3.1.38	-		
HRA-101B	2	B-430 SP-01	-	B	3/8	GL	SO	C	C	Q	-	3.2.8	-	Containment Dome Sample B	
(2HA-E621B)										MT	NST	3.1.38	-		
HRA-102A	2	B-430 SP-01	-	B	3/8	GL	SO	C	C	Q	-	3.2.8	-	Below Missile Shield Sample A	
(2HA-E607A)										MT	NST	3.1.38	-		
HRA-102B	2	B-430 SP-01	-	B	3/8	GL	SO	C	C	Q	-	3.2.8	-	Below Missile Shield Sample B	
(2HA-E627B)										MT	NST	3.1.38	-		
HRA-103A	2	B-430 SP-01	-	B	3/8	GL	SO	C	C	Q	-	3.2.8	-	Above Regenerative Heat Exchanger Sample A	
(2HA-E606A)										MT	NST	3.1.38	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Hydrogen Recombiner and Analyzer (HRA)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
HRA-103B	2	LOU-1564-B-430 SP-01	-	B	3/8	GL	SO	C	C	Q	-	3.2.8	-	Above Regenerative Heat Exchanger Sample B	
(2HA-E626B)										MT	NST	3.1.38	-		
HR -104A	2	B-430 SP-01	-	B	3/8	GL	SO	C	C	Q	-	3.2.8	-	Above Steam Generator #2 Compartment Sample A	
(2HA-E605A)										MT	NST	3.1.38	-		
HRA-104B	2	B-430 SP-01	-	B	3/8	GL	SO	C	C	Q	-	3.2.8	-	Above Steam Generator #2 Compartment Sample B	
(2HA-E625B)										MT	NST	3.1.38	-		
HRA-105A	2	B-430 SP-01	-	B	3/8	GL	SO	C	C	Q	-	3.2.8	-	Above Steam Generator #1 Compartment Sample A	
(2HA-E604A)										MT	NST	3.1.38	-		
HRA-105B	2	B-430 SP-01	-	B	3/8	GL	SO	C	C	Q	-	3.2.8	-	Above Steam Generator #1 Compartment Sample B	
(2HA-E624B)										MT	NST	3.1.38	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Hydrogen Recombiner and Analyzer (HRA)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
HRA-106A	2	LOU-1564-B-430 SP-01	-	B	3/8	GL	SO	C	C	Q	-	3.2.8	-	Above Pressurizer Sample A	
(2HA-E603A)										MT	NST	3.1.38	-		
HRA-106B	2	B-430 SP-01	-	B	3/8	GL	SO	C	C	Q	-	3.2.8	-	Above Pressurizer Sample B	
(2HA-E623B)										MT	NST	3.1.38	-		
HRA-109A	2	B-430 SP-01	-	A	3/8	GL	SO	C	C	Q*	-	-	-	Inlet Header A Isolation (Upstream of Penetration)	CTMT Isolation
(2HA-E608A)										MT	-	-			
										LT	-	-	-		
HRA-109B	2	B-430 SP-01	-	A	3/8	GL	SO	C	C	Q*	-	-	-	Inlet Header B Isolation (Upstream of Penetration)	CTMT Isolation
(2HA-E628B)										MT	-	-			
										LT	-	-	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Hydrogen Recombiner and Analyzer (HRA)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
HRA-110A	2	LOU-1564-B-430 SP-01	-	A	3/8	GL	SO	C	C	Q*	-	-	-	Inlet Header A Isolation (Downstream of Penetration)	CTMT Isolation
(2HA-E609A)										MT	-	-			
										LT	-	-	-		
HRA-110B	2	B-430 SP-01	-	A	3/8	GL	SO	C	C	Q*	-	-	-	Inlet Header B Isolation (Downstream of Penetration)	CTMT Isolation
(2HA-E629B)										MT	-	-			
										LT	-	-	-		
HRA-126A	2	B-430 SP-01	-	A	3/8	GL	SO	C	C	Q*	-	-	-	Containment Sample Return Isolation	CTMT Isolation
(2HA-E610A)										MT	-	-			
										LT	-	-	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Hydrogen Recombiner and Analyzer (HRA)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
HRA-126B	2	LOU-1564 B-430 SP-01	-	A	3/8	GL	SO	C	C	Q*	-	-	-	Containment Sample Return Isolation	CTMT Isolation
(2HA-E630B)										MT	-	-			
										LT	-	-	-		
HRA-128A	2	B-430 SP-01	-	AC	3/8	CK	SA	C	-	CV	-	-	-	Containment Sample Return Check	CTMT Isolation
(2HA-V637A)										LT	-	-	-		
HRA-128B	2	B-430 SP-01	-	AC	3/8	CK	SA	C	-	CV	-	-	-	Containment Sample Return Check	CTMT Isolation
(2HA-V638B)										LT	-	-	-		
HRA-201A	2	B-430 SP-01	-	B	3/8	GL	SO	C	C	Q	-	3.2.8	-	Annulus Sample A Inlet Isolation	
										MT	NST	3.1.38	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Hydrogen Recombiner and Analyzer (HRA)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
HRA-201B	2	LOU-1564-B-430 SP-01	-	B	3/8	GL	SO	C	C	Q	-	3.2.8	-	Annulus Sample B Inlet Isolation	
(2HA-E622B)										MT	NST	3.1.38	-		
HRA-202A	2	B-430 SP-01	-	B	3/8	GL	SO	C	C	Q	-	3.2.8	-	Annulus Sample A Return Isolation	
(2HA-E633A)										MT	NST	3.1.38	-		
HRA-202B	2	B-430 SP-01	-	B	3/8	GL	SO	C	C	Q	-	3.2.8	-	Annulus Sample B Return Isolation	
(2HA-E634B)										MT	NST	3.1.38	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Primary Sampling (PSL)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
PSL-105	2	LOU-1564-G-162 Sheet 2	B-5	A	½	GL	AO	O	C	Q	-	-	-	RCS Loop 1 Hot Leg Sample	CTMT Isolation
										MT	-	-			
										LT	-	-	-		
PSL-107	2	G-162 Sheet 2	B-6	A	½	GL	AO	O	C	Q	-	-	-	RCS Loop 1 Hot Leg Sample	CTMT Isolation
										MT	-	-			
										LT	-	-	-		
PSL-203	2	G-162 Sheet 2	B-5	A	½	GL	AO	O	C	Q	-	-	-	Pressurizer Surge Line Sample	CTMT Isolation
										MT	-	-			
										LT	-	-	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Primary Sampling (PSL)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
PSL-204	2	LOU-1564-G-162 Sheet 2	B-6	A	½	GL	AO	O	C	Q	-	-	-	Pressurizer Surge Line Sample	CTMT Isolation
										MT	-	-			
										LT	-	-	-		
PSL-303	2	G-162 Sheet 2	A-5	A	½	GL	AO	O	C	Q	-	-	-	Pressurizer Steam Sample	CTMT Isolation
										MT	-	-			
										LT	-	-	-		
PSL-304	2	G-162 Sheet 2	A-6	A	½	GL	AO	O	C	Q	-	-	-	Pressurizer Steam Sample	CTMT Isolation
										MT	-	-			
										LT	-	-	-		

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Secondary Sampling (SSL)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
SSL-301A	2	LOU-1564-G-151 Sheet 1	D-5	B	1	GL	AO	O	C	Q	-	-	-	Main Steam Sample	MSIS Closes
										MT	-	-			
SSL-301B	2	G-151 Sheet 1	I-5	B	1	GL	AO	O	C	Q	-	-	-	Main Steam Sample	MSIS Closes
										MT	-	-			

LOUISIANA POWER & LIGHT
MIDDLE SOUTH UTILITIES SYSTEM

VALVES FOR INSERVICE TESTING

SYSTEM: Fire Protection (FP)

WATERFORD 3 S.E.S.
REVISION NO. 0

VALVE NUMBER	CODE CLASS	FLOW DIAGRAM/ SHEET NUMBER	COORDINATES	SECTION XI VALVE CATEGORY	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	FAILURE POSITION	TEST REQUIREMENTS	TEST ALTERNATES	RELIEF REQUESTS/ CLARIFICATIONS	STROKE TIME LIMIT (SEC.)	FUNCTION	REMARKS
FP-601A	2	LOU-1564 G-161 Sheet 1	E-3	A	3	GL	AO	O	C	Q*	-	-	-	Fire Protection Water Supply to Containment	CTMT Isolation
										MT	-	-			
										LT	-	-	-		
FP-601B	2	G-161 Sheet 1	E-6	A	3	GL	AO	O	C	Q*	-	-	-	Fire Protection Water Supply to Containment	CTMT Isolation
										MT	-	-			
										LT	-	-	-		
FP-602A	2	G-161 Sheet 1	E-3	AC	3	CK	SA	O	-	CV	RR	3.1.35	-	Fire Protection Water Supply to Containment	CTMT Isolation
										LT	-	-	-		
FP-602B	2	G-161 Sheet 1	E-6	AC	3	CK	SA	O	-	CV	RR	3.1.35	-	Fire Protection Water Supply to Containment	CTMT Isolation
										LT	-	-	-		

3.1 Requests for Relief from ASME Boiler and Pressure Vessel Code Section XI Requirements

3.1.1 Test Requirement

IWV-3413(b) requires that the stroke time of all power-operated valves shall be measured to the nearest second for stroke times of 10 seconds or less. IWV-3417 requires that on any one test of power-operated valves, an increase in stroke time of 50% or more from the previous test for valves with stroke times of 10 seconds or less, the test frequency shall be increased to once each month until corrective action is taken.

Basis for Relief

These solenoid-actuated valves have extremely short stroke times. Accurate measurement of these stroke times is not practical. In addition, the stroke times may vary from one test to another due to temperature and/or pressure variations.

Alternate Testing

These valves will be full-stroke tested quarterly. The stroke times will be measured to the nearest second and compared to the stroke time limit. Acceptance of the test will be based only on the stroke time limit and not on the "50%" criteria in IWV-3417. However, any significant increase in stroke time will be cause for an engineering evaluation by Plant Staff.

3.1.2 Test Requirement

Exercise the valves for operability at least once every three (3) months.

Basis for Relief

The operability testing (full stroke) of these valves during normal operation could cause a loss of system function. The failure of these valves in a nonconservative position during a cycling test would cause the loss of the RCP seal water cooling function. The design of the valve will not facilitate a partial-stroke test.

Alternate Testing

The valves will be full-stroke tested for operability at each cold shutdown.

3.1.3 Test Requirement

IWV-3417(b) and IWV-3523 state that when corrective action is required as a result of tests made during cold shutdown, the condition shall be corrected before startup. A retest showing acceptable operation shall be run following any required corrective action before the valve is returned to service.

Basis for Relief

The plant Technical Specifications provide the requirements and plant conditions necessary for plant startup, i.e., mode changes.

Alternate Testing

The test requirement will be satisfied before the valve is required for plant operability as defined in the plant Technical Specifications.

3.1.4 Test Requirement

IWV-3417(a) states that if an increase in stroke time of 25% or more from the previous test for valves with stroke times greater than ten seconds or 50% or more for valves with stroke times less than or equal to ten seconds is observed, test frequency shall be increased to once each month until corrective action is taken.

Basis for Relief

Valves that are normally tested during cold shutdown cannot be tested once each month. Stroking these valves during power operation may place the plant in an unsafe condition.

Alternate Testing

The test frequency shall be increased to once each cold shutdown, not to exceed once each month.

3.1.5 Test Requirement

Exercise valves for operability at least once every three (3) months.

Basis for Relief

Operability testing (full-stroke) of these normally closed valves during power operation would cause concentrated boric acid to be made available to the suction of the charging pumps. The charging pumps would inject the boric acid into the Reactor Coolant System causing overboration and possibly causing a plant shutdown. The design of the valves will not facilitate a partial-stroke test.

Alternate Testing

This valve will be full-stroke tested for operability at each cold shutdown.

3.1.6 Test Requirement

Exercise check valves for operability at least once every three (3) months.

Basis for Relief

Operability Testing (full or partial stroking) of this normally closed check valve per IWV-3520 requires flow verification utilizing the flow of concentrated boric acid to the suction of the Charging Pumps. During power operation, this flow verification would cause the injection of the boric acid into the Reactor Cooling System causing overboration and possibly causing a plant shutdown.

Alternate Testing

This valve will be full-stroke tested for operability at each cold shutdown.

3.1.7 Test Requirement

Exercise the valves for operability at least once every three (3) months.

Basis for Relief

The operability testing (full stroke) of these valves during normal operation could jeopardize the charging function of the CVCS. Failure in a nonconservative position would eliminate the VCT as a source of RCS charging and possibly cause a reactor trip. The design of the valves will not facilitiate a partial-stroke test.

Alternate Testing

The valves will be full-stroke tested for operability at each cold shutdown.

3.1.8 Test Requirement

Exercise valves for operability at least once every three (3) months.

Basis for Relief

The auxiliary pressurizer spray water temperature is approximately 140 degrees F. cooler than normal pressurizer spray. Operability testing (full stroke) of these normally closed valves during power operation would result in initiation of auxiliary pressurizer spray which would induce unnecessary thermal shock in the pressurizer and associated piping and nozzles. In addition, the introduction of this cooler water into the pressurizer will result in undesired primary pressure transients. The design of the valves will not facilitate a partial-stroke test.

Alternate Testing

The valves will be full-stroke tested for operability either during cold shutdown or during normal plant cooldown approaching cold shutdown.

3.1.9 Test Requirement

IWV-3413(b) requires that the stroke time of all power-operated valves shall be measured to the nearest second for stroke times of 10 seconds or less. IWV-3417 requires that on any one test of power-operated valves, an increase in stroke time of 50% or more from the previous test for valves with stroke times of 10 seconds or less, the test frequency shall be increased to once each month until corrective action is taken.

Basis for Relief

These solenoid-actuated valves have extremely short stroke times. Accurate measurement of these stroke times is not practical. In addition, the stroke times may vary from one test to another due to temperature and/or pressure variations.

Alternate Testing

These valves will be full-stroke exercised either during cold shutdown or during normal plant cooldown approaching cold shutdown. The stroke times will be measured to the nearest second and compared to the stroke time limit. Acceptance of the test will be based only on the stroke time limit and not on the "50%" criteria in IWV-3417. However, any significant increase in stroke time will be cause for an engineering evaluation by Plant Staff.

3.1.10 Test Requirement

Exercise check valves for operability at least once every three (3) months.

Basis for Relief

Operability testing (full or partial stroking) of these normally closed check valves per IWV-3520 requires flow verification utilizing the auxiliary pressurizer spray flow path. The auxiliary pressurizer spray water temperature is approximately 140 degrees F. cooler that normal pressurizer spray. Operability testing of these check valves during power operation would induce unnecessary thermal shock in the pressurizer and associated piping and nozzles. In addition, the introduction of this cooler water into the pressurizer will result in undesired primary pressure transients.

Alternate Testing

The valves will be full-stroke tested for operability either during cold shutdown or during normal plant cooldown approaching cold shutdown.

3.1.11 Test Requirements

The stroke time of all power-operated valves shall be measured.

Basis for Relief

The measurement of stroke time for these flow control valves provides no increase in the level of safety for this system. The valve's function is to modulate and control flow rather than to open or close in a definite period of time.

Alternate Testing

The operability testing of these valves once every 3 months will verify that the valves will operate from a closed to an open position.

3.1.12 Test Requirement

Exercise check valves for operability at least once every three (3) months.

Basis for Relief

The operability testing (full-stroke) of these normally closed check valves per IWV-3520 requires flow verification into the RCS. These valves cannot be full-stroke exercised during power operation because the pumps cannot overcome RCS pressure. During cold shutdown, these valves cannot be full-stroke exercised because design flow cannot be verified through the valves unless all LOCA test conditions can be met (i.e., suction from the RWSP through the pumps to the RCS with the RCS at atmospheric pressure).

Alternate Testing

These valves will be partial-stroke exercised quarterly (coincident with pump testing) and full-stroke exercised during each refueling outage.

3.1.13 Test Requirement

Exercise check valves for operability at least once every three (3) months.

Basis for Relief

The operability testing (full-stroke) of these normally closed check valves per IWV-3520 requires flow verification under LPSI into the RCS. These valves cannot be full-stroke exercised during power operation because the LPSI pumps cannot overcome RCS pressure. Partial-stroking these valves, using flow into containment, then back to the RWSP through a drain valve, would defeat the safety function of RCS Pressure Isolation Valves. During cold shutdown, these valves cannot be full-stroke exercised because design flow cannot be verified through the valves unless all LOCA test conditions can be met (i.e., suction from the RWSP through both pumps to the RCS with the RCS at atmospheric pressure)

Alternate Testing

These valves will be partial-stroke tested during each cold shutdown and full-stroked using LPSI design flow during each refueling outage.

3.1.14 Test Requirement

Exercise check valves for operability at least once every three (3) months.

Basis for Relief

The operability testing (full-stroke) of these normally-closed check valves per IWV-3520 requires flow verification into the RCS. These valves cannot be full-stroke exercised during power operation because the HPSI pumps cannot overcome RCS pressure. During power operation, partial stroking these valves, using HPSI flow into containment then back to the RWSP through a drain valve, would defeat the safety function of RCS Pressure Isolation Valves (PIV's). Likewise, partial-stroking these valves using charging flow would unseat the PIV's. During cold shutdown, these valves cannot be full-stroke exercised because design flow cannot be verified through the valves unless all LOCA test conditions can be met (i.e., suction from the RWSP through two HPSI pumps to the RCS with the RCS at atmospheric pressure). Also, during cold shutdown, these valves cannot be partial-stroke exercised because such testing would induce unwanted thermal shock to the safety injection nozzles and piping. Partial-stroke exercising at cold shutdowns also increases the possibility of overpressurizing the RCS at low temperature.

Alternate Testing

These valves will be full-stroke exercised during each refueling outage.

3.1.15 Test Requirement

Exercise valves for operability at least once every three (3) months.

Basis for Relief

The operability testing of these valves during normal operation would cause a loss of system function. Stroking the valves would cause a decrease in safety injection tank (SIT) nitrogen pressure. The failure of one of these valves in a nonconservative (open) position would cause the associated SIT to become inoperable. Valve design does not facilitate partial-stroke testing.

Alternate Testing

These valves will be full-stroke tested for operability during each cold shutdown.

3.1.16 Test Requirement

Exercise check valves for operability at least once every three (3) months.

Basis for Relief

The operability testing of these normally closed check valves per IWV-3520 during normal operation or cold shutdown is not practical. During normal operation, these valves cannot be full-stroke exercised because the safety injection tanks (SIT's) cannot overcome RCS pressure. The valves cannot be partial-stroke exercised during normal operation without making the SIT's inoperable, thus placing the plant in an unsafe condition. During cold shutdown, these valves cannot be fully or partially stroked without overpressurizing the RCS. During refueling outages, these valves cannot be full-stroke exercised at SIT operating pressure without possibly causing internal core damage due to excessive flow rates. Disassembly of the valves during refueling outages requires the draining of the SIT's and associated piping.

Alternate Testing

The valves will be partial-stroke exercised at each refueling outage by discharging the SIT's into the RCS with the SIT's at atmospheric pressure. The valves will be verified as closed prior to the exercising by testing for leakage with a differential pressure greater than 100 psi across the valves. A decrease in SIT level when the system is discharged to the RCS will verify a partial stroke.

3.1.17 Test Requirement

Exercise valves for operability at least once every three (3) months.

Basis for Relief

The operability testing (full-stroke) of these valves during power operation could cause a loss of system function. Failure of one of these valves in a nonconservative (closed) position would cause the associated safety injection tank to become inoperable, thereby causing a plant shutdown. Valve design does not facilitate partial stroke testing.

Alternate Testing

These valves will be full-stroked opened and timed during each plant startup following each cold shutdown.

3.1.18 Test Requirement

Exercise check valves for operability at least once every three (3) months.

Basis for Relief

The operability testing (full or partial stroke) of these normally closed check valves per IWV-3520 during normal operation is not practical. During normal operation, these valves cannot be full-stroke exercised because neither the LPSI pumps, HPSI pumps nor safety injection tanks (SIT's) can overcome RCS pressure. Partial-stroking these valves during power operation using charging flow unseats, and thereby defeats the purpose of the RCS Pressure Isolation Valves. During cold shutdown, these valves cannot be full-stroke tested unless all LOCA test conditions can be met. Fulfilling LOCA test conditions would require removing the Reactor Pressure Vessel (RPV) head.

Alternate Testing

These valves will be partial-stroke tested during each cold shutdown using normal shutdown cooling flow and full-stroked using LPSI design flow during each refueling outage when the RPV head is removed.

3.1.19 Test Requirement

Exercise valves for operability at least once every three (3) months.

Basis for Relief

The operability testing (full or partial stroke) of these valves during power operation cannot be accomplished because the valves are interlocked with an RCS pressure signal which prohibits the valves from opening at an RCS pressure greater than 400 psig.

Alternate Testing

The valves will be full-stroke tested for operability at each cold shutdown.

3.1.20 Test Requirement

Exercise check valves for operability at least once every three (3) months.

Basis for Relief

The operability testing (full or partial stroke) of these normally closed check valves per IWV-3520 during power operation is not practical. Exercising these valves requires flow verification into the RCS. During power operation the HPSI pumps cannot overcome RCS pressure and threfore cannot deliver any flow. Partial-stroking these valves during power operation using charging flow unseats, andthereby defeats the purpose of,the RCS Pressure Isolation Valves. During cold shutdown, these valves cannot be full-stroke exercised because design flow cannot be verified through the valves unless all LOCA test conditions can be met (i.e., suction from the RWSP through two pumps to the RCS with the RCS at atmospheric pressure). Also, during cold shutdown, these valves cannot be partial-stroke exercised because such testing would induce unwanted thermal shock to the safety injection nozzles and piping. Partial-stroke exercising at cold shutdowns also increases the possibility of overpressurizing the RCS at low temperature.

Alternate Testing

These valves will be full-stroke exercised during each refueling outage.

3.1.21 Test Requirement

Exercise check valves for operability at least once every three (3) months.

Basis for Relief

The operability testing (full-stroke) of these normally closed check valves per IWV-3520 during power operation is not practical. Full stroke exercising requires flow verification from the SIS Sump through a HPSI pump into the RCS with the RCS at atmospheric conditions. During power operation and cold shutdowns, these test conditions cannot be met. During any mode of operation (including power operation, cold shutdown and refuleing outages), the pumping of unknown-quality water into the RCS defeats the purpose of primary water chemistry controls and could cause violation of plant Technical Specifications. The only possible means of providing flow through these valves is through the check valve test connection. However, flow through the 3/4 inch test line only verifies a partial-stroke test. Disassembly of the valves (manual stroking) would require draining of extensive piping systems and render the RWSP inoperable.

Alternate Testing

These valves will be partial-stroke tested for operability quarterly.

3.1.22 Test Requirement

Exercise check valves for operability at least once every three (3) months.

Basis for Relief

The only positive means of exercising (full-stroke) this normally closed check valve is by directing Emergency Feedwater (EFW) flow into the Steam Generators. The initiation of EFW during power operation would result in unwanted thermal shock to the secondary portions of the Steam Generators, including feedwater nozzles and associated piping up to and including the EFW-to-FW connection. An introduction of cold water into the secondary system will also cause power transients.

Alternate Testing

This valve will be partial-stroke tested quarterly by providing EFW flow thorugh the valve then through the drain/recirculation line back to the Condensate Storage Pool.

During or approaching cold shutdown, EFW flow will be directed through the valve at the design flow rate of the EFW system. Verification of this flow through the valve, in conjunction with verification that the control valve position is the same for each test, will provide assurance that the valve has opened sufficiently to perform its function (full-stroke).

3.1.23 Test Requirement

Exercise check valves for operabilility at least once every three (3) months.

Basis for Relief

The only positive means of exercising (full or partial stroke) this normally closed check valve is by directing Emergency Feedwater (EFW) flow into the Steam Generators. The initiation of EFW during power operation would result in unwanted thermal shock to the secondary portions of the Steam Generators, including feedwater nozzles and associated piping up to and including the EFW-to-FW connection. An introduction of cold water into the secondary system will also cause power transients. The operation of the Turbine-driven EFW pump during cold shutdowns is not possible because steam for the turbine is not available.

Alternate Testing

This valve will be partial-stroke tested quarterly by providing EFW flow through the valve then through the drain/recirculation line back to the Condensate Storage Pool.

EFW flow will be directed through the valve at the design flow of the EFW system during a mode of operation approaching cold shutdown or leaving cold shutdown in which steam is available. Verification of this flow through the valve, in conjuction with verification that the control valve position is the same for each test, will provide assurance that the valve has opened sufficiently to perform its function.

3.1.24 Test Requirement

Exercise check valves for operability at least once every three (3) months.

Basis for Relief

The safety function of this valve is to prevent the loss of EFW by remaining closed. There are two positive means of verifying the closed position of this valve.

One method is to test for leakage past the valve after providing a differential pressure across the valve utilizing an EFW pump to pressurize the downstream side of the valve. This test will require that the upstream Blowdown Isolation Valve be open.

The failure of this check valve in a nonconservative (open) position prior to the beginning of the test would cause the injection of EFW into non-safety-class Feedwater piping. Consequently, the ability of the EFW system to function could be compromised. In addition, the failure of this check valve would result in unwanted thermal shock to the secondary portions of the Steam Generators, including feedwater nozzles and associated piping. Also, an introduction of cold water into the secondary system would also cause power transients.

Another method of verifying the closed position of this valve is to perform a leak test. Leak testing also requires the upstream isolation valve to be open and therefore produces the same dangers as described above.

Both of these methods of valve testing put the plant in an unsafe condition, if testing is performed during normal operation.

Alternate Testing

This valve will be verified closed during each cold shutdown using one of the methods described above.

3.1.25 Test Requirement

Exercise check valves for operability at least once every three (3) months.

Basis for Relief

The safety function of these valves is to prevent the loss of EFW by closing. The operability testing (full or partial stroke) of these valves during normal operation is not practical. Full-stroke exercising requires an interruption of feedwater to the Steam Generators which would result in a plant shutdown. Partial-stroke exercising requires a substantial decrease in feedwater flow, resulting in a feedwater-to-steam flow mismatch. Consequently, this also produces a plant shutdown.

Alternate Testing

These valves will be verified closed during each cold shutdown by injecting EFW into the Steam Generators with the Feedwater Isolation valves open. This test will verify that the valves fulfill their function.

3.1.26 Test Requirement

Exercise valves for operability at least once every three (3) months.

Basis for Relief

The safety function of these valves is to prevent the loss of EFW by closing. The operability testing (full stroke) of these valves during normal operation is not practical. Full-stroke exercising requires an interruption of feedwater to the Steam Generators which would result in a plant shutdown.

Alternate Testing

These valves will be partial-stroke tested (10% stroke) for operability quarterly and full-stroked tested during each cold shutdown.

3.1.27 Test Requirement

Exercise valves for operability at least once every three (3) months.

Basis for Relief

The operability testing (full or partial stroke) of these normally closed valves during power operation is not practical. Stroking the valves would induce unwanted secondary and primary transients. Failure of the valves in a nonconservative (open) position would force a plant shutdown.

Alternate Testing

These valves will be full-stroke tested for operability during each cold shutdown.

3.1.28 Test Requirement

The stroke time of all power operated valves shall be measured.

Basis for Relief

The measurement of stroke time for these Main Steam Atmospheric Dump valves provides no increase in the level of safety for this system. The valve's function is to relieve pressure rather than to open or close in a definite period of time.

Alternate Testing

The operability testing of these valves during each cold shutdown will verify that the valves will operate from a closed to an open position.

3.1.29 Test Requirement

Exercise valves for operability at least once every three (3) months.

Basis for Relief

The operability testing (full-stroke) of these normally open valves during power operation is not practical. Full stroking the valves will cause a plant shutdown.

Alternate Testing

These valves will be partial-stroke tested (10% stroke) for operability quarterly and full-stroke tested during each cold shutdown.

3.1.30 Test Requirement

Exercise check valves for operability at least once every three (3) months.

Basis for Relief

The operability testing (full or partial stroke) of these normally closed check valves per IWV-3520 during power operation or cold shutdown is not practical. Stroking these valves with flow would require the spraying of containment resulting in unnecessary equipment damage. Valve disassembly (manual full-stroke) during power operation is not practical because the valves are inside containment. During cold shutdown, valve disassembly would require draining a portion of the system which is beyond the scope of cold shutdown testing. An air test for flow verification would require either draining a portion of the system or risking the possibility of wetting equipment inside containment. Therefore, the air test is impractical. In general, performing any test during power operation which lowers the water level in the spray header below +147 feet MSL elevation places the plant under a Limiting Condition for Operation (LCO) and may result in a plant shutdown.

Alternate Testing

The check valves will be verified as operable by performing an air test during each refueling outage after draining the header.

3.1.31 Test Requirement

Exercise valves for operability at least once every three (3) months.

Basis for Relief

The operability testing (full stroke) of these valves during normal operation would jeopardize the RCP cooling function. Cycling of the valves would interrupt the CCW supply to the reactor coolant pumps. Also, the failure of the valves in a nonconservative position during the cycling test would result in a loss of the system function. The design of the valves does not facilitate a partial-stroke test.

Alternate Testing

The valves will be full-stroke tested for operability during each cold shutdown.

3.1.32 Test Requirement

Exercise valves for operability at least once every three (3) months.

Basis for Relief

The operability testing (full stroke) of this valve during normal operation would cause an interruption of instrument air supply to instruments and equipment within containment. Also, a failure in a nonconservative position during a cycling test would cause a complete loss of instrument air supply to the containment. The design of the valve will not facilitate a partial-stroke test.

Alternate Testing

The valves will be full-stroke tested for operability during each cold shutdown.

3.1.33 Test Requirement

Exercise check valves for operability at least once every three (3) months.

Basis for Relief

Due to plant design, it is not practical to verify by any positive means, neither directly nor indirectly, the operability of these normally open check valves per the requirements of IWV-3522(a).

Alternate Testing

Valve closure will be verified during the performance of the leak-rate tests at each refueling outage.

3.1.34 Test Requirement

Exercise the valves for operability at least once every three (3) months.

Basis for Relief

The operability testing (full or partial stroke) during normal operation or cold shutdown of these valves provides no assurance of an increase in safety. The valves are containment isolation valves which are normally closed and passive.

Alternate Testing

The valves' closed position will be verified during the performance of the leak-rate tests at each refueling outage.

3.1.35 Test Requirement

Exercise check valves for operability at least once every three (3) months.

Basis for Relief

The operability testing (full or partial stroke) during normal operation or cold shutdown of these valves provides no assurance of an increase in safety. The valves are containment isolation valves which are normally closed and passive.

Alternate Testing

The valves' closed position will be verified during the performance of the leak-rate tests at each refueling outage.

3.1.36 Test Requirement

Exercise valves for operability at least once every three (3) months.

Basis for Relief

The operability testing of these valves during normal operation would cause a loss of system function. Stroking the valves would cause an increase in safety injection tank (SIT) nitrogen pressure. The failure of one of these valves in a nonconservative (open) position would cause the associated SIT to become inoperable. Valve design does not facilitate partial stroke testing.

Alternate Testing

These valves will be full-stroke tested for operability during each cold shutdown.

3.1.37 Test Requirement

Exercise valves for operability at least once every three (3) months.

Basis for Relief

The operability testing (full stroke) of these valves during normal operation could cause a loss of system function. A failure while cycling in a nonconservative (closed) position would cause a loss of the containment atmosphere radiation monitoring system. The valve design does not facilitate a partial-stroke test.

Alternate Testing

The valves will be full-stroke tested for operability at each cold shutdown.

3.1.38 Test Requirement

The stroke time of all power-operated valves shall be measured.

Basis for Relief

No physical means exists to measure the stroke times of these solenoid-operated valves. These valves do not have position indicators. In addition, the stems are not visible from the exterior of the valves. Also, there is no critical limit on the stroke time. Valve design does not facilitate partial-stroke testing.

Alternate Testing

Verification of normal sample flow through the appropriate Hydrogen Analyzer within a reasonable time demonstrates that the valves move from a closed to an open position.

3.1.39 Test Requirement

IWV-3522(b) requires that for normally-closed check valves that are stroked without flow, a mechanical exerciser shall be used and the torque valves must be within certain limits.

Basis for Relief

Due to valve design, a mechanical exerciser cannot be used.

Alternate Testing

These valves will be manually exercised by hand to their full-open position quarterly.

3.2 Clarification of Valve Testing Methods

3.2.1 Code Requirement

IWV-3421 requires that Category A valves shall be leak-tested except that valves which function in the course of plant operation in a manner that demonstrates functionally adequate seat tightness need not be leak-tested.

Testing Method

The seat tightness of these valves is demonstrated to be functionally adequate during normal plant operation. The RCS is monitored for leakage per Technical Specifications 3.4.6.1 and 3.4.6.2.

3.2.2 Code Requirement

IWV-3522(b) requires that confirmation that the disk moves away from the seat shall be by visual observation, by electrical signal, by approriate pressure indications, or by other positive means.

Test Method

Due to plant design, the operability of this normally closed check valve cannot be determined by any of the specific methods allowed in IWV-3522(b). The only positive means of demonstrating operability is by verification of flow such that the valve moves to perform its function. This valve will be tested quarterly coincident with the charging pump test provided the pump is operable. A successful pump test which demonstrates that the pump is operable also demonstrates that the discharge check valve is operable.

3.2.3 Code Requirement

IWV-3522(b) requires that confirmation that the disk moves away from the seat shall be by visual observation, by electrical signal, by pressure indications or by other positive means.

Test Method

Due to plant design, the operability of these normally closed check valves cannot be determined by any of the specific methods allowed in IWV-3522(b). The only positive means of demonstrating operability is by verification of flow such that the valves move to perform their function. During power operation, the pumps will be operated to provide design flow in the recirculation path back to the RWSP, thereby full stroking these valves.

3.2.4 Code Requirement

IWV-3522(b) requires that confirmation that the disk moves away from the seat shall be by visual observation, by electrical signal, by pressure indications, or by other positive means.

Test Method

Due to plant design, the operability of these normally closed check valves cannot be determined by any of the specific methods allowed in IWV-3522(b). The only positive means of demonstrating operability is by verification of flow such that the valves move to perform their function. During power operation, the LPSI pumps will be operated to provide design flow in the recirculation path through the Shutdown Cooling Heat Exchangers and through the Bypass Valves back to the pump suctions, thereby full stroking these valves.

3.2.5 Code Requirement

IWV-3421 requires that Category A valves shall be leak-tested, except that valves which function in the course of plant operation in a manner that demonstrates functionally adequate seat tightness need not be leak-tested.

Testing Method

The seat tightness of these valves is demonstrated to be functionally adequate during normal plant operation. The safety injection tanks (SIT's) are monitored for pressure per Technical Specification 4.5.1.1. Ability to maintain pressure in the SIT's indicates adequate seat tightness of these valves.

3.2.6 Code Requirement

IWV-3522(b) requires that confirmation that the disk moves away from the seat shall be by visual observation, by electrical signal, by appropriate pressure indications or by other positive means.

Test Method

Due to plant design, the operability of these normally closed check valves cannot be determined by any of the specific methods allowed in IWV-3522(b). The only positive means of demonstrating operability is by verification of flow such that the valves move to perform their function. Steam for the Emergency Feedwater Pump A/B quarterly test will be supplied through each of these valves in succession. An acceptable pump test verifies that each valve moves to perform its function.

3.2.7 Code Requirement

Exercise valves for operability at least once every three (3) months.

Test Method

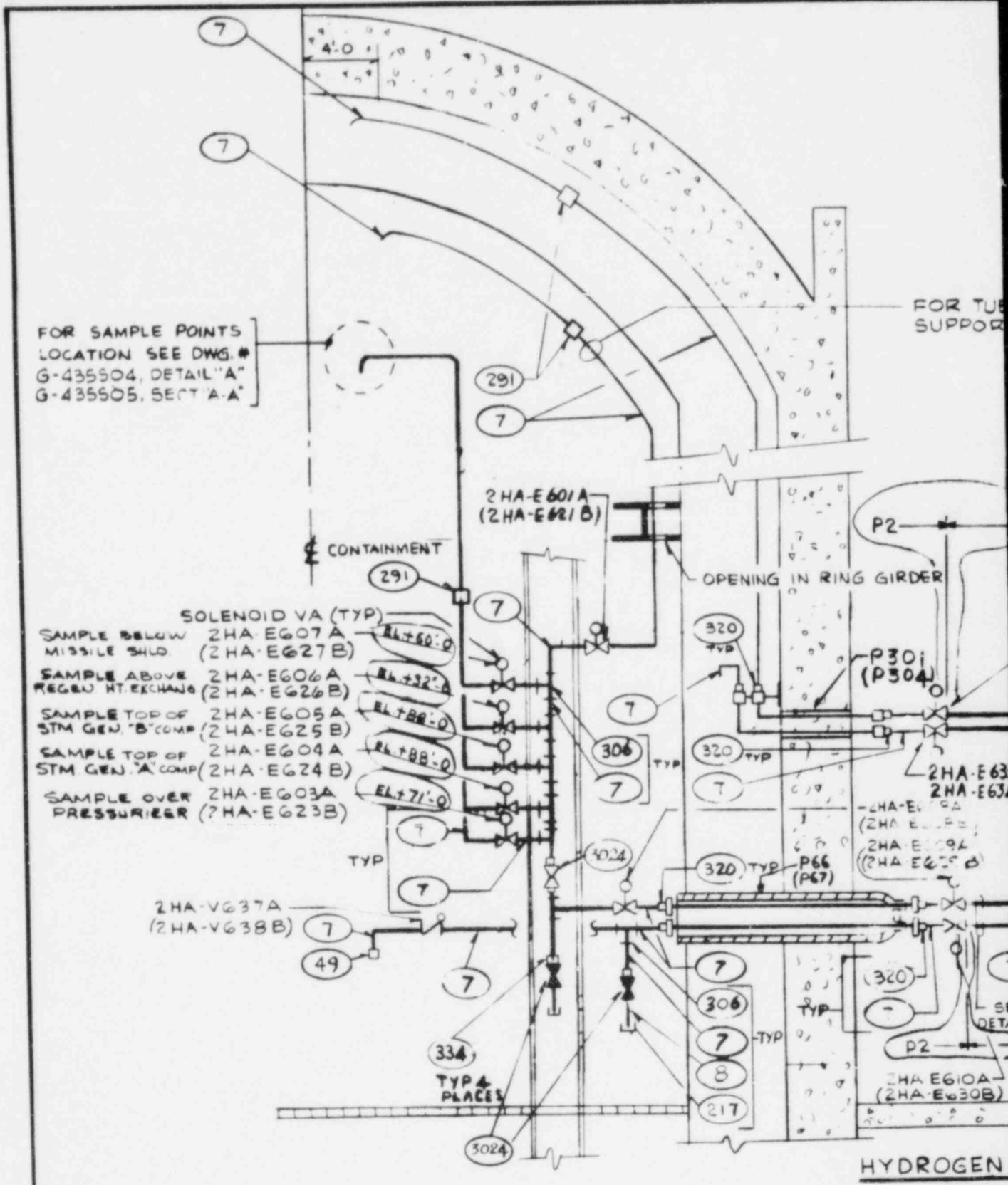
Operability testing of these valves will be accomplished quarterly. However, prior to performing the tests, the operators will verify that at least two CCW pumps are operating and that valve alignments provide CCW flow through at least one dry cooling tower and through line 3CC18-11A/B. This line provides CCW flow to the Fuel Pool Heat Exchanger, Letdown Heat Exchanger, CEDM Cooling Coils and all Reactor Coolant Pump coolers.

3.2.8 Code Requirement

Exercise valves for operability at least once every three (3) months.

Test Method

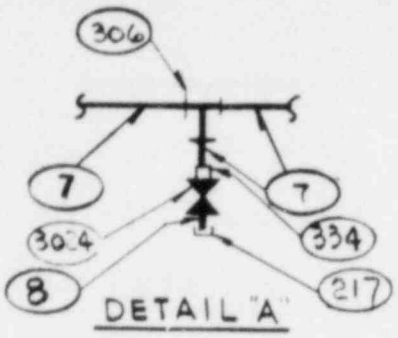
Operability testing of these valves will be accomplished quarterly. However, these valves do not have position indicators to provide direct evidence of stem movement. Instead, the disk movement shall be demonstrated by verifying normal sample flow through the appropriate Hydrogen Analyzer. Establishment of normal sample flow demonstrates that the valves move to perform their function. The reclosure of each valve will be demonstrated by verification of the "low flow" alarm on the appropriate Hydrogen Analyzer.



8					4				
7					3	9-11-80	MP	SIDC	
6					2	5-17-80	RB		
5					1	7-19-79	BM		
REV	DATE	BY	APPROVED		REV	DATE	BY		

IC-P-12 REV. 0

FCR/DCN-NYC NO.



DETAIL "A"

BE TRACK
T SEE G818

BILL OF MATERIALS*			
ITEM NO.	QUANTITY	ITEM NO.	QUANTITY
7	3000 FT		
		217	4
291	AS REQ'D	334	6
306	11		
320	8	8	AS REQ'D
559	AS REQ'D	3024	5
		49	1

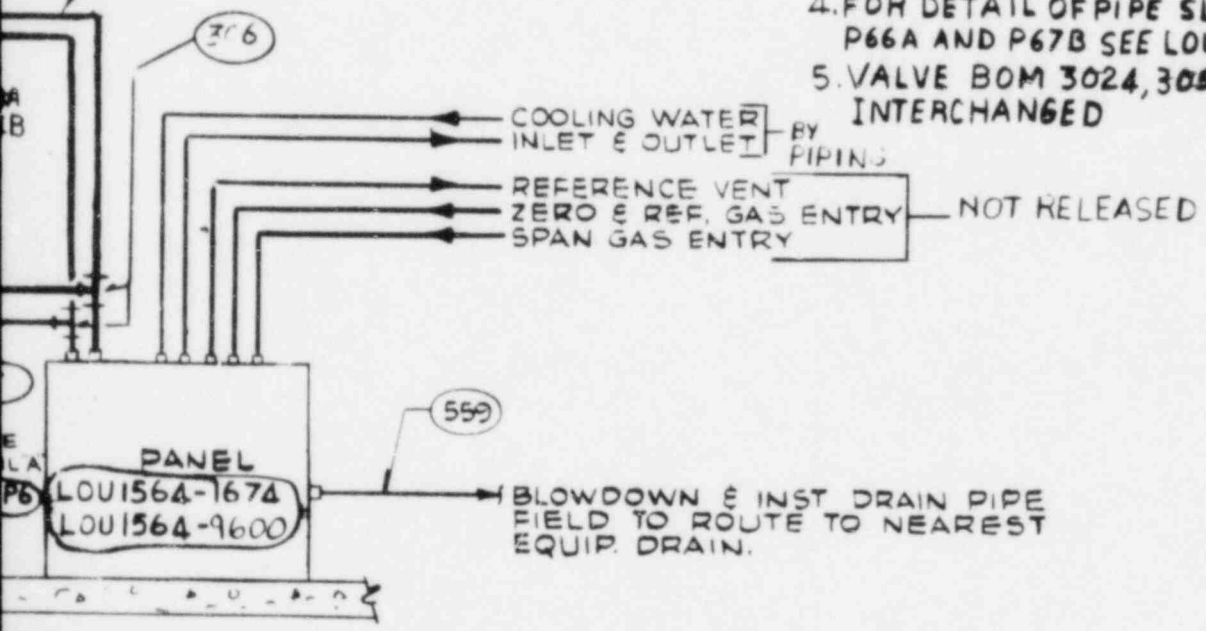
* QUANTITIES LISTED ABOVE IS FOR SYSTEM "A" ONLY & BULK QUANTITIES

P6

NOTES.

1. ALL SOLENOID VALVES AND CHECK VALVES ARE BY MECH NUC
2. ALL CONNECTIONS NOTED ON HYDROGEN ANALYZER PANEL ARE BY PANEL VENDOR.
3. FOR DETAIL OF PIPE SLEEVE P301 AND P304 SEE SH X-30
4. FOR DETAIL OF PIPE SLEEVE FOR PENET'S P66A AND P67B SEE LOU 1564-6175 SH 182
5. VALVE BOM 3024, 3056 AND 3360 MAY BE INTERCHANGED

2 HA-E 602A
(2 HA-E 622B



ANALYZER SYSTEM 'A' (PIPE CAT 2) SEISMIC CLASS 1

AL FOR SYSTEM 'B')

APPROVED

EBASCO SERVICES INCORPORATED
NEW YORK

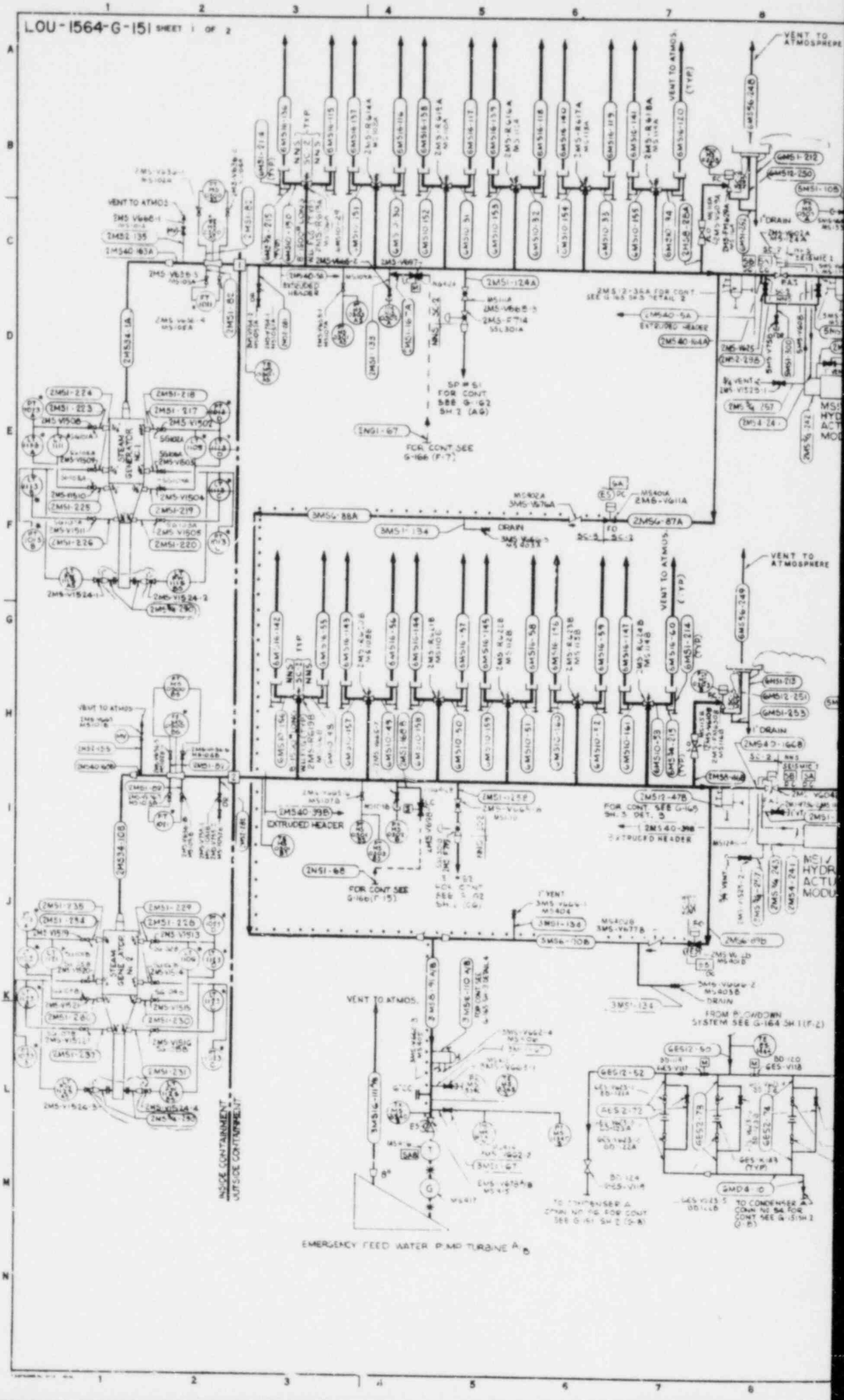
DIV. I & C DR. RSD
SCALE ~ CH BAGGA
DATE SEP 20, 1974

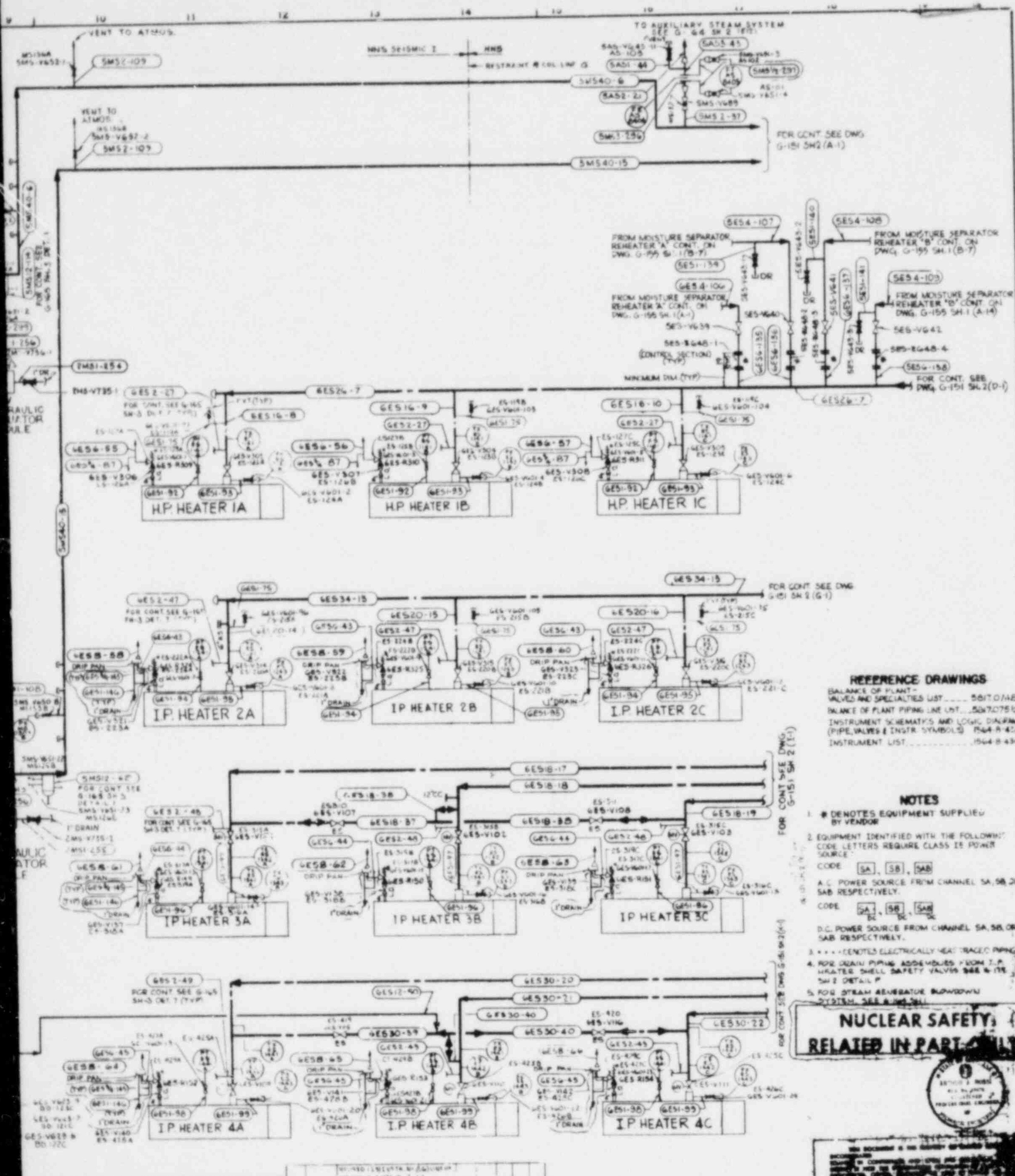
APPROVED

LOUISIANA POWER & LIGHT CO.
WATERFORD S.E.S. UNIT No. 3
INSTRUMENT INSTALLATION
DETAILS

LOU 1564
B-430
SHEETS R-0

LOU-1564-G-151 SHEET 1 OF 2





REFERENCE DRAWINGS

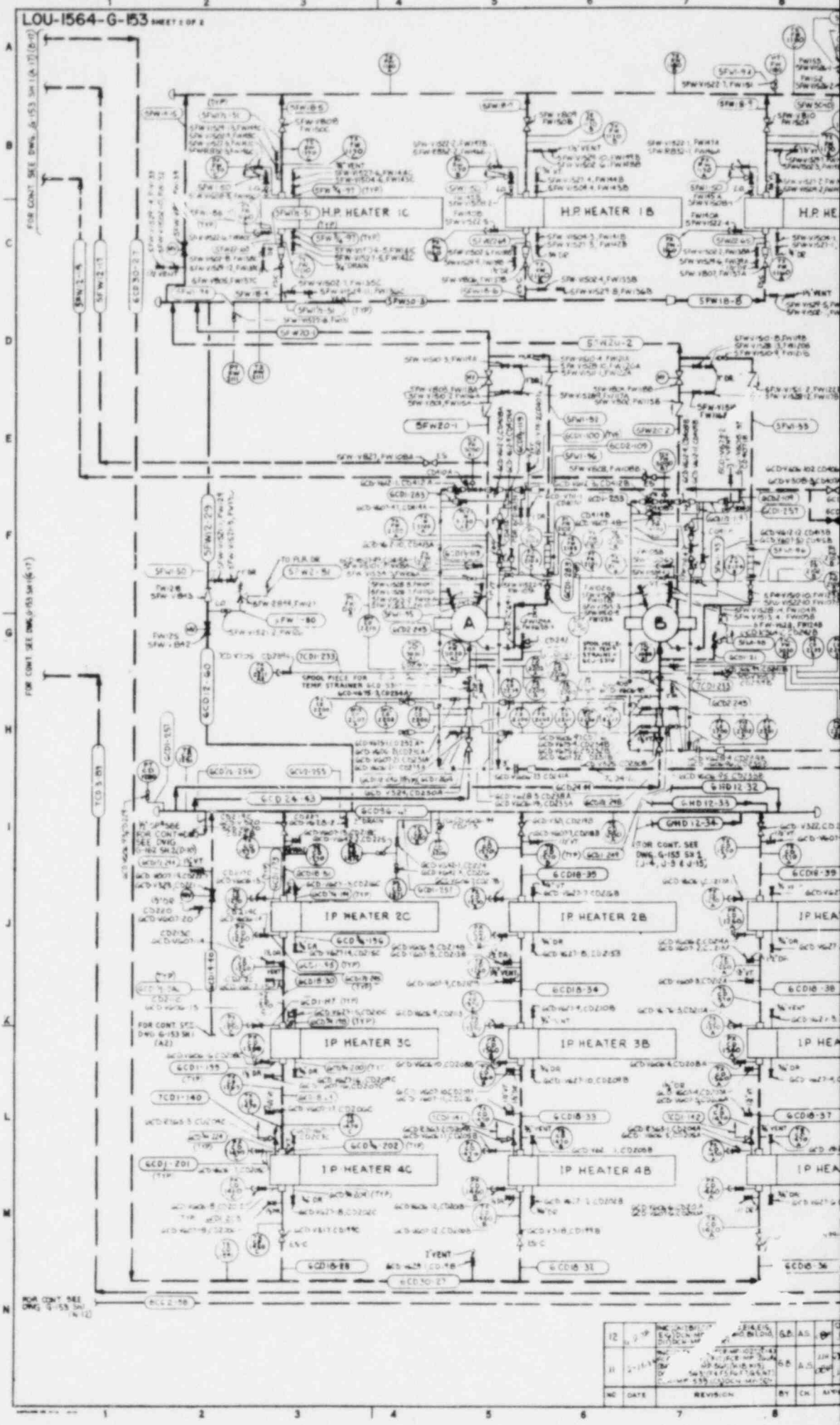
BALANCE OF PLANT - VALVES AND SPECIALTIES LIST 5817.0748
BALANCE OF PLANT PIPING LINE LIST 5817.0756
INSTRUMENT SCHEMATICS AND LOGIC DIAGRAMS (PIPE, VALVES & INSTR. SYMBOLS) 1564-B-431
INSTRUMENT LIST 1564-B-434

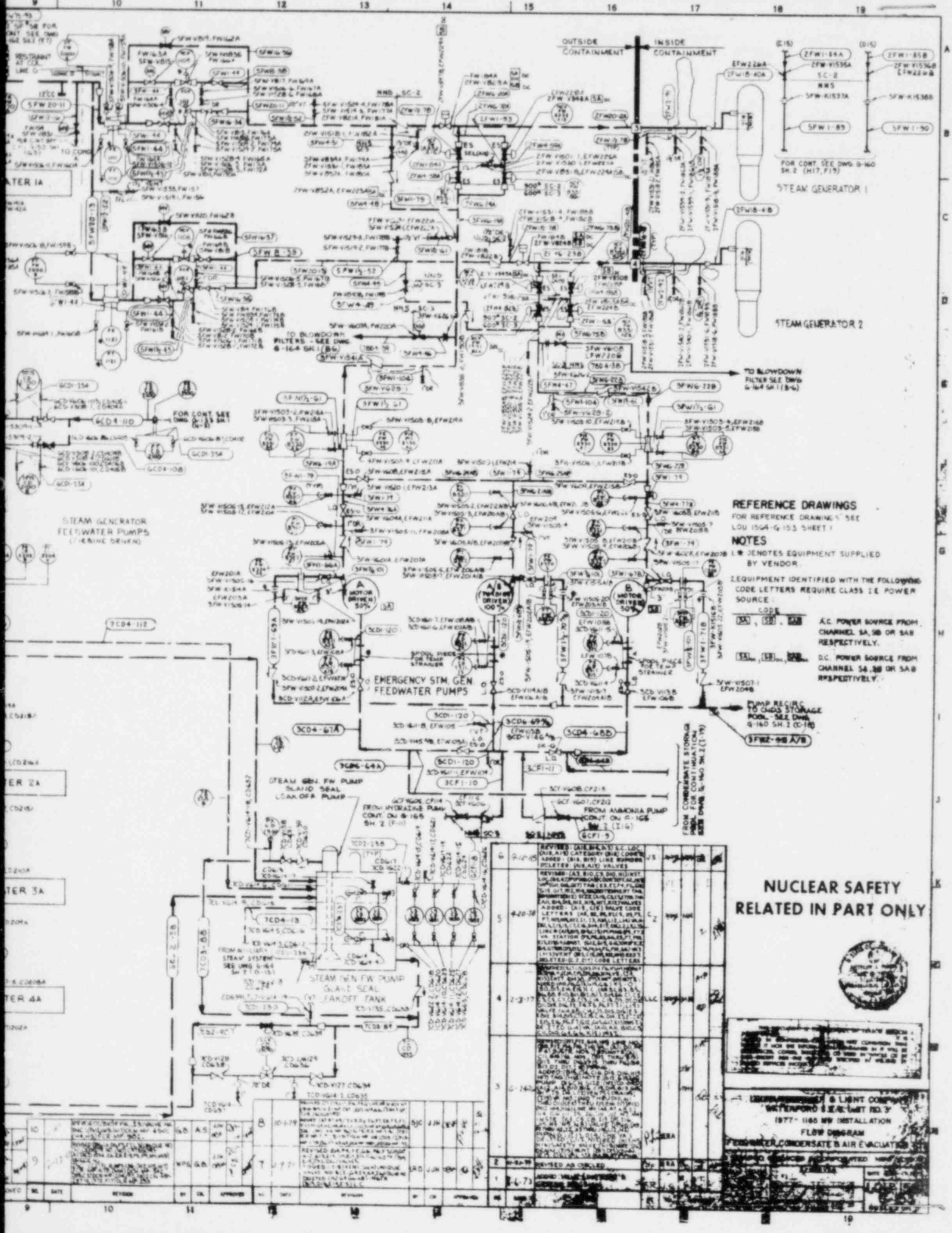
NOTES

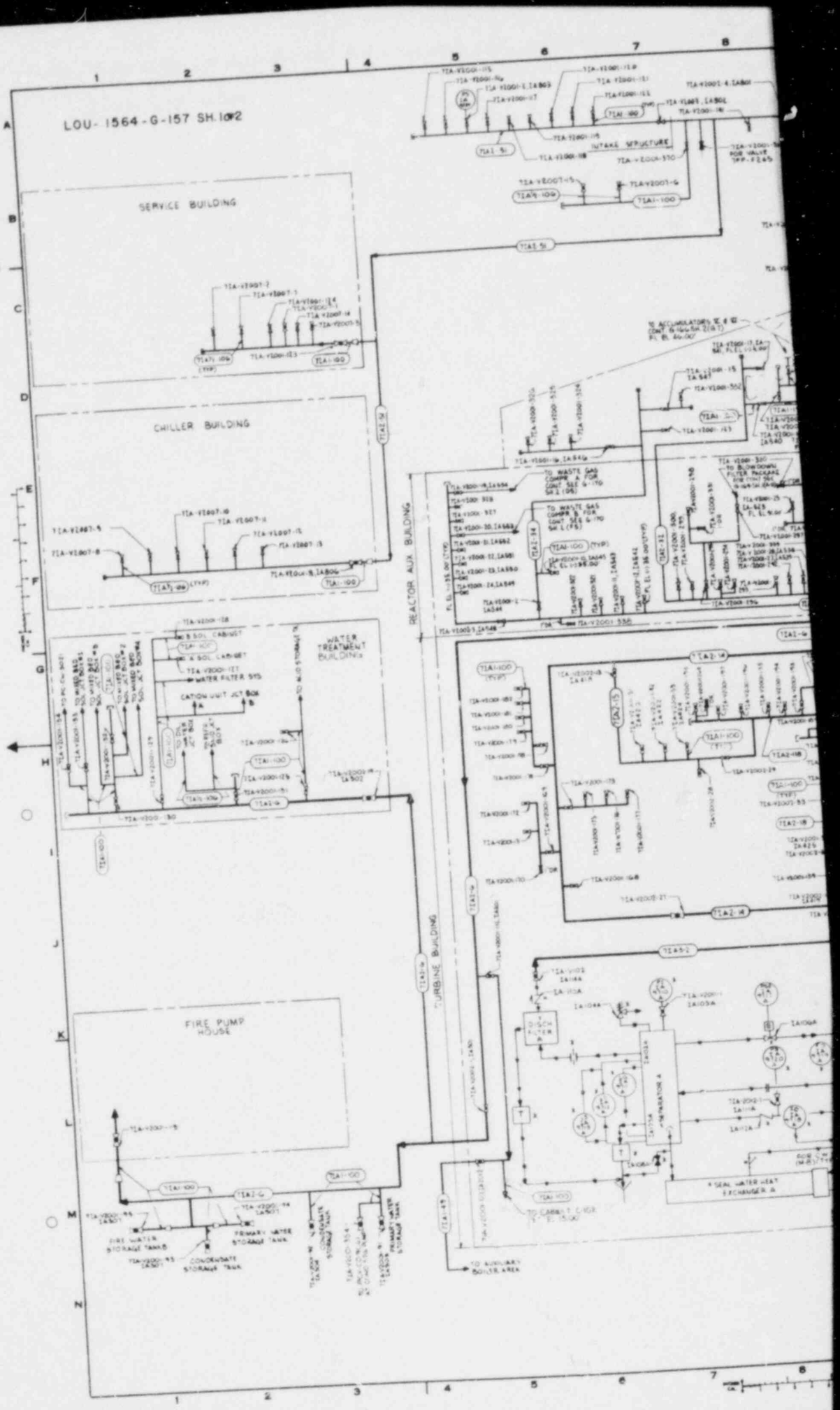
1. # DENOTES EQUIPMENT SUPPLIED BY VENDOR
2. EQUIPMENT IDENTIFIED WITH THE FOLLOWING CODE LETTERS REQUIRE CLASS IE POWER SOURCE:
   CODE SA, SB, SAB
   A.C. POWER SOURCE FROM CHANNEL SA, SB, OR SAB RESPECTIVELY.
   CODE SA DC, SB DC, SAB DC
   D.C. POWER SOURCE FROM CHANNEL SA, SB, OR SAB RESPECTIVELY.
3. • • • • DENOTES ELECTRICALLY HEAT TRACED PIPING
4. FOR DRAIN PIPING ASSEMBLIES FROM I.P. HEATER SHELL SAFETY VALVES SEE G-179 SH 2 DETAIL F
5. FOR STEAM GENERATOR BLOWDOWN SYSTEM, SEE G-[illegible]

NUCLEAR SAFETY RELATED IN PART ONLY

LOUISIANA POWER & LIGHT COMPANY
WATERFORD S.E.S. UNIT NO. 3
1977 - 1165 MW INSTALLATION
FLOW DIAGRAM
MAIN & EXTRACTION STEAM SYSTEM


LOU-1564-G-153 SHEET 1 OF 2
H.P. HEATER 1C
H.P. HEATER 1B
I.P. HEATER 2C
I.P. HEATER 2B
I.P. HEATER 3C
I.P. HEATER 3B
I.P. HEATER 4C
I.P. HEATER 4B
A
B
FOR CONT. SEE DWG. G-153 SH 1 (A-17) (B-17)
FOR CONT. SEE DWG. G-153 SH 1 (G-17)
FOR CONT. SEE DWG. G-153 SH 1 (N-12)
FOR CONT. SEE DWG. G-153 SH 1 (A2)
REVISION
DATE
BY
CK


OUTSIDE CONTAINMENT
INSIDE CONTAINMENT
STEAM GENERATOR 1
STEAM GENERATOR 2
EMERGENCY STM. GEN. FEEDWATER PUMPS
STEAM GENERATOR FEEDWATER PUMPS (TURBINE DRIVEN)
REFERENCE DRAWINGS
NOTES
NUCLEAR SAFETY RELATED IN PART ONLY
FLOW DIAGRAM


LOU-1564-G-157 SH.1 of 2
SERVICE BUILDING
CHILLER BUILDING
WATER TREATMENT BUILDING
FIRE PUMP HOUSE
REACTOR AUX BUILDING
TURBINE BUILDING
INTAKE STRUCTURE
FIRE WATER STORAGE TANKS
PRIMARY WATER STORAGE TANK
CONDENSATE STORAGE TANK
TO AUXILIARY BOILER AREA
1
2
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7
8
A
B
C
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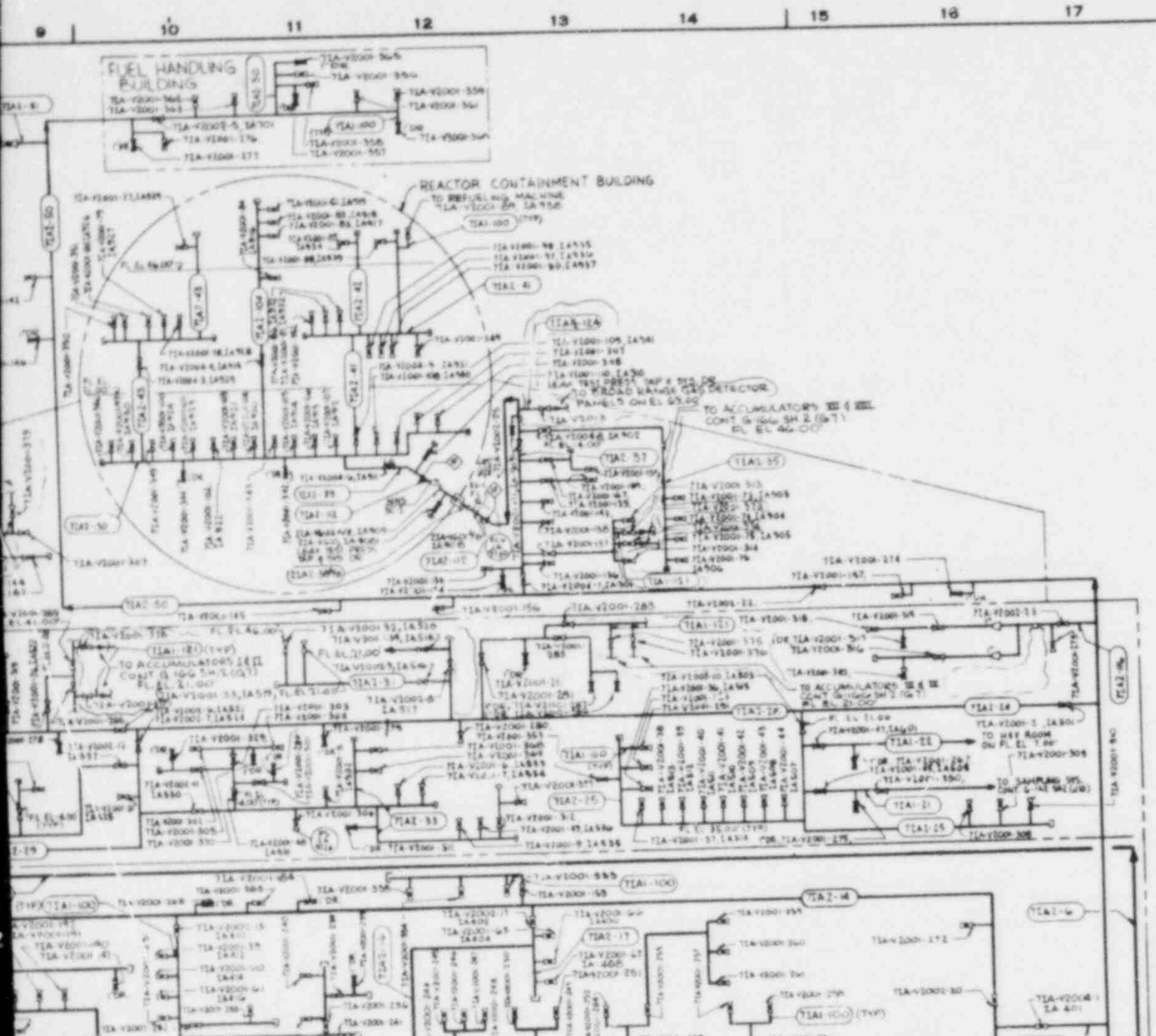


NOTES:

1. * DENOTES EQUIPMENT SUPPLIED BY VENDOR
2. EQUIPMENT IDENTIFIED WITH THE FOLLOWING CODE LETTERS REQUIRE CLASS IE POWER SOURCE: CODE [SA] [SB] [SAB]
   A.C. POWER SOURCE FROM CHANNEL SA, SB, OR SAB RESPECTIVELY.
3. ◈ DENOTES INSULATING FLANGE

REFERENCE DRAWINGS

VALVES & SPECIALTIES LIST — LOU-5817.014B
PIPING LINE LIST — LOU-5817.015B
INSTRUMENT SCHEMATICS AND LOGIC DIAGRAMS (PIPE, VALVES AND INSTRUMENT SYMBOLS) — 1564-B-431
INSTRUMENT LIST — 1564-B-434
STATION & INSTRUMENT AIR COMPRESSOR PACKAGE OUTLINE (FOR PIPING LAYOUT & SIZES) — 1564-G13

NUCLEAR SAFETY RELATED IN PART ONLY

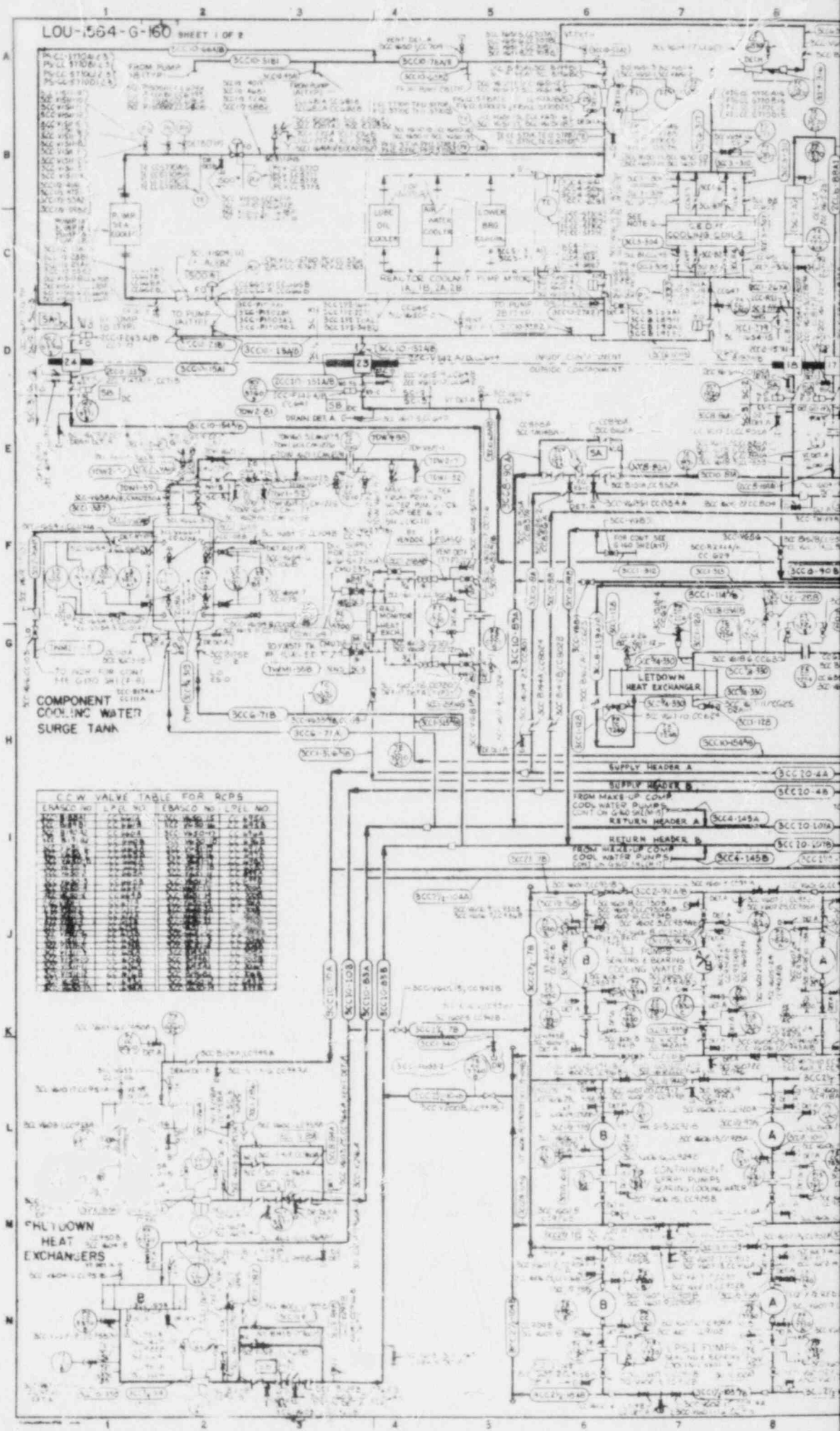
LOUISIANA POWER & LIGHT COMPANY
WATERFORD S.E.S. UNIT NO. 3
1977 - 1165 MW INSTALLATION

FLOW DIAGRAM
INSTRUMENT AIR SYSTEM

EBASCO SERVICES INCORPORATED

SCALE NONE
LOU-1564
G-157
SHEET 1 OF 2

NO	DATE	REVISION	BY	CH	APPROVED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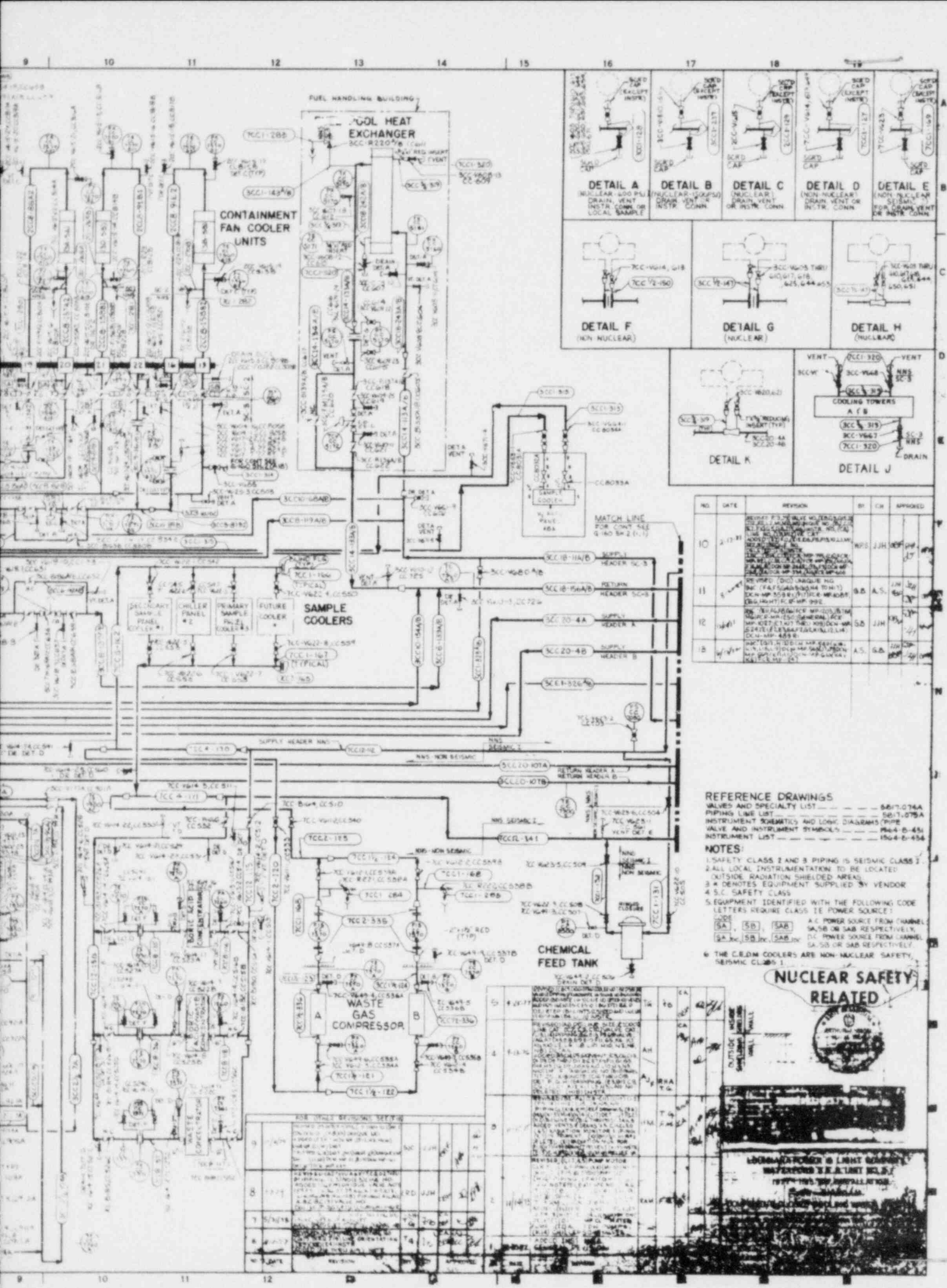
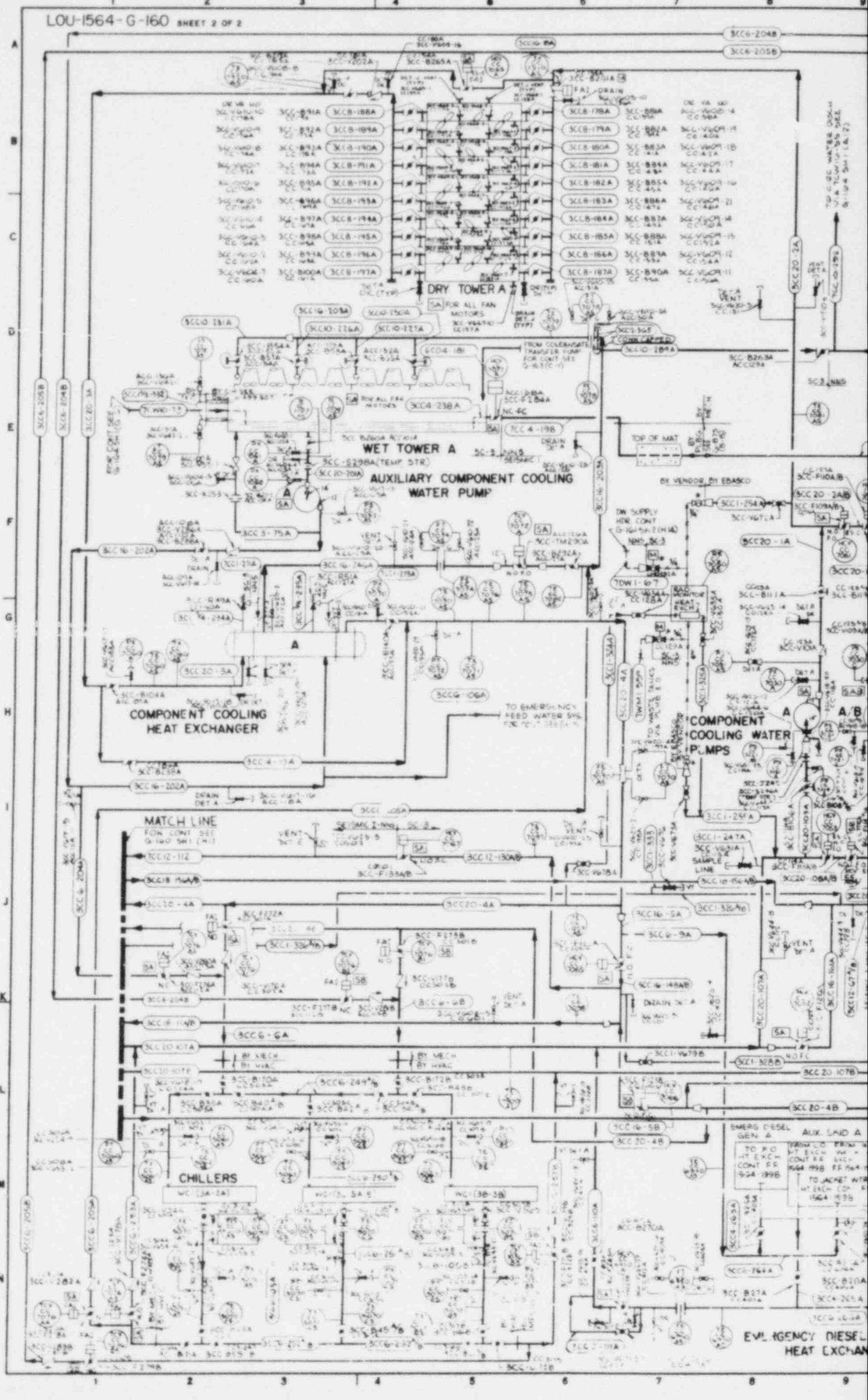
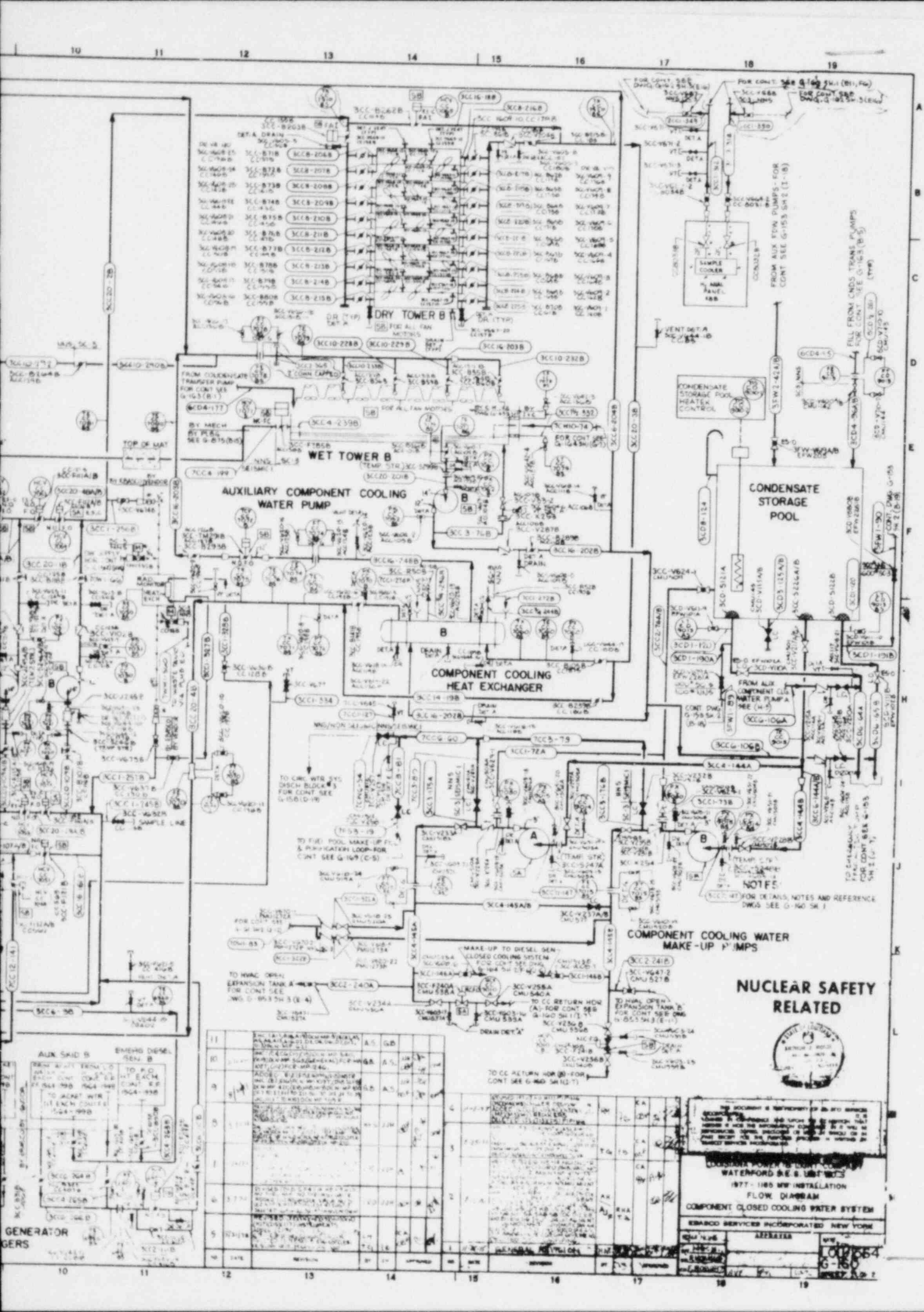
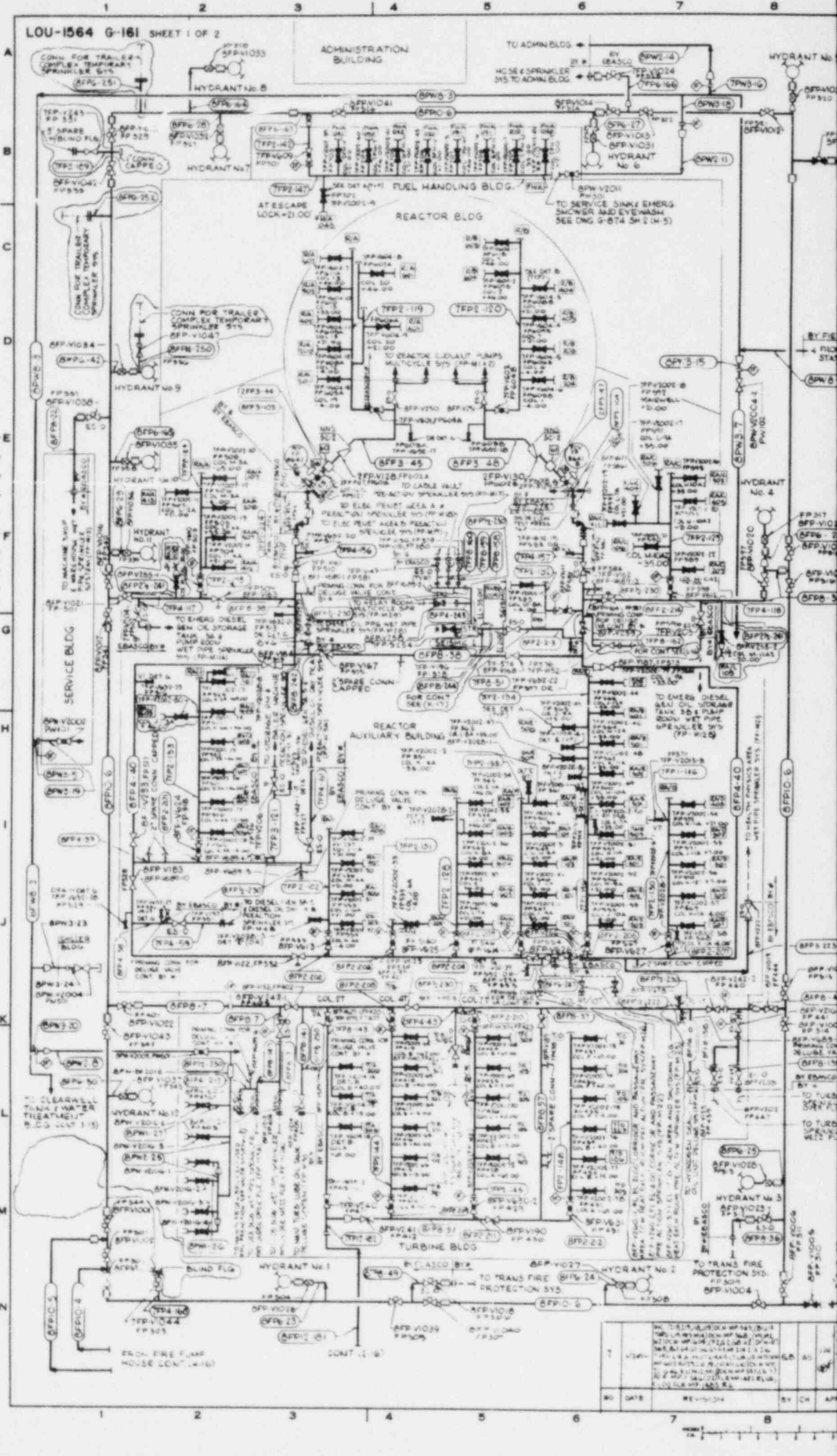
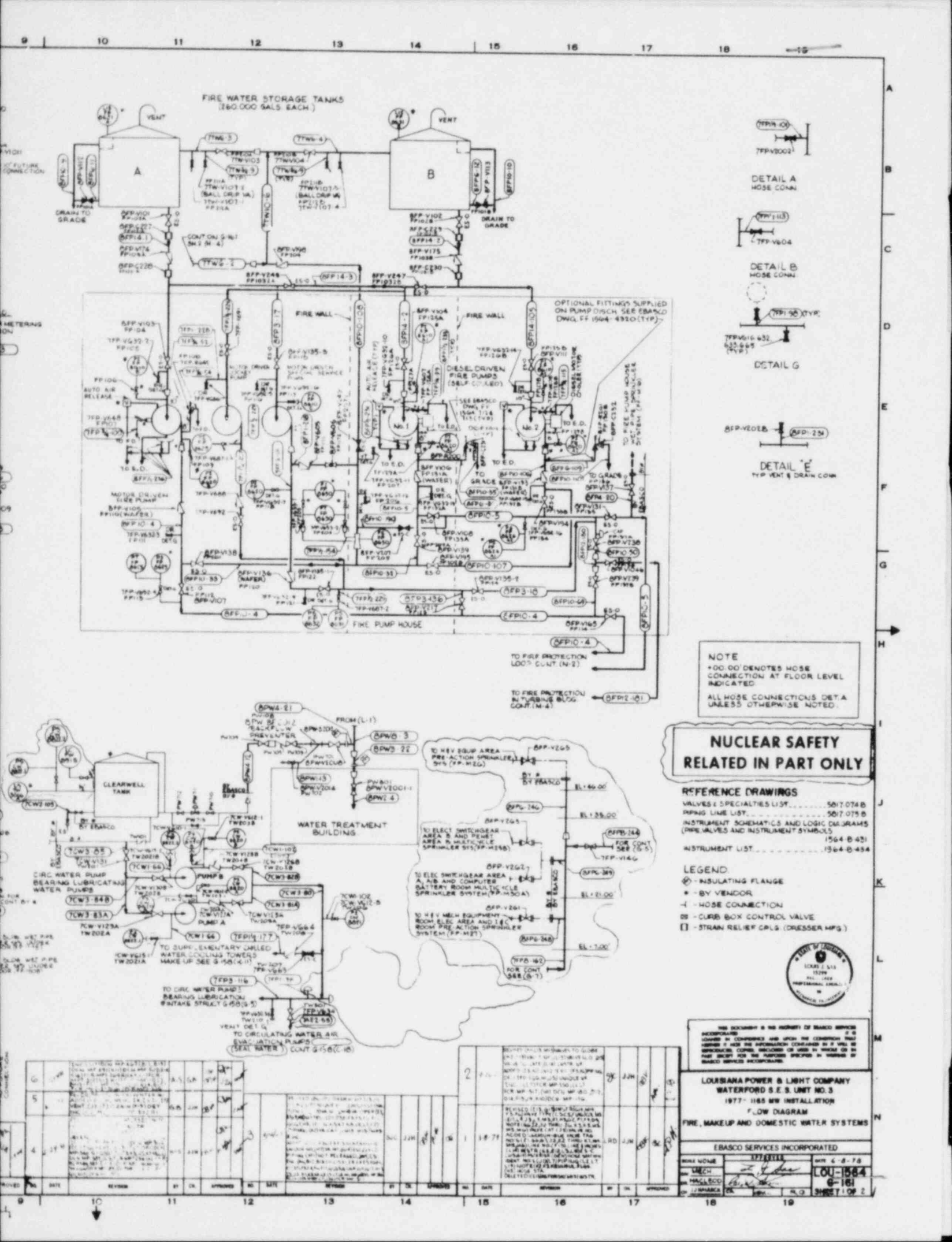
COMPONENT COOLING WATER SURGE TANK
LETDOWN HEAT EXCHANGER
SUPPLY HEADER A
SUPPLY HEADER B
RETURN HEADER A
RETURN HEADER B
CCW VALVE TABLE FOR RCPS
ENABLCO NO
LPEL NO
ENABLCO NO
LPEL NO
CHLTDOWN HEAT EXCHANGERS

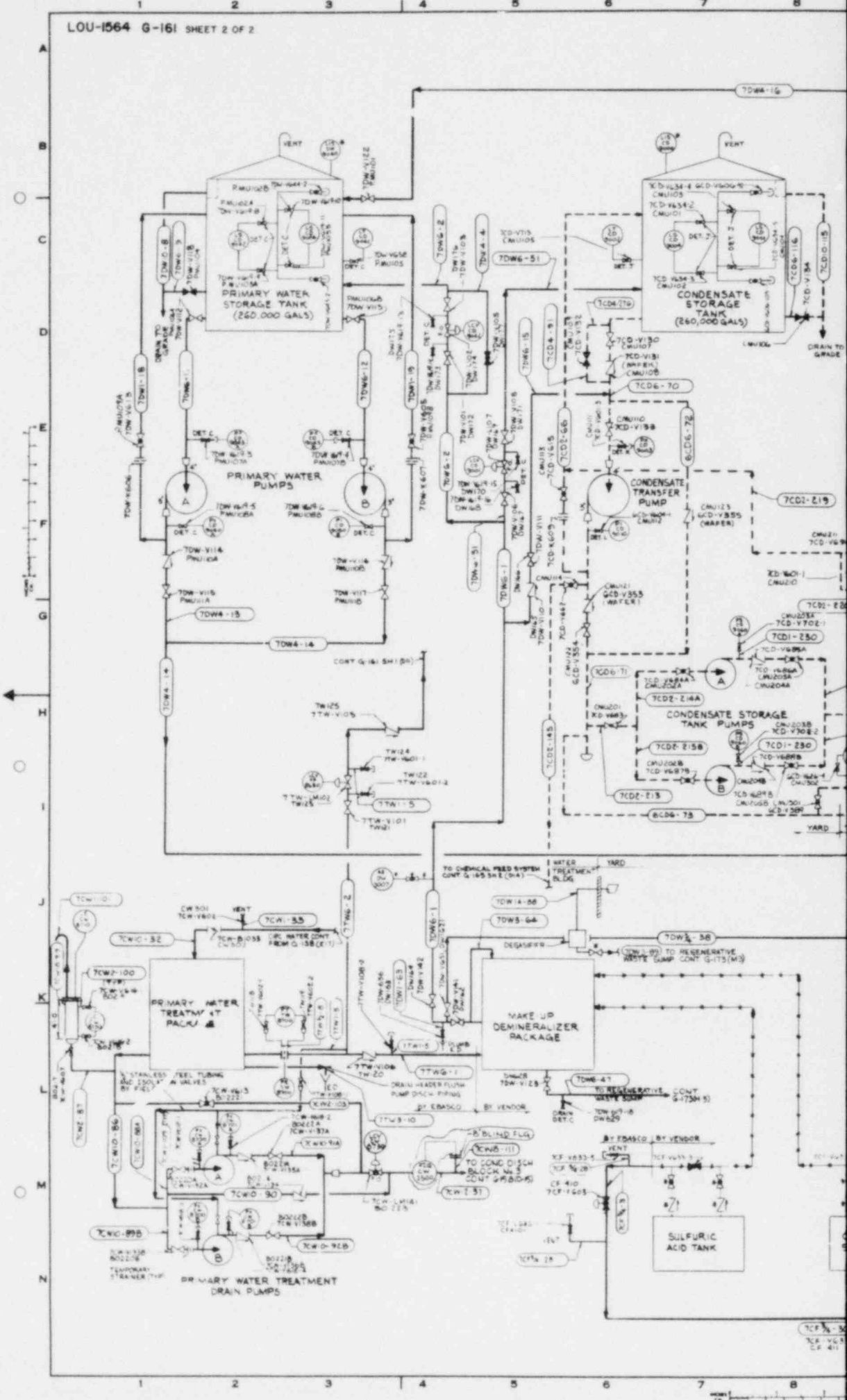

FUEL HANDLING BUILDING
COOL HEAT EXCHANGER
CONTAINMENT FAN COOLER UNITS
SAMPLE COOLERS
CHEMICAL FEED TANK
WASTE GAS COMPRESSOR
A
B
DETAIL A
DETAIL B
DETAIL C
DETAIL D
DETAIL E
DETAIL F
DETAIL G
DETAIL H
DETAIL K
DETAIL J
COOLING TOWERS A & B
MATCH LINE FOR CONT SEE G-160 SH 2 (L-1)
SUPPLY HEADER SC-3
RETURN HEADER SC-3
SUPPLY HEADER A
SUPPLY HEADER B
SUPPLY HEADER NAS
RETURN HEADER A
RETURN HEADER B
NAS SEISMIC I
NAS NON SEISMIC
REFERENCE DRAWINGS
VALVES AND SPECIALTY LIST 6817-074A
PIPING LINE LIST 5817-078A
INSTRUMENT SCHEMATICS AND LOGIC DIAGRAMS (PIPE) 1564-8-451
VALVE AND INSTRUMENT SYMBOLS 1564-8-451
INSTRUMENT LIST 1564-8-454
NOTES:
1. SAFETY CLASS 2 AND 3 PIPING IS SEISMIC CLASS 1.
2. ALL LOCAL INSTRUMENTATION TO BE LOCATED OUTSIDE RADIATION SHIELDED AREAS.
3. * DENOTES EQUIPMENT SUPPLIED BY VENDOR.
4. S.C. SAFETY CLASS
5. EQUIPMENT IDENTIFIED WITH THE FOLLOWING CODE LETTERS REQUIRE CLASS 1E POWER SOURCE:
6. THE C.R.D.M. COOLERS ARE NON-NUCLEAR SAFETY, SEISMIC CLASS 1.
NUCLEAR SAFETY RELATED

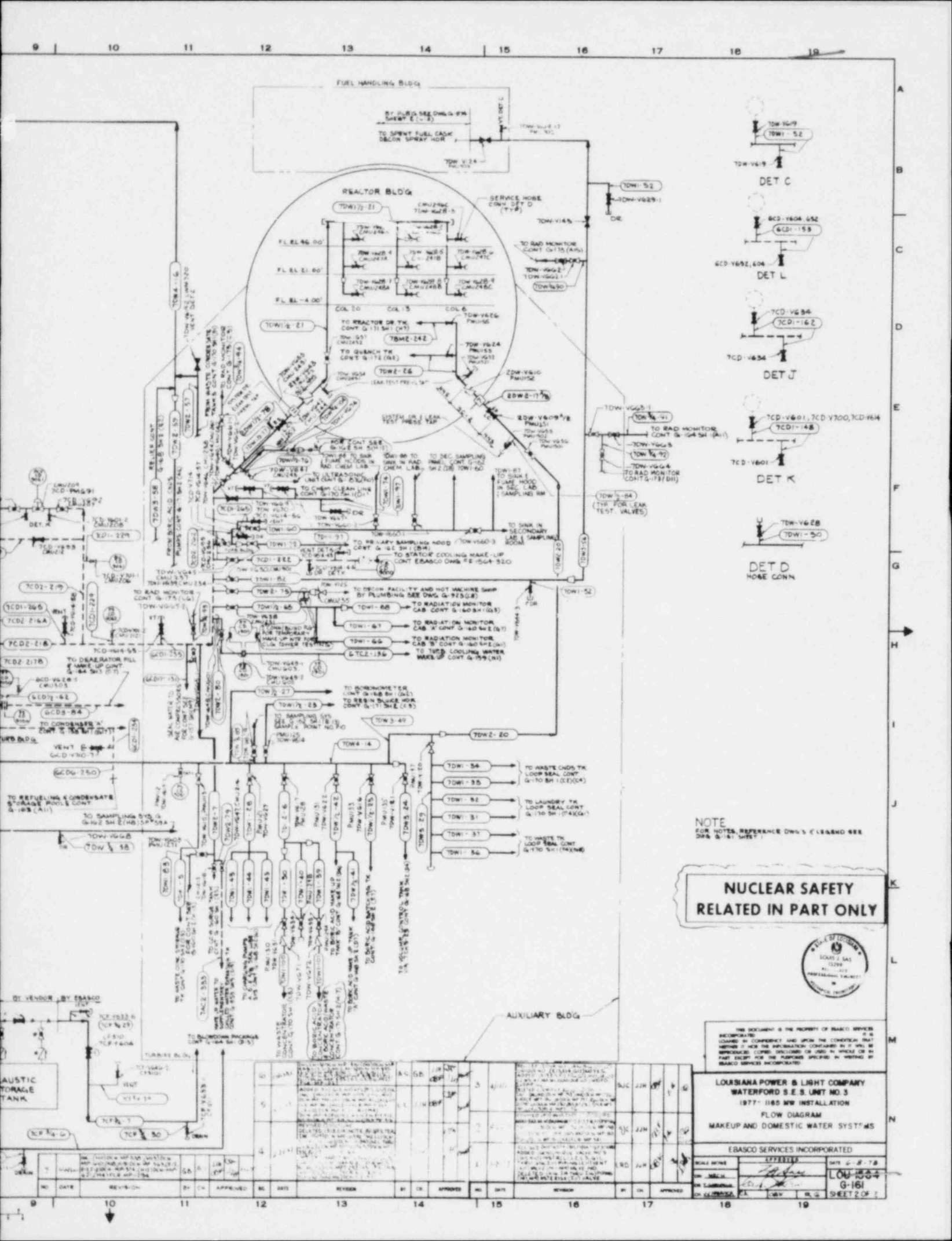

LOU-1564-G-160 SHEET 2 OF 2
DRY TOWER A
WET TOWER A
AUXILIARY COMPONENT COOLING WATER PUMP
COMPONENT COOLING HEAT EXCHANGER
COMPONENT COOLING WATER PUMPS
MATCH LINE
CHILLERS
TOP OF MAT
BY VENDOR, BY EBASCO
TO EMERGENCY FEED WATER SYS
EMERG DIESEL GEN A
AUX. SAND A
EVL AGENCY DIESEL
HEAT EXCHAN

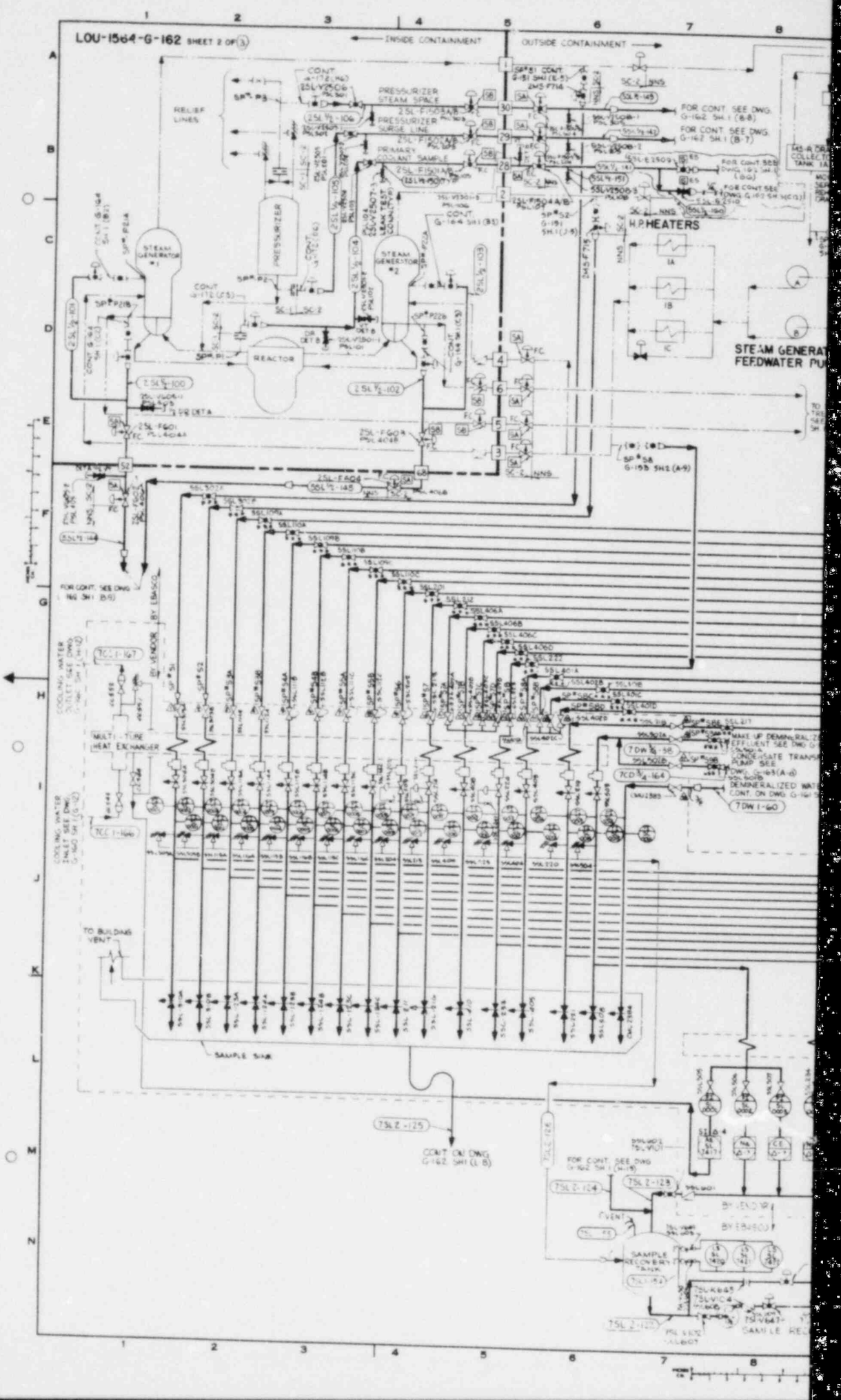

DRY TOWER B
WET TOWER B
AUXILIARY COMPONENT COOLING WATER PUMP
CONDENSATE STORAGE POOL
COMPONENT COOLING HEAT EXCHANGER
COMPONENT COOLING WATER MAKE-UP PUMPS
NOTES
NUCLEAR SAFETY RELATED
WATERFORD SES UNIT NO 3
1977 - 1165 MW INSTALLATION
FLOW DIAGRAM
COMPONENT CLOSED COOLING WATER SYSTEM
EBASCO SERVICES INCORPORATED NEW YORK
LOUISIANA POWER & LIGHT COMPANY
G-160

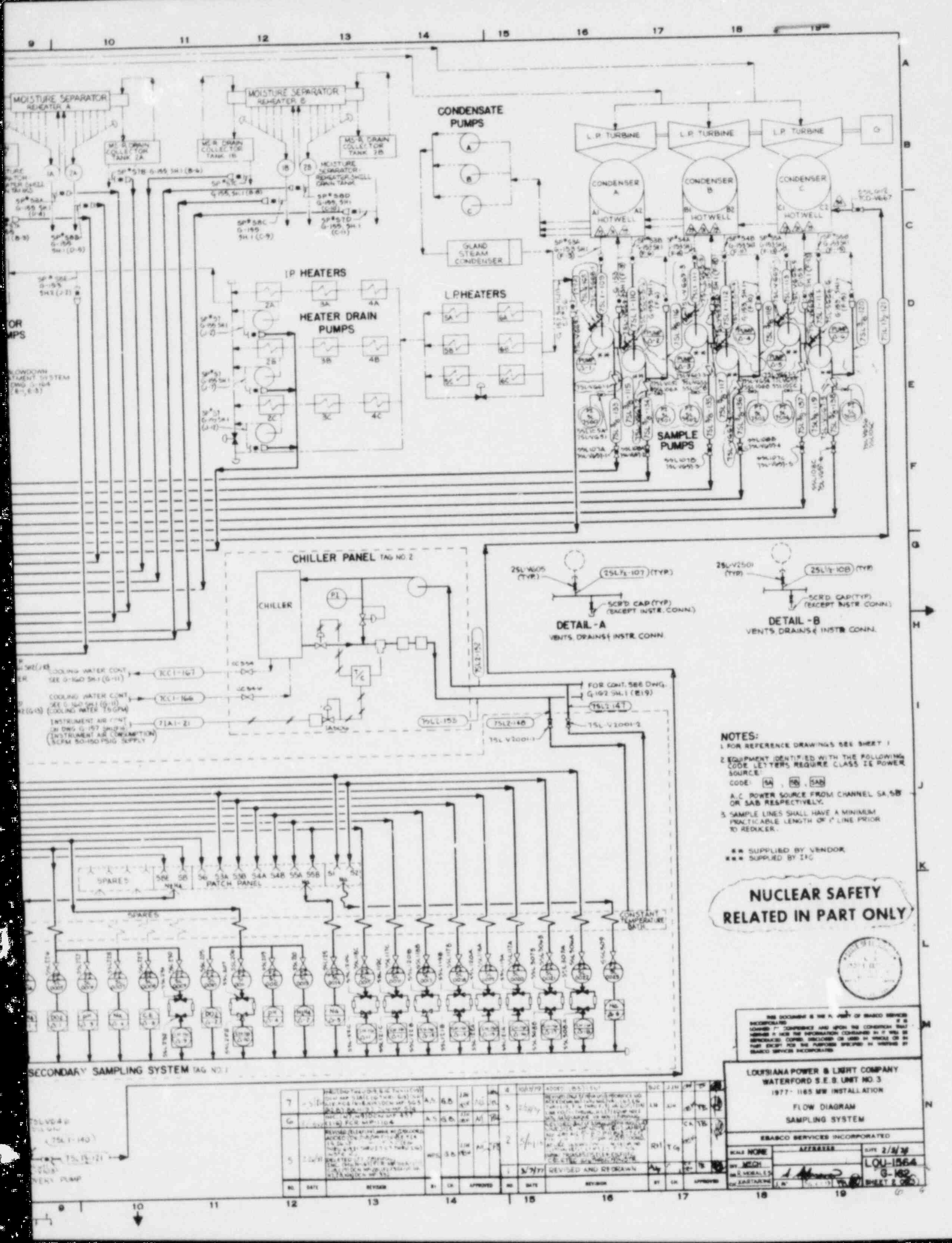

LOU-1564 G-161 SHEET 1 OF 2
ADMINISTRATION BUILDING
TO ADMIN BLDG
HOSE & SPRINKLER SYS TO ADMIN BLDG
HYDRANT No. 8
HYDRANT No. 7
HYDRANT No. 6
FUEL HANDLING BLDG.
REACTOR BLDG
TO SERVICE SINK & EMERG SHOWER AND EYEWASH SEE DWG G-874 SH 2 (H-5)
CONN FOR TRAILER COMPLEX TEMPORARY SPRINKLER SYS
HYDRANT No. 9
HYDRANT No. 10
HYDRANT No. 11
SERVICE BLDG
TO CABLE VAULT
TO REACTOR COOLANT PUMPS MULTICYCLE SYS
TO EMERG DIESEL GEN OIL STORAGE TANK
REACTOR AUXILIARY BUILDING
TO EMERG DIESEL GEN OIL STORAGE TANK 3B & PUMP ROOM WET PIPE SPRINKLER SYS
HYDRANT No. 4
CHILLER BLDG
TO CLEARWELL TANK & WATER TREATMENT BLDG CONT (J-15)
HYDRANT No. 12
HYDRANT No. 1
HYDRANT No. 2
HYDRANT No. 3
TURBINE BLDG
BLIND FLG
TO TRANS FIRE PROTECTION SYS
FROM FIRE PUMP HOUSE CONT (K-16)
CONT (I-16)
REVISION
BY
CH
APP
NO
DATE

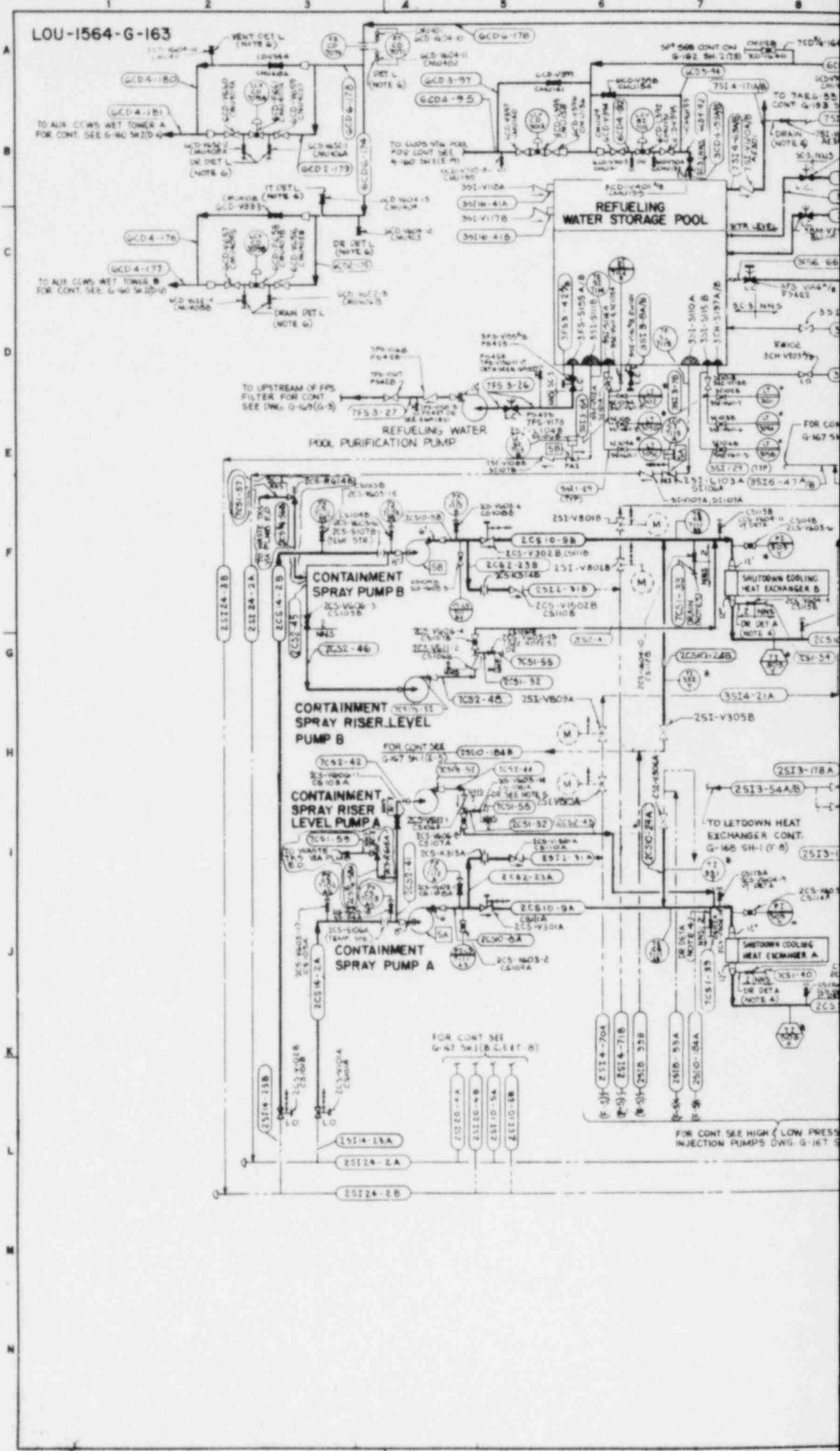

FIRE WATER STORAGE TANKS
(260,000 GALS EACH)
A
B
VENT
DRAIN TO GRADE
FIRE WALL
DIESEL DRIVEN FIRE PUMPS (SELF-CONTAINED)
FIRE PUMP HOUSE
OPTIONAL FITTINGS SUPPLIED ON PUMP DISCH. SEE EBASCO DWG. FF 1564-4320 (TYP.)
TO FIRE PROTECTION LOOP CONT. (N-2)
TO FIRE PROTECTION IN TURBINE BLDG CONT. (M-4)
DETAIL A
HOSE CONN.
DETAIL B
HOSE CONN.
DETAIL G
DETAIL "E"
TYP VENT & DRAIN CONN.
NOTE
+00.00' DENOTES HOSE CONNECTION AT FLOOR LEVEL INDICATED.
ALL HOSE CONNECTIONS DET. A UNLESS OTHERWISE NOTED.
CLEARWELL TANK
WATER TREATMENT BUILDING
CIRC. WATER PUMP BEARING LUBRICATING WATER PUMPS
PUMP A
PUMP B
TO SUPPLEMENTARY DRILLED WATER COOLING TOWERS MAKE UP SEE G-158 (K-11)
TO CIRC. WATER PUMP BEARING LUBRICATION INTAKE STRUCT. G-158 (J-5)
TO CIRCULATING WATER AIR EVACUATION PUMPS
SEAL WATER
CONT. G-158 (K-10)
TO H.E.V. EQUIP. AREA PRE-ACTION SPRINKLER SYS (FP-M126)
TO ELECT. SWITCHGEAR AREA B AND PENET. AREA B, MULTI-CYCLE SPRINKLER SYS. (FP-M256)
TO ELEC. SWITCHGEAR AREA A, A/B AND COMPUTER BATTERY ROOM MULTI-CYCLE SPRINKLER SYSTEM (FP-M50A)
TO H.E.V. MECH. EQUIPMENT ROOM, ELEC. AREA AND I&C ROOM PRE-ACTION SPRINKLER SYSTEM (FP-M27)
EL. +46.00'
EL. +25.00'
EL. +21.00'
EL. +7.00'
FOR CONT SEE (B-5)
FOR CONT SEE (B-7)
NUCLEAR SAFETY RELATED IN PART ONLY
REFERENCE DRAWINGS
VALVES & SPECIALTIES LIST ..... 5617.074 B
PIPING LINE LIST ..... 5617.075 B
INSTRUMENT SCHEMATICS AND LOGIC DIAGRAMS (PIPE, VALVES AND INSTRUMENT SYMBOLS) 1564-B-431
INSTRUMENT LIST 1564-B-454
LEGEND
- INSULATING FLANGE
- BY VENDOR
- HOSE CONNECTION
- CURB BOX CONTROL VALVE
- STRAIN RELIEF CPLG. (DRESSER MFG.)
LOUISIANA POWER & LIGHT COMPANY
WATERFORD S.E.S. UNIT NO. 3
1977 - 1165 MW INSTALLATION
FLOW DIAGRAM
FIRE, MAKEUP AND DOMESTIC WATER SYSTEMS
EBASCO SERVICES INCORPORATED
LOU-1564 G-161
SHEET 1 OF 2

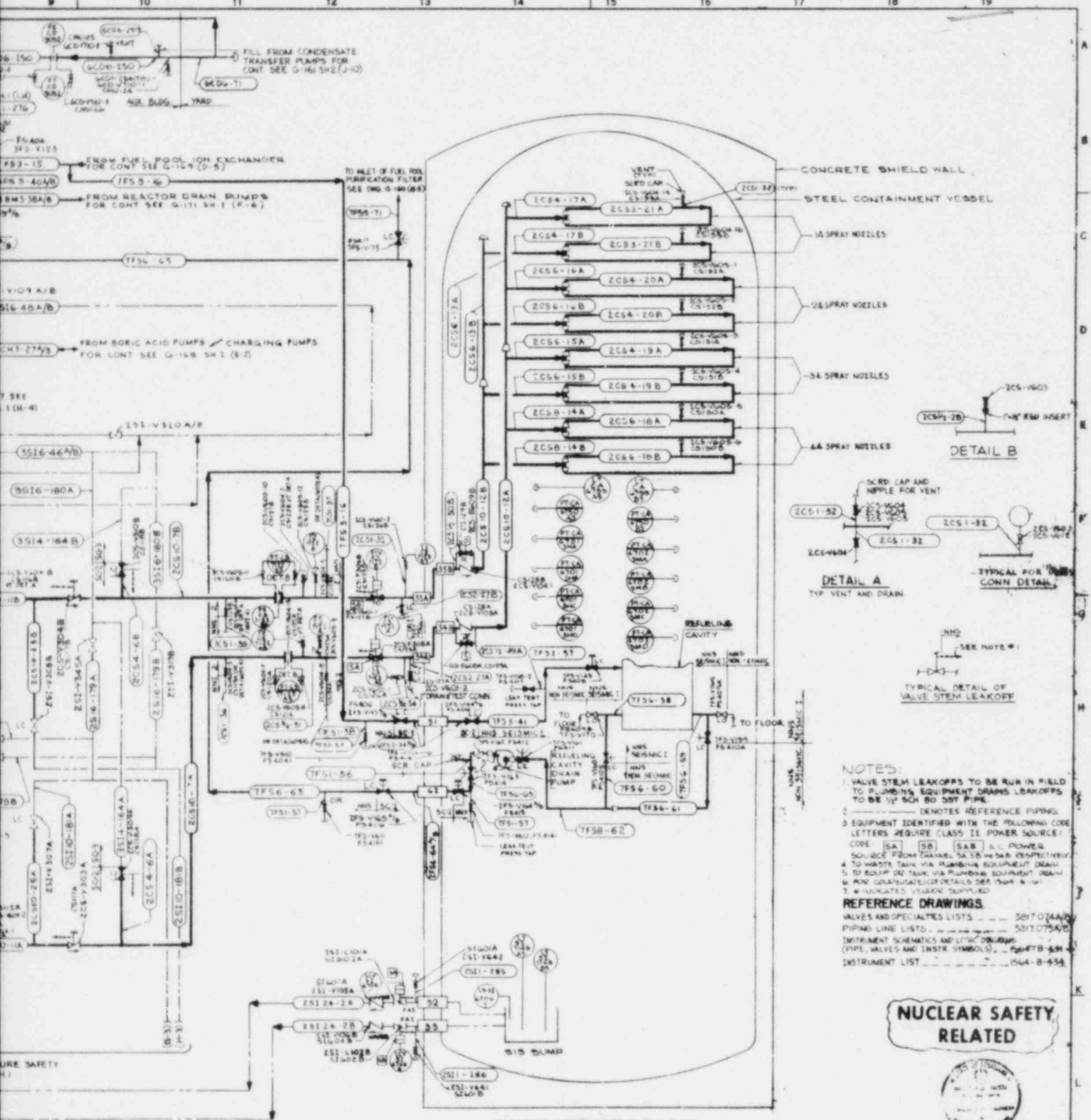

LOU-1564 G-161 SHEET 2 OF 2
PRIMARY WATER STORAGE TANK (260,000 GALS)
CONDENSATE STORAGE TANK (260,000 GALS)
PRIMARY WATER PUMPS
CONDENSATE TRANSFER PUMP
CONDENSATE STORAGE TANK PUMPS
PRIMARY WATER TREATMENT PACKAGE
MAKE UP DEMINERALIZER PACKAGE
SULFURIC ACID TANK
PRIMARY WATER TREATMENT DRAIN PUMPS
DEAERATOR
VENT
YARD
BY EBASCO
BY VENDOR


FUEL HANDLING BLDG
REACTOR BLDG
AUXILIARY BLDG
DET C
DET L
DET J
DET K
DET D
HOSE CONN
NOTE
NUCLEAR SAFETY
RELATED IN PART ONLY
LOUISIANA POWER & LIGHT COMPANY
WATERFORD S.E.S. UNIT NO. 3
1977 1160 MW INSTALLATION
FLOW DIAGRAM
MAKEUP AND DOMESTIC WATER SYSTEMS
EBASCO SERVICES INCORPORATED
LOU-1004
G-161
SHEET 2 OF 2


LOU-1564-G-162 SHEET 2 OF 3
INSIDE CONTAINMENT
OUTSIDE CONTAINMENT
RELIEF LINES
PRESSURIZER STEAM SPACE
PRESSURIZER SURGE LINE
PRIMARY COOLANT SAMPLE
PRESSURIZER
STEAM GENERATOR #1
STEAM GENERATOR #2
REACTOR
H.P.HEATERS
1A
1B
1C
MULTI-TUBE HEAT EXCHANGER
SAMPLE SINK
TO BUILDING VENT
SAMPLE RECOVERY TANK
FOR CONT. SEE DWG. G-162 SH.1 (B-8)
FOR CONT. SEE DWG. G-162 SH.1 (B-7)
CONT ON DWG G-162, SH1 (L-8)


MOISTURE SEPARATOR REHEATER A
MOISTURE SEPARATOR REHEATER B
M.S.R. DRAIN COLLECTOR TANK 2A
M.S.R. DRAIN COLLECTOR TANK 1B
M.S.R. DRAIN COLLECTOR TANK 2B
CONDENSATE PUMPS
L.P. TURBINE
CONDENSER A
CONDENSER B
CONDENSER C
HOTWELL
GLAND STEAM CONDENSER
I.P. HEATERS
HEATER DRAIN PUMPS
L.P. HEATERS
SAMPLE PUMPS
CHILLER PANEL TAG NO. 2
CHILLER
COOLING WATER CONT.
INSTRUMENT AIR CONT.
DETAIL - A
VENTS, DRAINS & INSTR. CONN.
DETAIL - B
VENTS, DRAINS & INSTR. CONN.
SCR'D CAP (TYP) (EXCEPT INSTR. CONN.)
SPARES
PATCH PANEL
CONSTANT TEMPERATURE BATH
SECONDARY SAMPLING SYSTEM TAG NO. 1
NOTES:
1. FOR REFERENCE DRAWINGS SEE SHEET 1
2. EQUIPMENT IDENTIFIED WITH THE FOLLOWING CODE LETTERS REQUIRE CLASS IE POWER SOURCE:
CODE: SA , SB , SAB
A.C. POWER SOURCE FROM CHANNEL SA, SB OR SAB RESPECTIVELY.
3. SAMPLE LINES SHALL HAVE A MINIMUM PRACTICABLE LENGTH OF 1" LINE PRIOR TO REDUCER.
** SUPPLIED BY VENDOR
*** SUPPLIED BY I&C
NUCLEAR SAFETY RELATED IN PART ONLY
LOUISIANA POWER & LIGHT COMPANY
WATERFORD S.E.S. UNIT NO. 3
1977 - 1165 MW INSTALLATION
FLOW DIAGRAM
SAMPLING SYSTEM
EBASCO SERVICES INCORPORATED
SCALE NONE
LOU-1564
G-162
SHEET 2


LOU-1564-G-163
REFUELING WATER STORAGE POOL
REFUELING WATER POOL PURIFICATION PUMP
CONTAINMENT SPRAY PUMP B
CONTAINMENT SPRAY RISER LEVEL PUMP B
CONTAINMENT SPRAY RISER LEVEL PUMP A
CONTAINMENT SPRAY PUMP A
SHUTDOWN COOLING HEAT EXCHANGER B
SHUTDOWN COOLING HEAT EXCHANGER A
TO LETDOWN HEAT EXCHANGER CONT. G-168 SH-1 (F-8)
TO AUX. CCWS WET TOWER A FOR CONT. SEE G-160 SH 2(D-4)
TO AUX. CCWS WET TOWER B FOR CONT. SEE G-160 SH 2(D-4)
TO UPSTREAM OF FPS FILTER FOR CONT SEE DWG. G-169(G-5)
FOR CONT SEE HIGH & LOW PRESS INJECTION PUMPS DWG. G-167
DRAIN (NOTE 6)
DR DET L (NOTE 6)
DRAIN DET L (NOTE 6)
VENT DET L (NOTE 6)
DET L (NOTE 6)
FT DET L (NOTE 6)
DR DET A (NOTE 4)



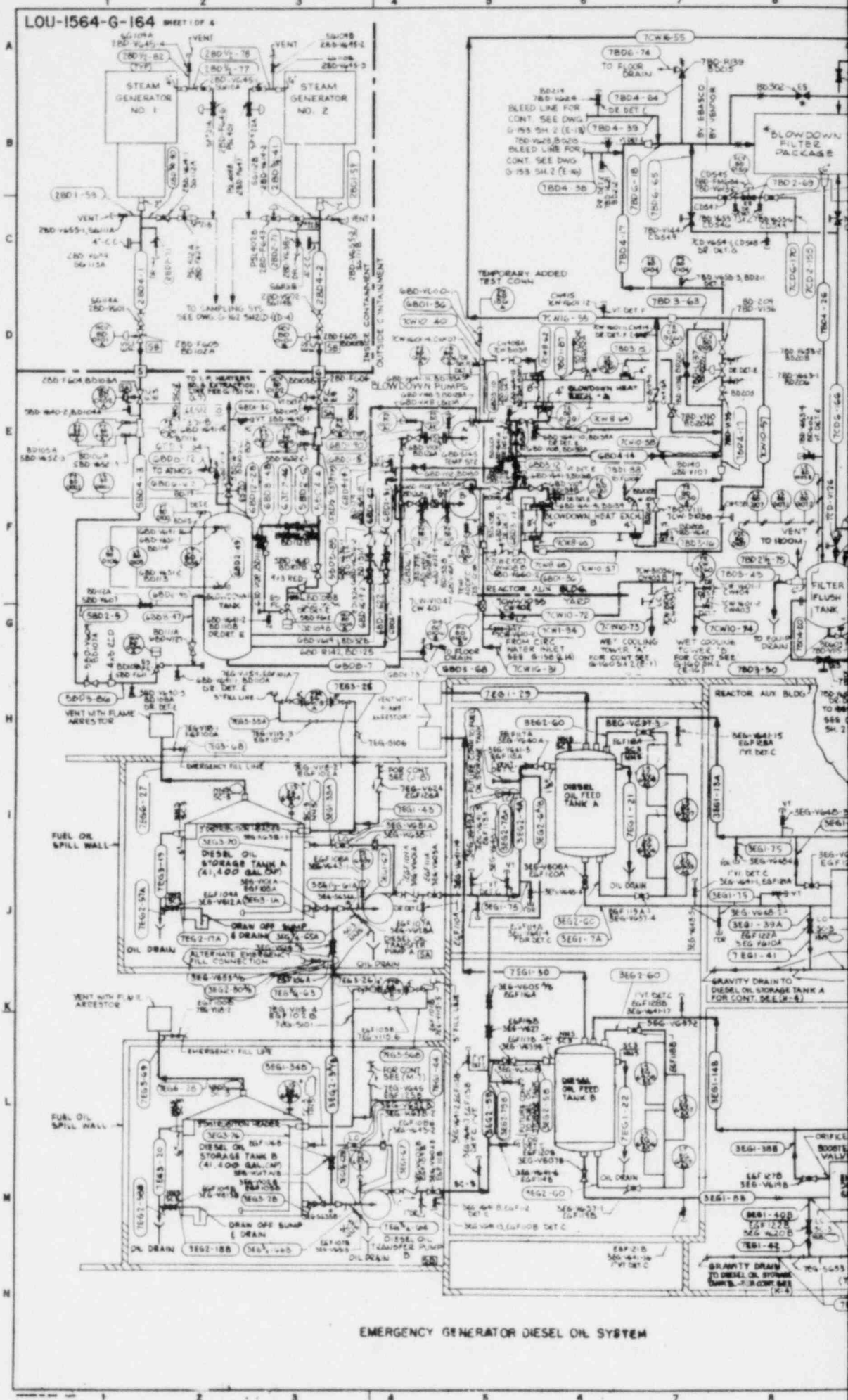
NOTES:

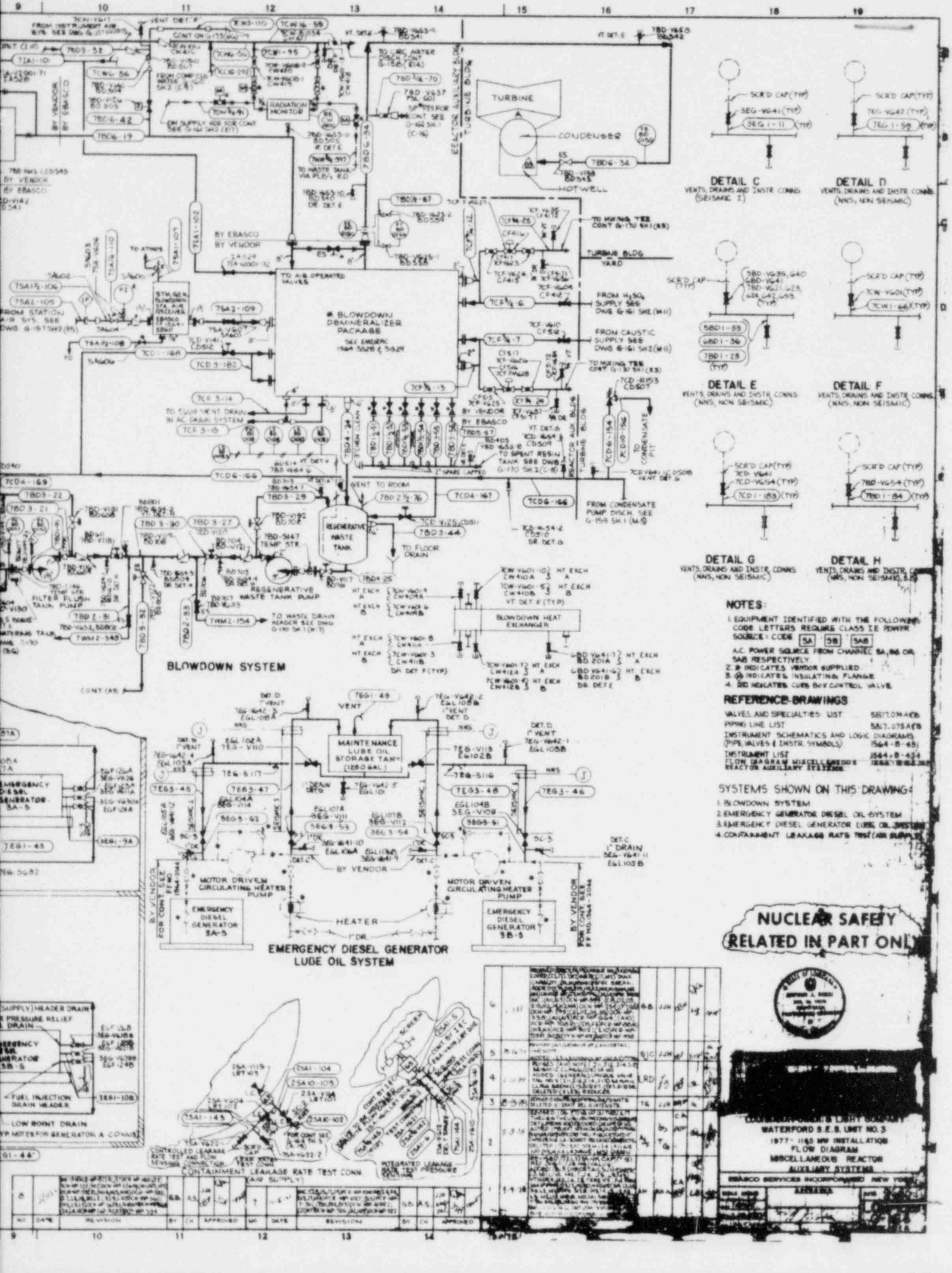
1. VALVE STEM LEAKOFFS TO BE RUN IN FIELD TO PLUMBING EQUIPMENT DRAINS. LEAKOFFS TO BE 1/2" SCH 80 316T PIPE.
2. ——— DENOTES REFERENCE PIPING.
3. EQUIPMENT IDENTIFIED WITH THE FOLLOWING CODE LETTERS REQUIRE CLASS 1E POWER SOURCE:
   CODE: 5A | 5B | 5AB | A.C. POWER
   SOURCE: FROM CHANNEL 5A, 5B OR 5AB RESPECTIVELY.
4. TO WASTE TANK VIA PLUMBING EQUIPMENT DRAIN.
5. TO EQUIP DR. TANK VIA PLUMBING EQUIPMENT DRAIN.
6. NON CONTAINMENT LOCA DETAILS SEE (SHT. & GRID)
7. (W) INDICATES VENDOR SUPPLIED

REFERENCE DRAWINGS

VALVES AND SPECIALTIES LISTS 5817-074A/B
PIPING LINE LISTS 5817-075A/B
INSTRUMENT SCHEMATICS AND LOGIC DIAGRAMS (PIPE, VALVES AND INSTR. SYMBOLS) 5817B-63H
INSTRUMENT LIST 1564-8-438

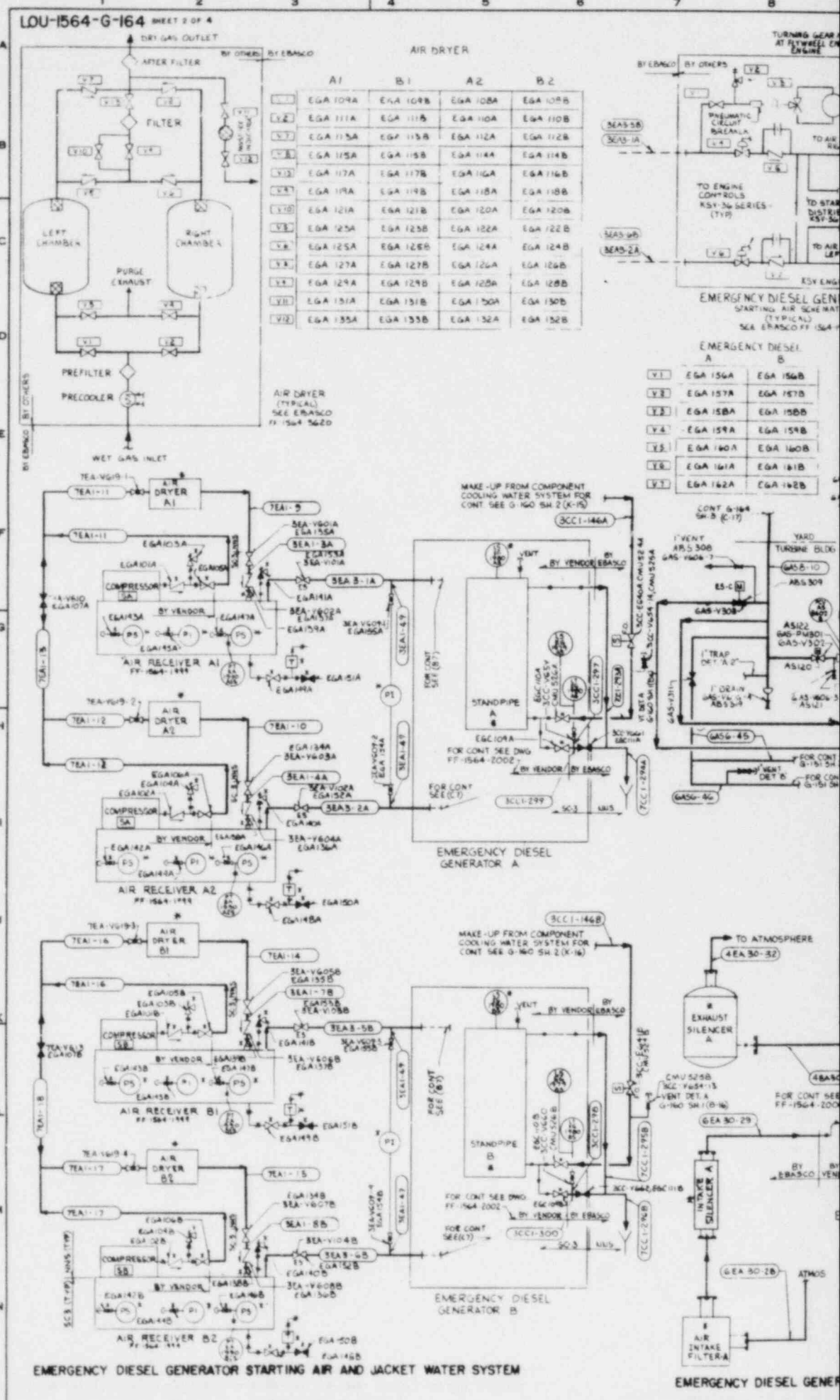
NUCLEAR SAFETY RELATED

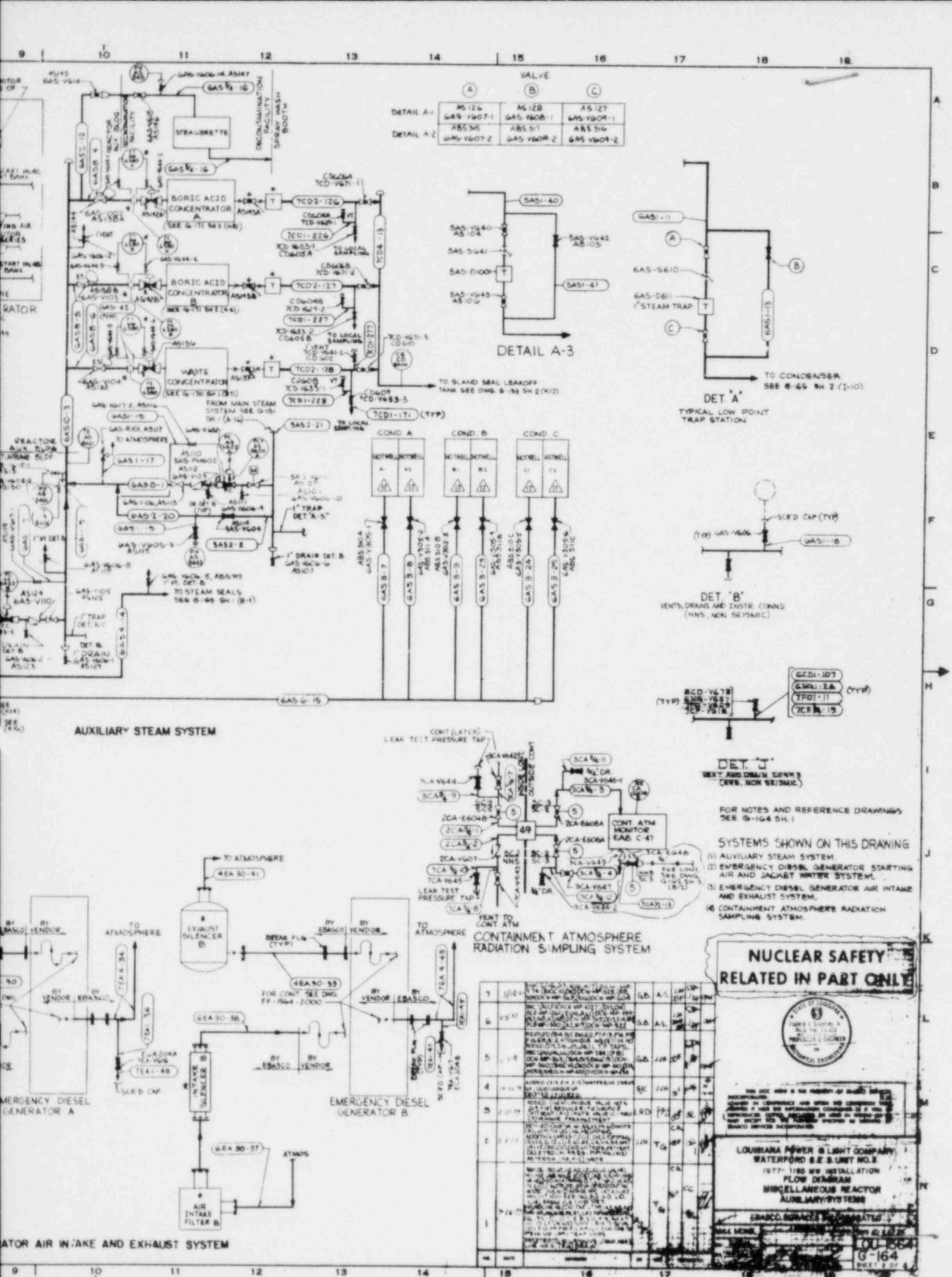

LOU-1564-G-164 SHEET 1 OF 4
STEAM GENERATOR NO. 1
STEAM GENERATOR NO. 2
BLOWDOWN FILTER PACKAGE
TEMPORARY ADDED TEST CONN
BLOWDOWN PUMPS
BLOWDOWN HEAT EXCH. A
BLOWDOWN HEAT EXCH. B
FILTER FLUSH TANK
REACTOR AUX. BLDG.
TO FLOOR DRAIN
VENT TO HOOD
VENT WITH FLAME ARRESTOR
DIESEL OIL STORAGE TANK A (41,400 GAL CAP)
DIESEL OIL STORAGE TANK B (41,400 GAL CAP)
DIESEL OIL FEED TANK A
DIESEL OIL FEED TANK B
DIESEL OIL TRANSFER PUMP A
DIESEL OIL TRANSFER PUMP B
FUEL OIL SPILL WALL
OIL DRAIN
GRAVITY DRAIN TO DIESEL OIL STORAGE TANK A
GRAVITY DRAIN TO DIESEL OIL STORAGE TANK B
EMERGENCY GENERATOR DIESEL OIL SYSTEM



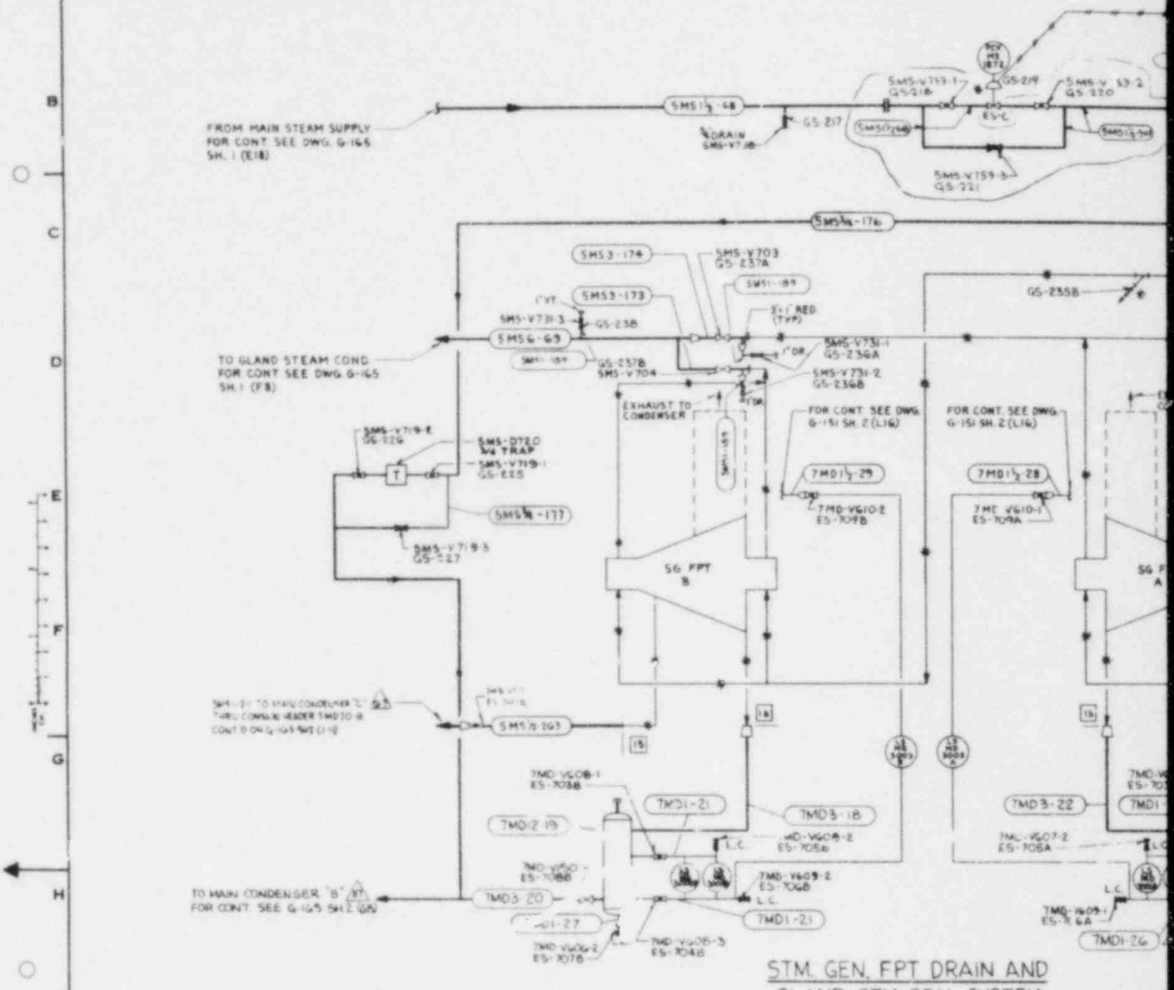
BLOWDOWN SYSTEM
BLOWDOWN DEMINERALIZER PACKAGE
TURBINE
CONDENSER
HOTWELL
RADIATION MONITOR
REGENERATIVE WASTE TANK
REGENERATIVE WASTE TANK PUMP
FILTER FLUSH TANK PUMP
BLOWDOWN HEAT EXCHANGER
REACTOR AUXILIARY BLDG
TURBINE BLDG
TURBINE BLDG YARD
BY EBASCO
BY VENDOR
DETAIL C
VENTS, DRAINS AND INSTR. CONNS (SEISMIC I)
DETAIL D
VENTS, DRAINS AND INSTR. CONNS (NNS, NON SEISMIC)
DETAIL E
VENTS, DRAINS AND INSTR. CONNS (NNS, NON SEISMIC)
DETAIL F
VENTS, DRAINS AND INSTR. CONNS (NNS, NON SEISMIC)
DETAIL G
VENTS, DRAINS AND INSTR. CONNS (NNS, NON SEISMIC)
DETAIL H
VENTS, DRAINS AND INSTR. CONNS (NNS, NON SEISMIC)
NOTES:
1. EQUIPMENT IDENTIFIED WITH THE FOLLOWING CODE LETTERS REQUIRE CLASS IE POWER SOURCE: CODE 3A 3B 3AB
A.C. POWER SOURCE FROM CHANNEL 3A, 3B OR 3AB RESPECTIVELY.
2. V INDICATES VENDOR SUPPLIED.
3. Ⓘ INDICATES INSULATING FLANGE.
4. CBC INDICATES CURB BOX CONTROL VALVE.
REFERENCE DRAWINGS
VALVES AND SPECIALTIES LIST 5817.074A(B)
PIPING LINE LIST 5817.075A(B)
INSTRUMENT SCHEMATICS AND LOGIC DIAGRAMS (PIPE, VALVES & INSTR. SYMBOLS) 1564-B-43
INSTRUMENT LIST 1564-B-434
FLOW DIAGRAM MISCELLANEOUS REACTOR AUXILIARY SYSTEMS
SYSTEMS SHOWN ON THIS DRAWING:
1. BLOWDOWN SYSTEM
2. EMERGENCY GENERATOR DIESEL OIL SYSTEM
3. EMERGENCY DIESEL GENERATOR LUBE OIL SYSTEM
4. CONTAINMENT LEAKAGE RATE TEST (AIR SUPPLY)
MAINTENANCE LUBE OIL STORAGE TANK (1280 GAL)
MOTOR DRIVEN CIRCULATING HEATER PUMP
EMERGENCY DIESEL GENERATOR 3A-S
EMERGENCY DIESEL GENERATOR 3B-S
HEATER
BY VENDOR
EMERGENCY DIESEL GENERATOR LUBE OIL SYSTEM
CONTAINMENT LEAKAGE RATE TEST CONN. (AIR SUPPLY)
INTEGRATED LEAKAGE RATE TEST PRESSURE SENSING
CONTROLLED LEAKAGE RATE TEST AND FLOW SENSING CONNECTION
FUEL INJECTION DRAIN HEADER
LOW POINT DRAIN
NUCLEAR SAFETY RELATED IN PART ONLY
WATERFORD S.E.S. UNIT NO. 3
1977 - 1165 MW INSTALLATION
FLOW DIAGRAM
MISCELLANEOUS REACTOR AUXILIARY SYSTEMS
EBASCO SERVICES INCORPORATED NEW YORK
NO. DATE REVISION BY CH APPROVED

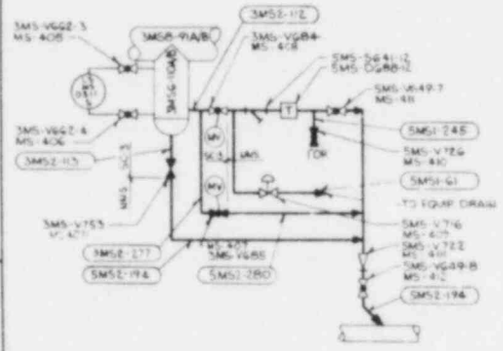
LOU-1564-G-164 SHEET 2 OF 4



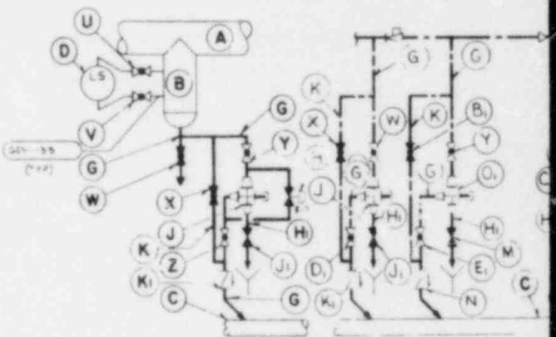

VALVE
A
B
C
DETAIL A-1
AS126 GAS-V607-1
AS128 GAS-V608-1
AS127 GAS-V609-1
DETAIL A-2
AB536 GAS-V607-2
AB537 GAS-V608-2
AB534 GAS-V609-2
DECONTAMINATION FACILITY SPRAY WASH BOOTH
STEAM LINE TRAP
BORIC ACID CONCENTRATOR A
BORIC ACID CONCENTRATOR B
WASTE CONCENTRATOR
TO LOCAL SAMPLING
TO SLAND SEAL LEAKOFF TANK SEE DWG. G-159 SH 2 (K12)
FROM MAIN STEAM SYSTEM SEE G-151 SH 1 (A-10)
TO ATMOSPHERE
TO STEAM SEALS SEE G-165 SH 1 (B-1)
1" TRAP DET. A-5
1" DRAIN DET. B
COND A
COND B
COND C
HOTWELL
DETAIL A-3
DET. "A"
TYPICAL LOW POINT TRAP STATION
TO CONDENSER SEE G-165 SH. 2 (I-10)
DET. "B"
VENTS, DRAINS AND INSTR. CONNS (NNS, NON SEISMIC)
DET. "J"
VENT AND DRAIN CONNS (NNS, NON SEISMIC)
AUXILIARY STEAM SYSTEM
FOR NOTES AND REFERENCE DRAWINGS SEE G-164 SH. 1
SYSTEMS SHOWN ON THIS DRAWING
(1) AUXILIARY STEAM SYSTEM.
(2) EMERGENCY DIESEL GENERATOR STARTING AIR AND JACKET WATER SYSTEMS.
(3) EMERGENCY DIESEL GENERATOR AIR INTAKE AND EXHAUST SYSTEM.
(4) CONTAINMENT ATMOSPHERE RADIATION SAMPLING SYSTEM.
CONTAINMENT ATMOSPHERE RADIATION SAMPLING SYSTEM
CONT ATM MONITOR GAB C-47
LEAK TEST PRESSURE TAP
VENT TO CONT ATM
TO ATMOSPHERE
EXHAUST SILENCER B
INTAKE SILENCER B
AIR INTAKE FILTER B
EMERGENCY DIESEL GENERATOR A
EMERGENCY DIESEL GENERATOR B
ATOR AIR INTAKE AND EXHAUST SYSTEM
NUCLEAR SAFETY RELATED IN PART ONLY
LOUISIANA POWER & LIGHT COMPANY
WATERFORD S.E.S. UNIT NO. 3
1977 - 1165 MW INSTALLATION
FLOW DIAGRAM
MISCELLANEOUS REACTOR AUXILIARY SYSTEMS
EBASCO SERVICES INCORPORATED
DRAWING NO. LOU-1864 G-164
SHEET 8 OF 8

LOU-1564 - G-165 - SHEET 3 OF 3

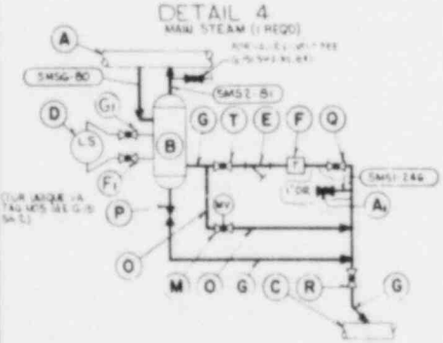




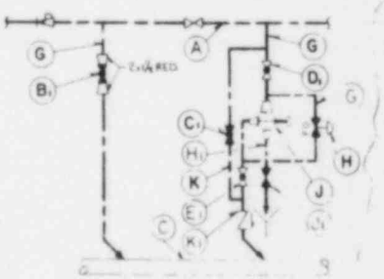
DETAIL 4
MAIN STEAM (1 REQD)



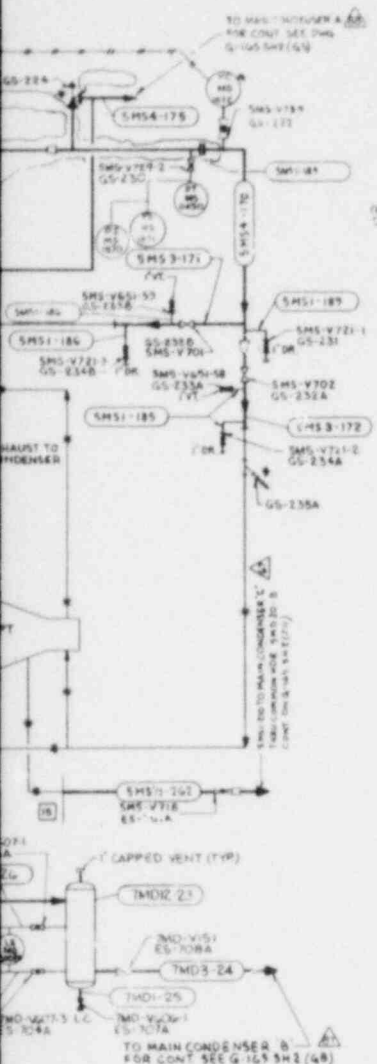
DETAIL 5
EXTRACTION STEAM (4 REQD)
SEE DET TABULATIONS ON G-165 SH.

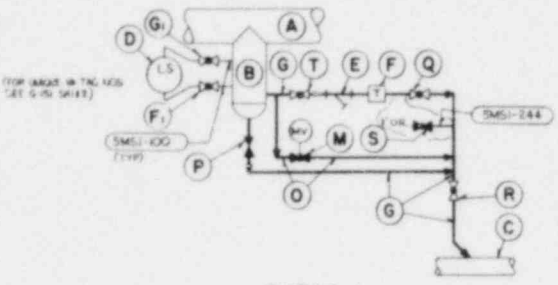


DETAIL 9
MAIN STEAM (2 REQD)

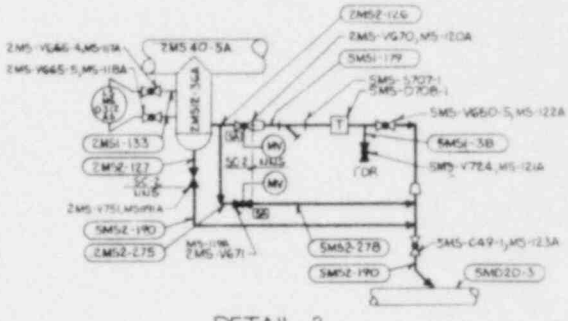


DETAIL 8
EXTRACTION STEAM (6 REQD)

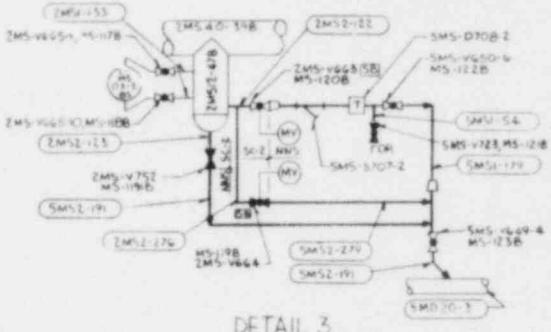




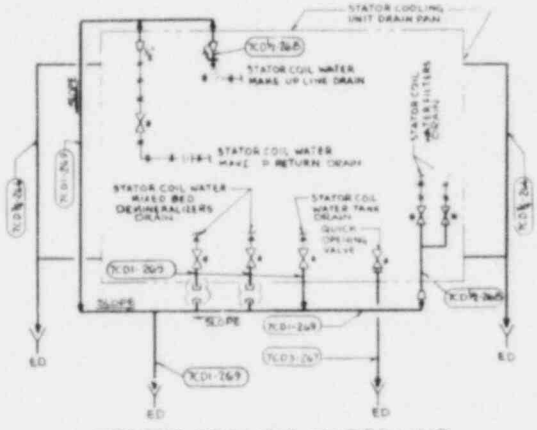
DETAIL 1
MAIN STEAM (9 REQD)
SEE DET TABULATIONS ON G-165 SH2



DETAIL 2
MAIN STEAM (1 REQD)



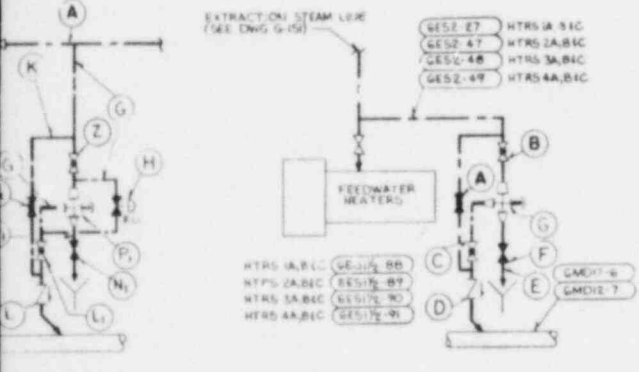
DETAIL 3
MAIN STEAM (1 REQD)



STATOR COOLING UNIT DRAINS

NOTES

1. ◆ DENOTES ITEMS SUPPLIED BY VENDOR
   □ DENOTES WESTINGHOUSE TURBINE CONN NO
   △ DENOTES CONDENSER CONN NO
2. ALL GUIDANCE AND REQUIREMENTS STATED IN THE ASME STANDARD NO TWDPS-1 PART 2 "RECOMMENDED PRACTICES FOR PREVENTION OF WATER DAMAGE TO STEAM TURBINES USED FOR ELECTRIC POWER GENERATION" SHALL BE FULLY COMPLIED WITH.
3. WORK THIS DRAWING IN CONJUNCTION WITH G-165 SH2.



DETAIL 7
EXTRACTION STEAM (12 REQD)

HTR NO.	A	B	C	D	E	F	G
1A							
1B							
1C							
2A							
2B							
2C							
3A							
3B							
3C							
4A							
4B							
4C							

REFERENCE DRAWINGS

1. LOU 1564 G-165 SHEET 1 & 2
2. WESTINGHOUSE DRAWING "STEAM GENERATOR FEED PUMP TURBINE GLAND STEAM AND DRAIN FLOW DIAGRAM" LOU 1564*1044

NUCLEAR SAFETY RELATED IN PART ONLY

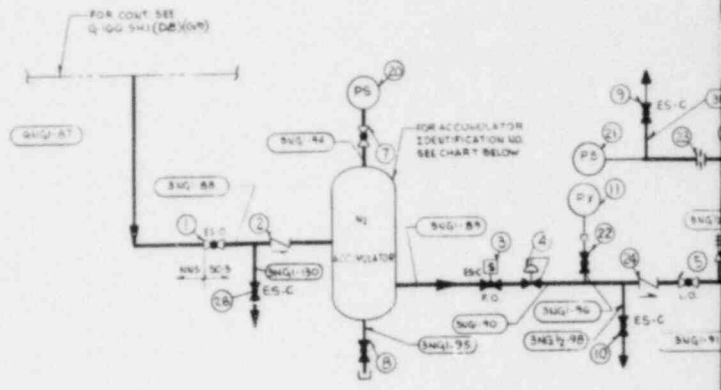
NO.	DATE	REVISION	BY	CH.	APPROVED
7					
6					
5					
4					
3					
2					
1					

LOUISIANA POWER & LIGHT COMPANY
WATERFORD 3 E.S. UNIT NO. 3
1977 - 1165 MW INSTALLATION
FLOW DIAGRAM
TURBINE BLDG MISCELLANEOUS SYSTEMS

EBASCO SERVICES INCORPORATED

LOU-1564
G-100
SHEET 3 OF 3

LOU-1564-G-166 SHEET 2 OF 2

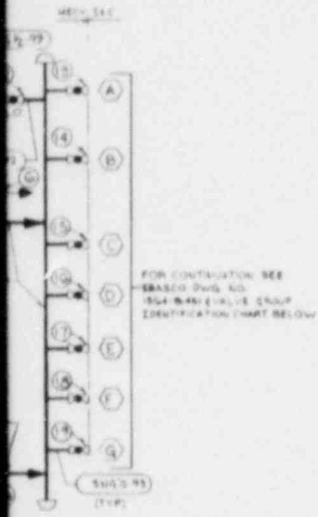


N1 ACCUMULATOR IDENTIFICATION CHART

ACCUM NO.	I	II	III	IV	V	VI	VII	VIII
1	5A	5B	5A	5B	5A	5B	5A	5B
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								

SAFETY RELATED VALVE G

ACCUM NO.	I	II	III	IV
	5A	5B	5A	5A
A				
B				
C				
D				
E				
F				
G				



...P IDENTIFICATION CHART

	V	VI	VII	VIII
5B	5A	5B	5A	5B
	2FW-V848A	2FW-V847B	2FW-V849A	2FW-V850B
	2FW-V852A	2FW-V851B	2FW-V853A	2FW-V854B
	2HS-V61A			2HS-V61B
	2HS-[illegible]			2HS-[illegible]

NOTES:

1. FOR NOTES AND REFERENCE DRAWINGS SEE G-166 SH.1

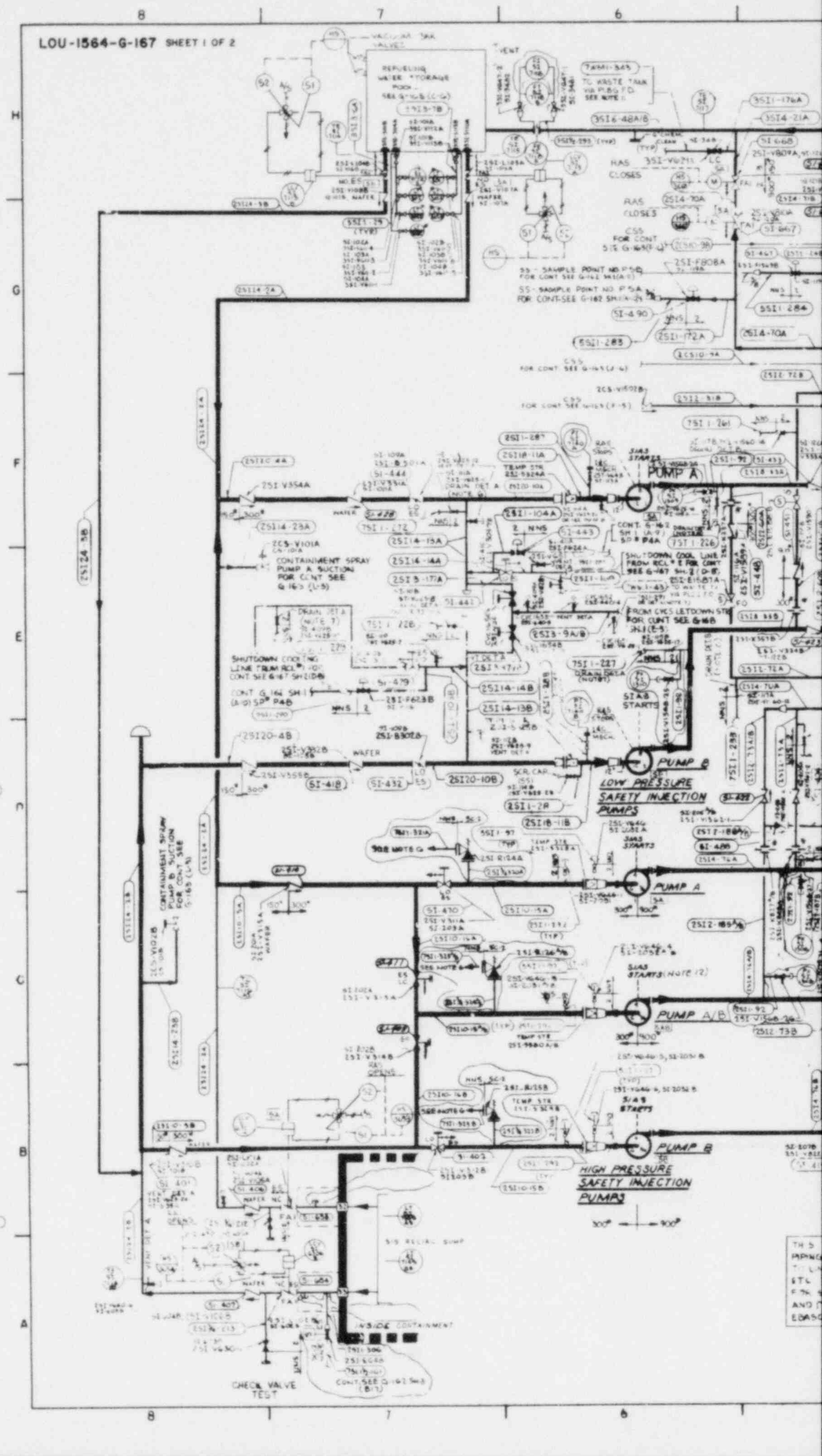
NUCLEAR SAFETY RELATED

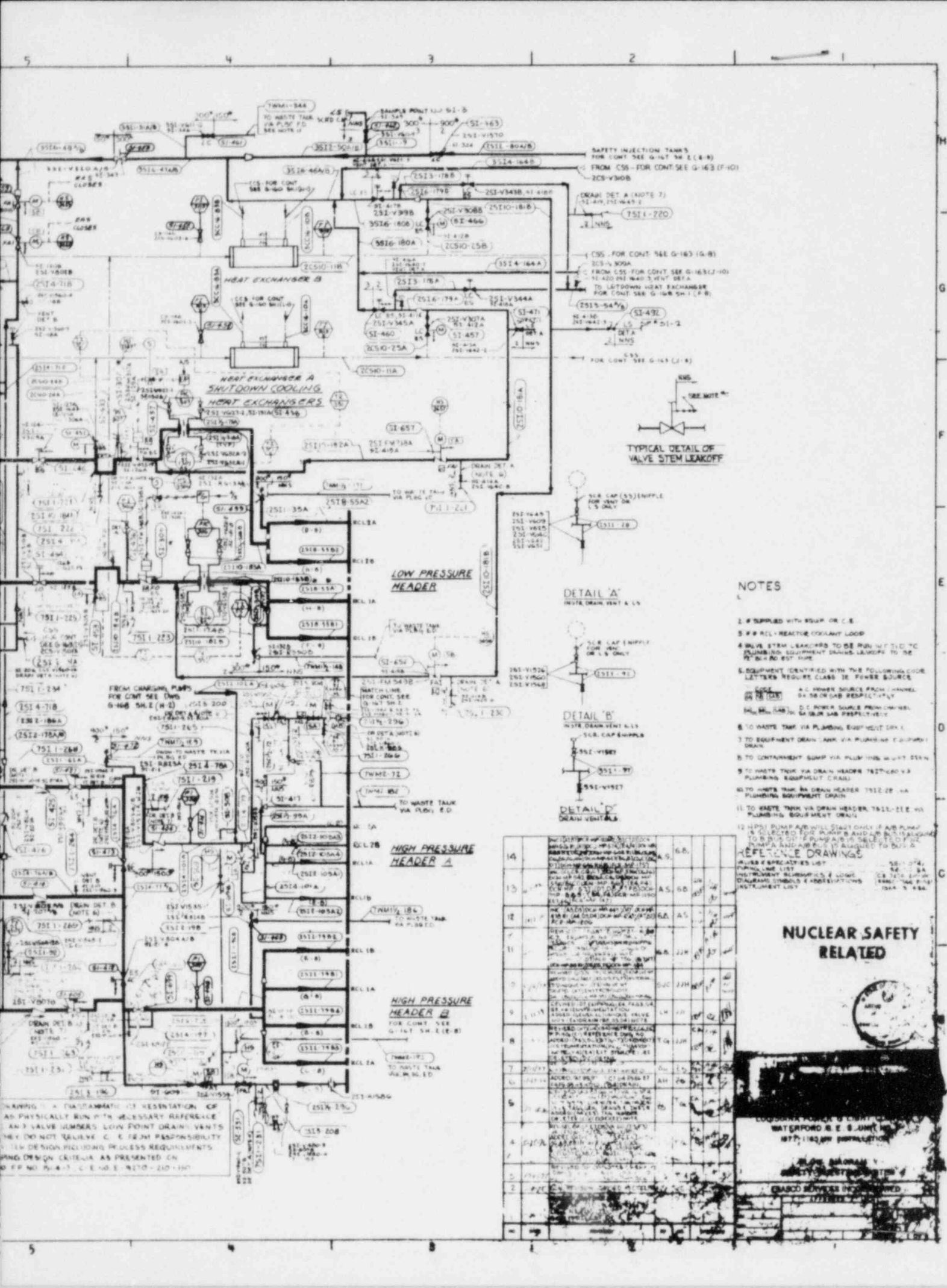
NO.	DATE	REVISION	BY	CK	APPROVED
3	[illegible]	[illegible] DCN MP-565	GB	AS	[illegible]
2	[illegible]	[illegible]	AS	GB	[illegible]
1	[illegible]	ADDED (D8) COORDINATE INC. (D8 & B-17 THRU (5,18) THRU MP) DCN MP-550	GB	JJH	[illegible]

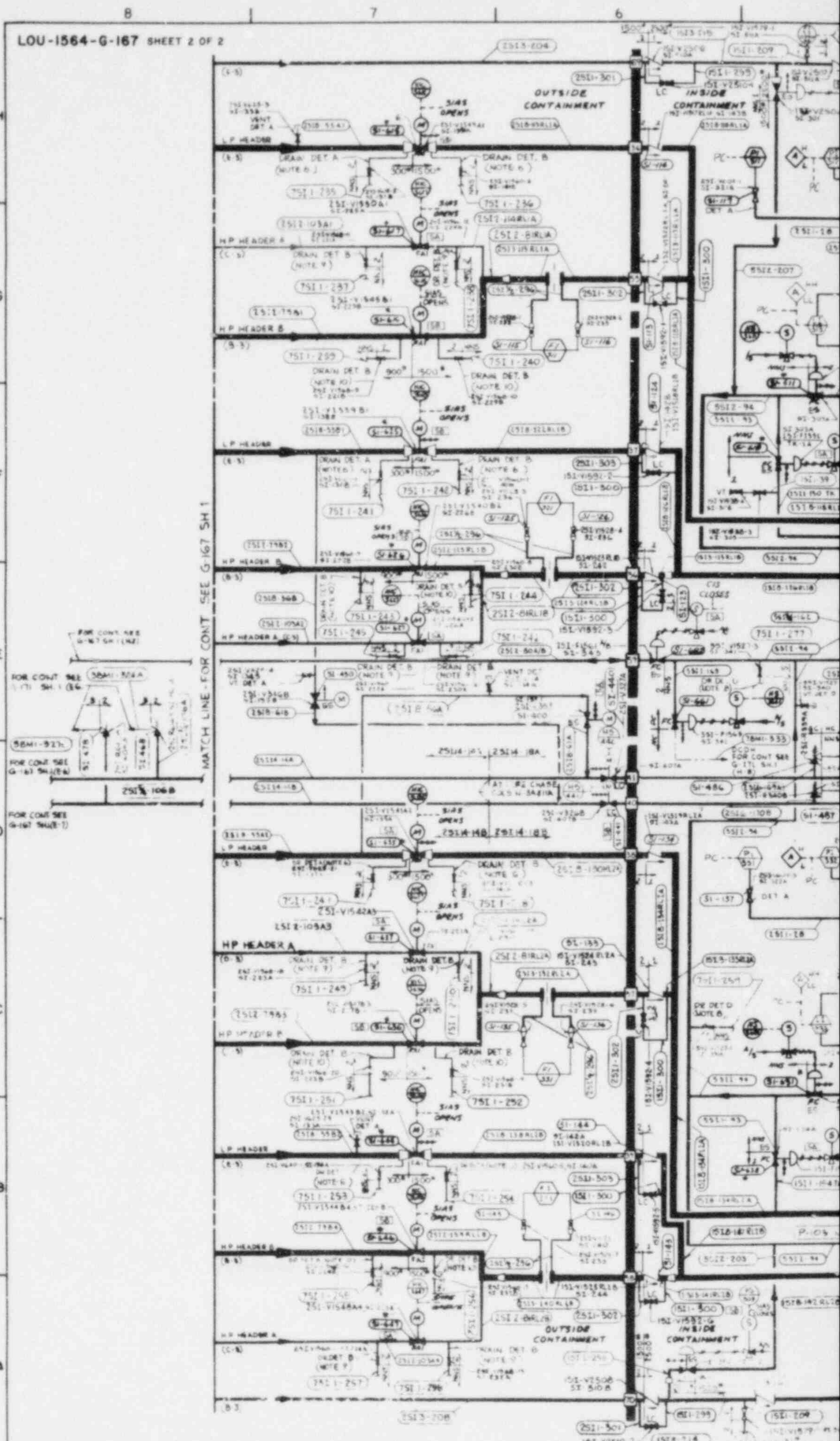
LOUISIANA POWER & LIGHT COMPANY
WATERFORD S.E.S. UNIT NO. 3
1977 - 1165 MW INSTALLATION
FLOW DIAGRAM
N2, H2, CO2 SYSTEMS

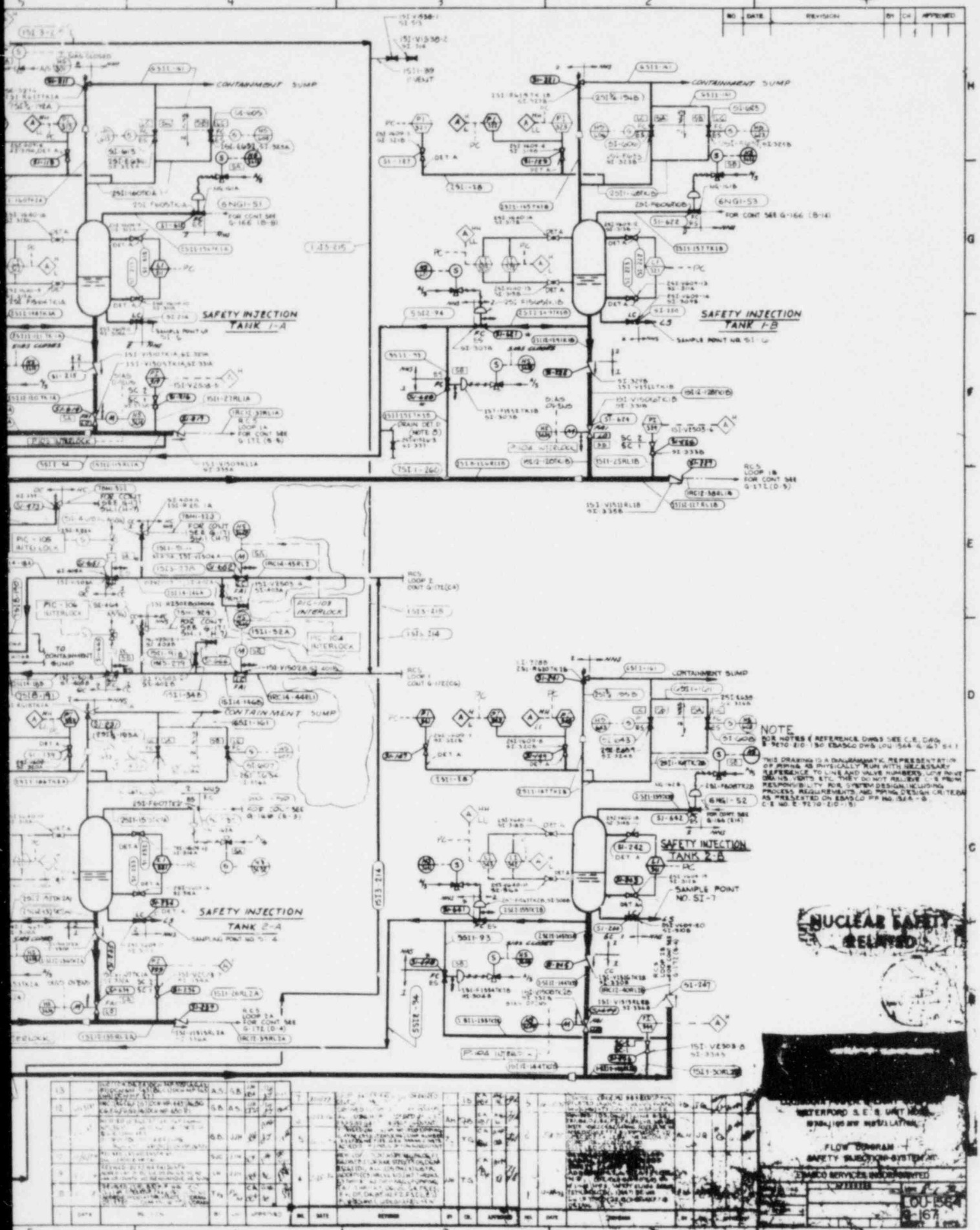
EBASCO SERVICES INCORPORATED NEW YORK

SCALE: NONE
APPROVED
DATE 3-21-80
LOU-1564
G-166

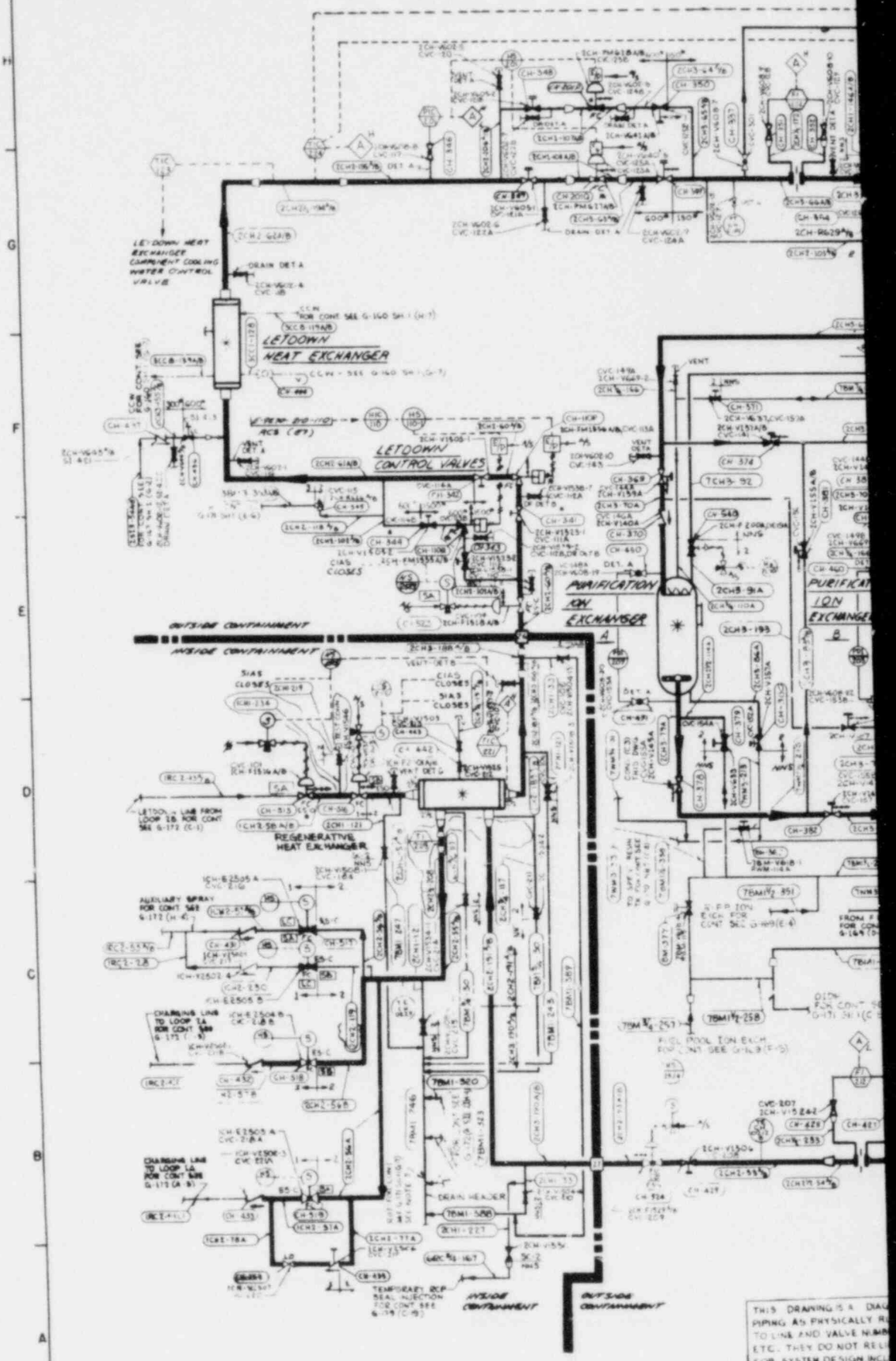

LOU-1564-G-167 SHEET 1 OF 2
REFUELING WATER STORAGE POOL
VENT
RAS CLOSES
CSS FOR CONT
PUMP A
PUMP B
LOW PRESSURE SAFETY INJECTION PUMPS
PUMP A
PUMP A/B
PUMP B
HIGH PRESSURE SAFETY INJECTION PUMPS
CONTAINMENT SPRAY PUMP A SUCTION FOR CONT SEE G-165 (L-5)
CONTAINMENT SPRAY PUMP B SUCTION FOR CONT SEE G-165 (L-5)
SHUTDOWN COOLING LINE FROM RCL
FROM CVCS LETDOWN
SIAS STARTS
SIAS STARTS
INSIDE CONTAINMENT
CHECK VALVE TEST
8
7
6
H
G
F
E
D
C
B
A


HEAT EXCHANGER B
HEAT EXCHANGER A
SHUTDOWN COOLING
HEAT EXCHANGERS
LOW PRESSURE
HEADER
HIGH PRESSURE
HEADER A
HIGH PRESSURE
HEADER B
TYPICAL DETAIL OF
VALVE STEM LEAKOFF
DETAIL 'A'
DETAIL 'B'
DETAIL 'C'
NOTES
REFERENCE DRAWINGS
NUCLEAR SAFETY
RELATED
WATERFORD S. E. 3 UNIT NO.
GIBBS & HILL, INC.

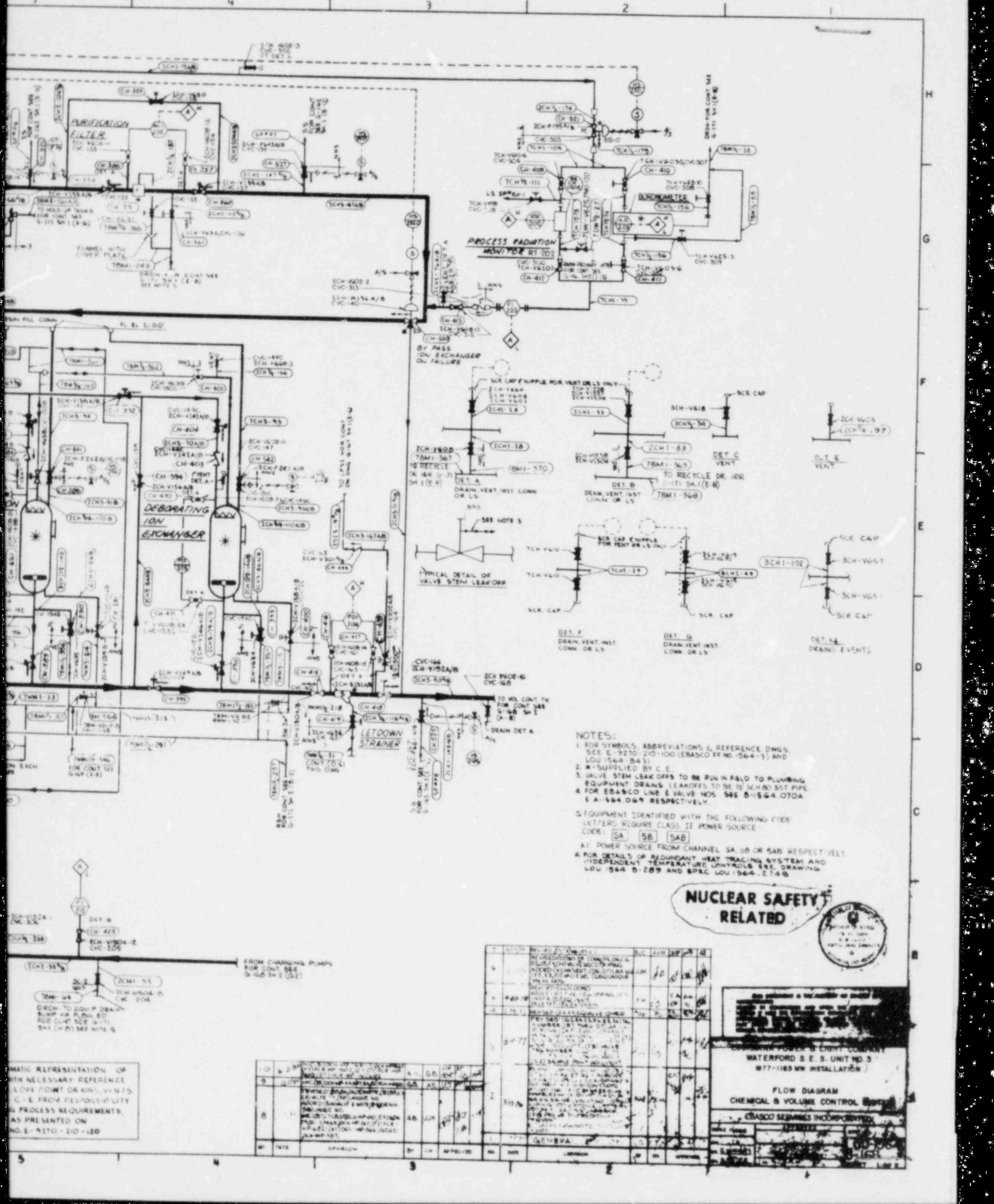

LOU-1564-G-167 SHEET 2 OF 2
OUTSIDE CONTAINMENT
INSIDE CONTAINMENT
MATCH LINE-FOR CONT SEE G-167 SH 1
LP HEADER
HP HEADER A
HP HEADER B
SIAS OPENS
DRAIN DET. A
DRAIN DET. B
CIS CLOSES
FOR CONT SEE G-167 SH 1

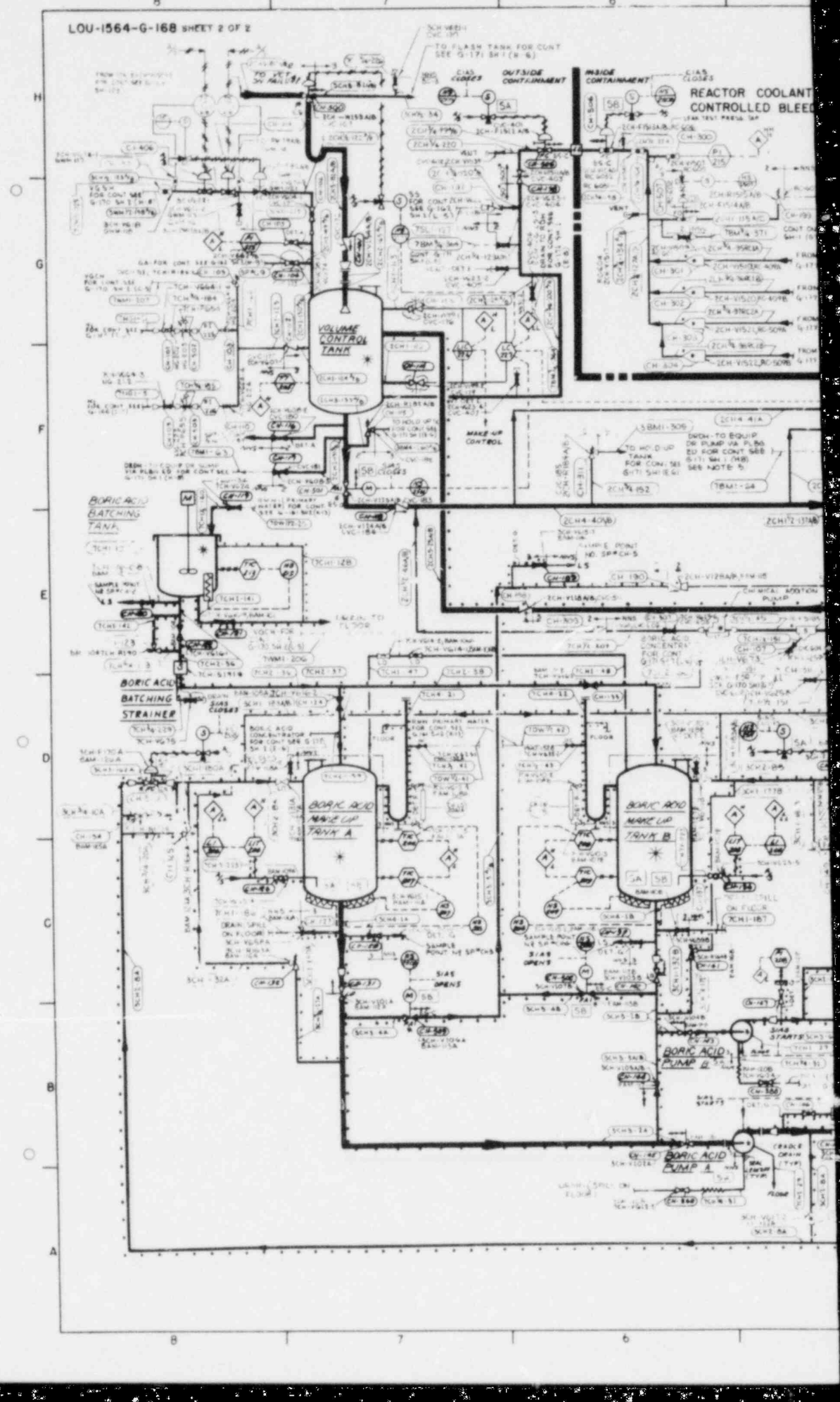

SAFETY INJECTION TANK 1-A
SAFETY INJECTION TANK 1-B
SAFETY INJECTION TANK 2-A
SAFETY INJECTION TANK 2-B
CONTAINMENT SUMP
NOTE
NUCLEAR SAFETY RELATED
WATERFORD S.E.S. UNIT NO.3
FLOW DIAGRAM
SAFETY INJECTION SYSTEM
ENGINEERED SERVICES INCORPORATED
LOU-1562
G-167

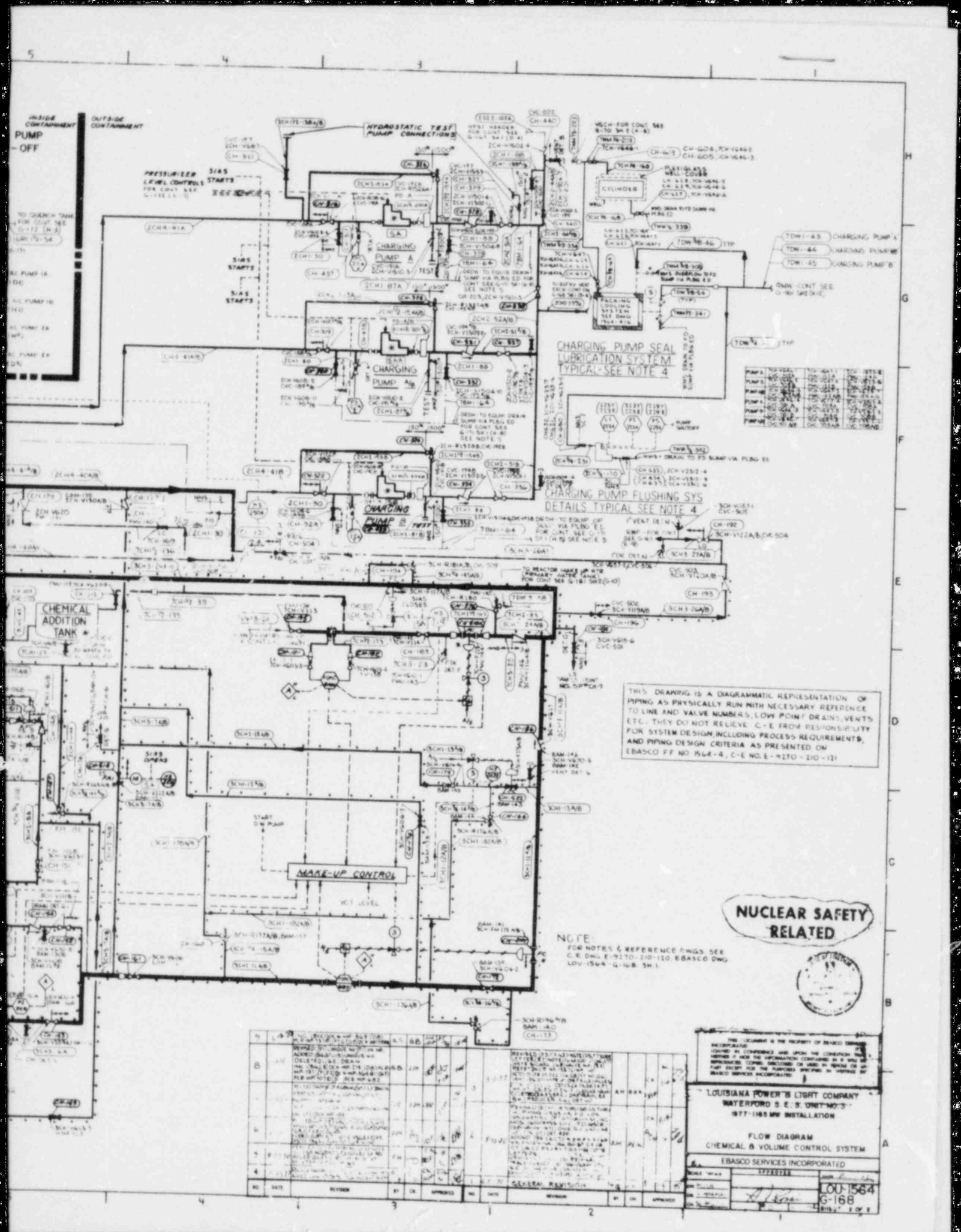
LOU-1564-G-168 SHEET 1 OF 2

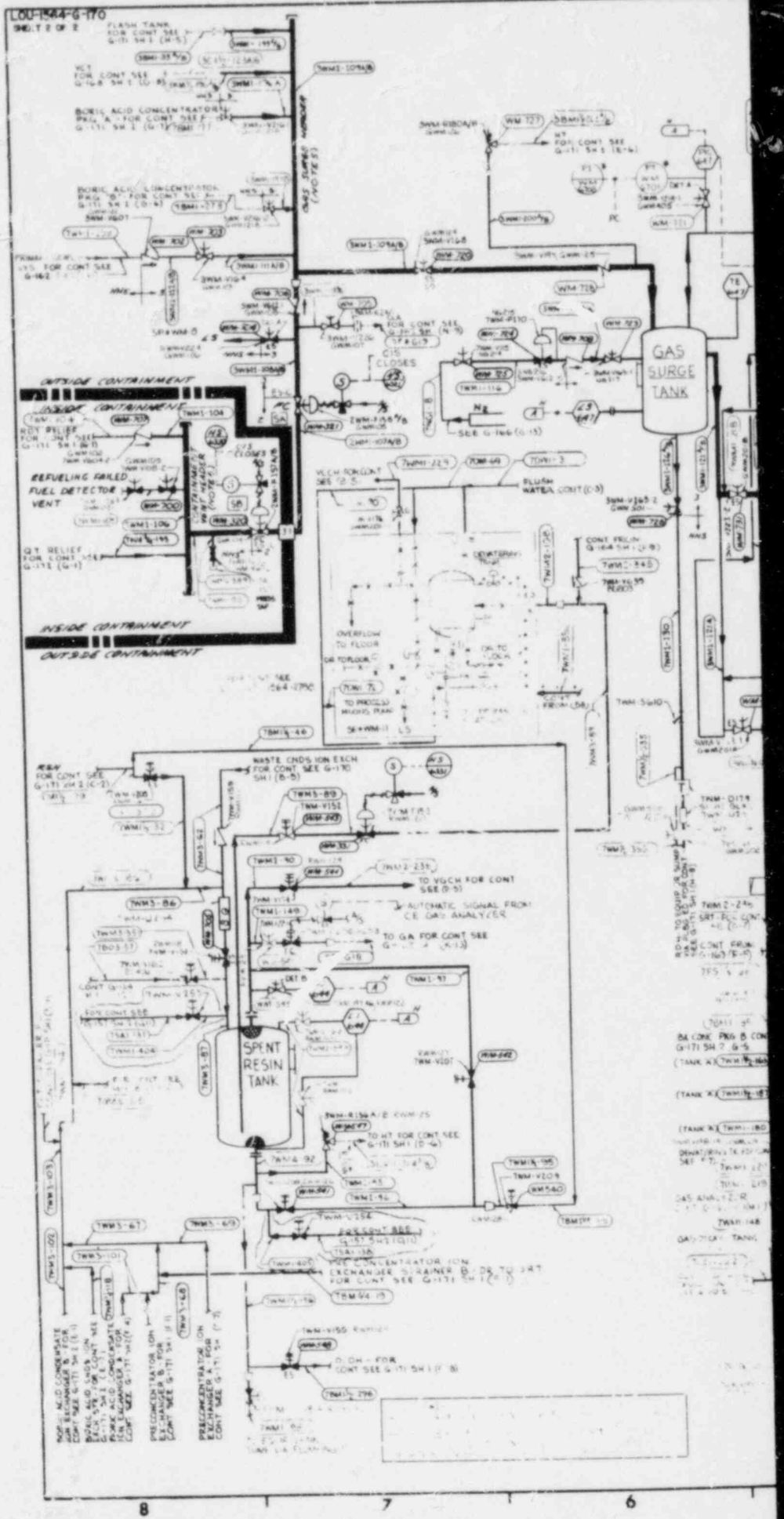


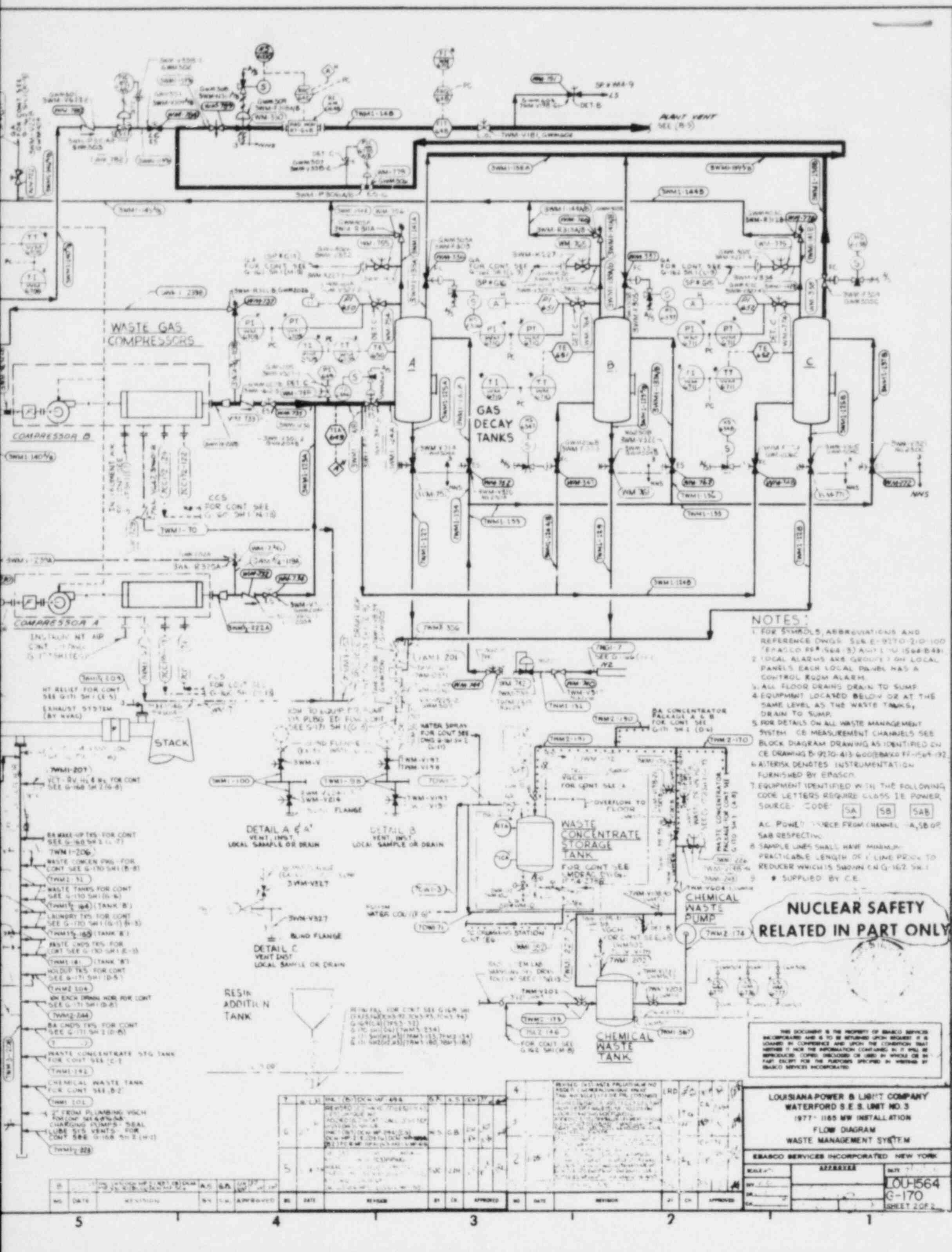
THIS DRAWING IS A DIAG
PIPING AS PHYSICALLY R
TO LINE AND VALVE NUMB
ETC. THEY DO NOT REFL
FOR SYSTEM DESIGN, INCL
AND PIPING DESIGN CRITE
EBASCO "E" NO 1564-S,

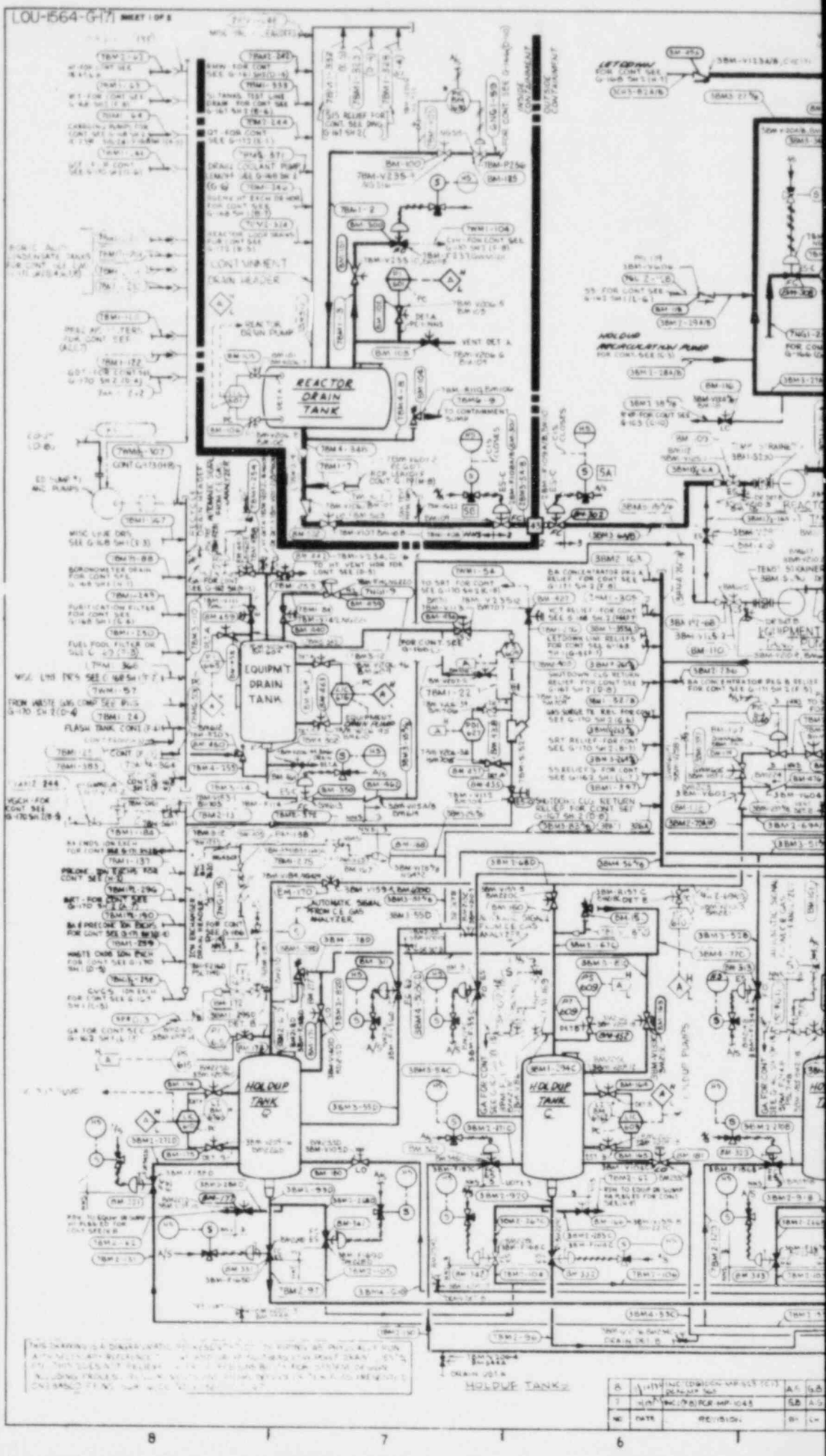

PURIFICATION FILTER
PROCESS RADIATION MONITOR RT 202
DEBORATING ION EXCHANGER
LETDOWN STRAINER
BY PASS ION EXCHANGER ON FAILURE
TYPICAL DETAIL OF VALVE STEM LEAKOFF
DET A
DET B
DET C VENT
DET E VENT
DET F
DET G
DET H4
TO RECYCLE DR. HDR.
TO VOL. CONT. TK.
FROM CHARGING PUMPS
NOTES:
1. FOR SYMBOLS, ABBREVIATIONS & REFERENCE DWGS SEE E-9270-210-100 (EBASCO FF NO. 1564-1-3) AND LOU 1564-B-431.
2. * SUPPLIED BY C.E.
3. VALVE STEM LEAK OFFS TO BE RUN IN FIELD TO PLUMBING EQUIPMENT DRAINS. LEAKOFFS TO BE 1/2" SCH 80 SST PIPE.
4. FOR EBASCO LINE & VALVE NOS. SEE B-1564-070A & A-1564-069 RESPECTIVELY.
5. EQUIPMENT IDENTIFIED WITH THE FOLLOWING CODE LETTERS REQUIRE CLASS 1E POWER SOURCE.
CODE: 5A 5B 5AB
A.C. POWER SOURCE FROM CHANNEL 5A, 5B OR 5AB RESPECTIVELY.
6. FOR DETAILS OF REDUNDANT HEAT TRACING SYSTEM AND INDEPENDENT TEMPERATURE CONTROLS SEE DRAWING LOU 1564 B-289 AND SPEC LOU 1564-E748.
NUCLEAR SAFETY RELATED
GENERAL POWER & LIGHT COMPANY
WATERFORD S. E. S. UNIT NO. 3
1077-1165 MW INSTALLATION
FLOW DIAGRAM
CHEMICAL & VOLUME CONTROL
EBASCO SERVICES INCORPORATED

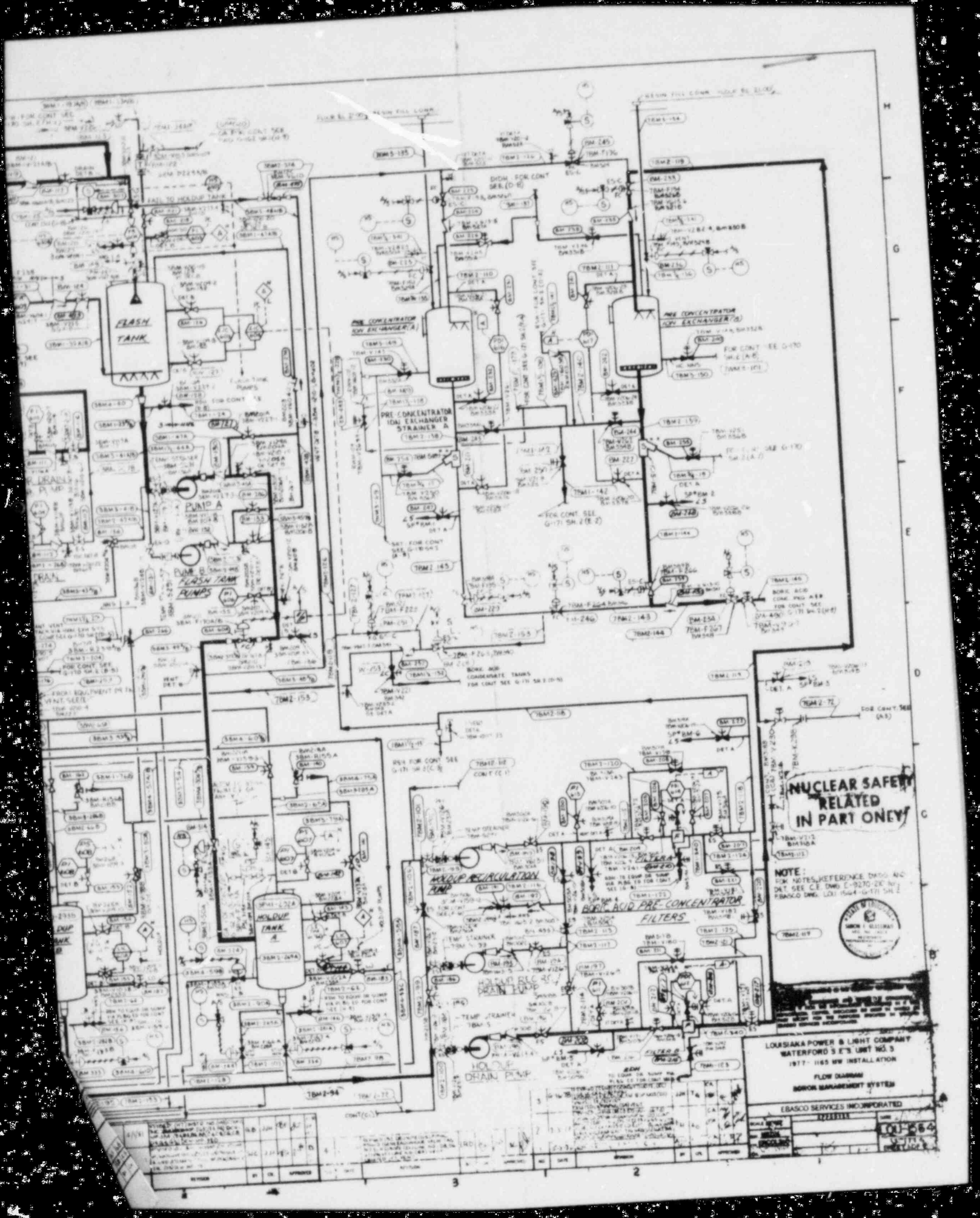

LOU-1564-G-168 SHEET 2 OF 2
REACTOR COOLANT
CONTROLLED BLEED
VOLUME CONTROL TANK
BORIC ACID BATCHING TANK
BORIC ACID BATCHING STRAINER
BORIC ACID MAKE UP TANK A
BORIC ACID MAKE UP TANK B
BORIC ACID PUMP B
BORIC ACID PUMP A
MAKE UP CONTROL
OUTSIDE CONTAINMENT
INSIDE CONTAINMENT

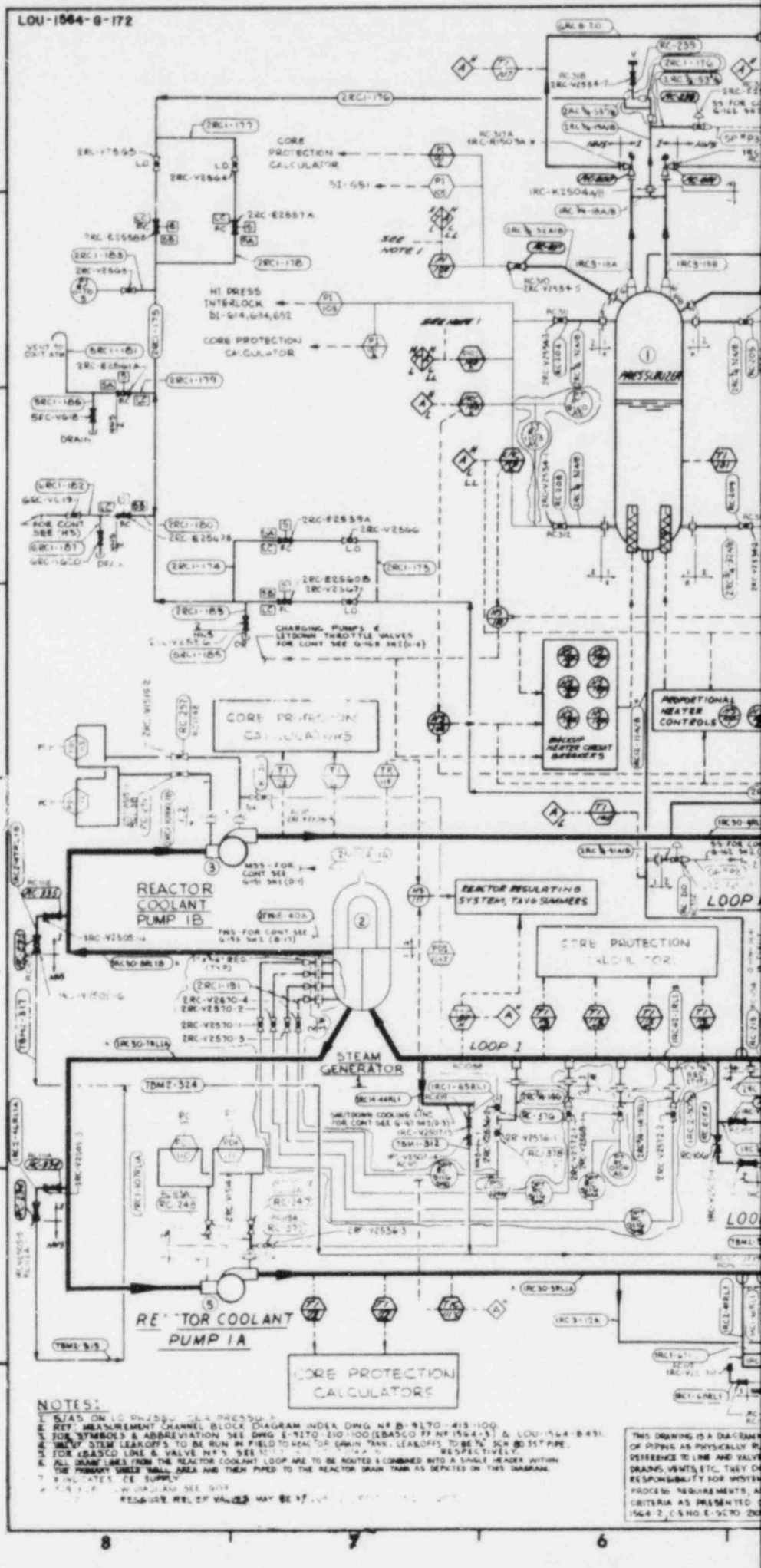

INSIDE CONTAINMENT
OUTSIDE CONTAINMENT
PUMP - OFF
HYDROSTATIC TEST PUMP CONNECTION
PRESSURIZER LEVEL CONTROLS
S1AS STARTS
CHARGING PUMP A
CHARGING PUMP B
CHARGING PUMP SEAL LUBRICATION SYSTEM TYPICAL - SEE NOTE 4
CHARGING PUMP FLUSHING SYS DETAILS TYPICAL SEE NOTE 4
CHEMICAL ADDITION TANK
MAKE-UP CONTROL
THIS DRAWING IS A DIAGRAMMATIC REPRESENTATION OF PIPING AS PHYSICALLY RUN WITH NECESSARY REFERENCE TO LINE AND VALVE NUMBERS, LOW POINT DRAINS, VENTS ETC., THEY DO NOT RELIEVE C-E FROM RESPONSIBILITY FOR SYSTEM DESIGN, INCLUDING PROCESS REQUIREMENTS, AND PIPING DESIGN CRITERIA AS PRESENTED ON EBASCO FF NO. 1564-4, C-E NO. E-9270-210-121
NUCLEAR SAFETY RELATED
NOTE: FOR NOTES & REFERENCE DWGS. SEE C-E DWG. E-9270-210-120, EBASCO DWG. LOU-1564-G-168, SH. 1
LOUISIANA POWER & LIGHT COMPANY
WATERFORD S.E.S. UNIT NO. 3
1977-1165 MW INSTALLATION
FLOW DIAGRAM
CHEMICAL & VOLUME CONTROL SYSTEM
EBASCO SERVICES INCORPORATED
LOU-1564
G-168

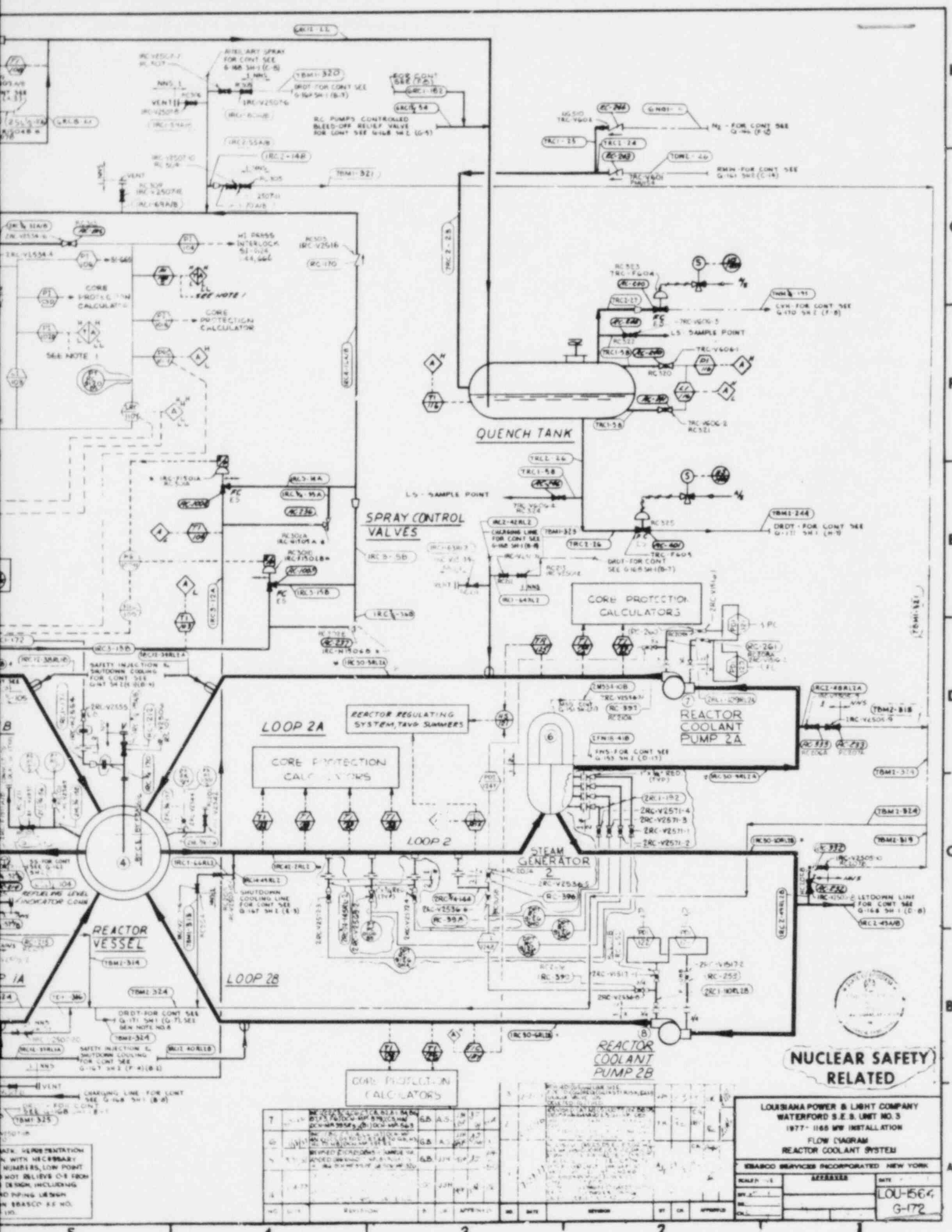

LOU-1544-G-170
SHEET 2 OF 2
GAS SURGE TANK
SPENT RESIN TANK
OUTSIDE CONTAINMENT
INSIDE CONTAINMENT
REFUELING FAILED FUEL DETECTOR VENT
RCV RELIEF
QT RELIEF
FLUSH WATER
OVERFLOW TO FLOOR
TO PROCESS MONITOR TANK
WASTE CNDS ION EXCH
AUTOMATIC SIGNAL FROM CE GAS ANALYZER
TO GA FOR CONT SEE G-171 SH 1 (K-3)
TO VGCH FOR CONT SEE (F-5)
TO HT FOR CONT SEE G-171 SH 1 (D-4)
8
7
6

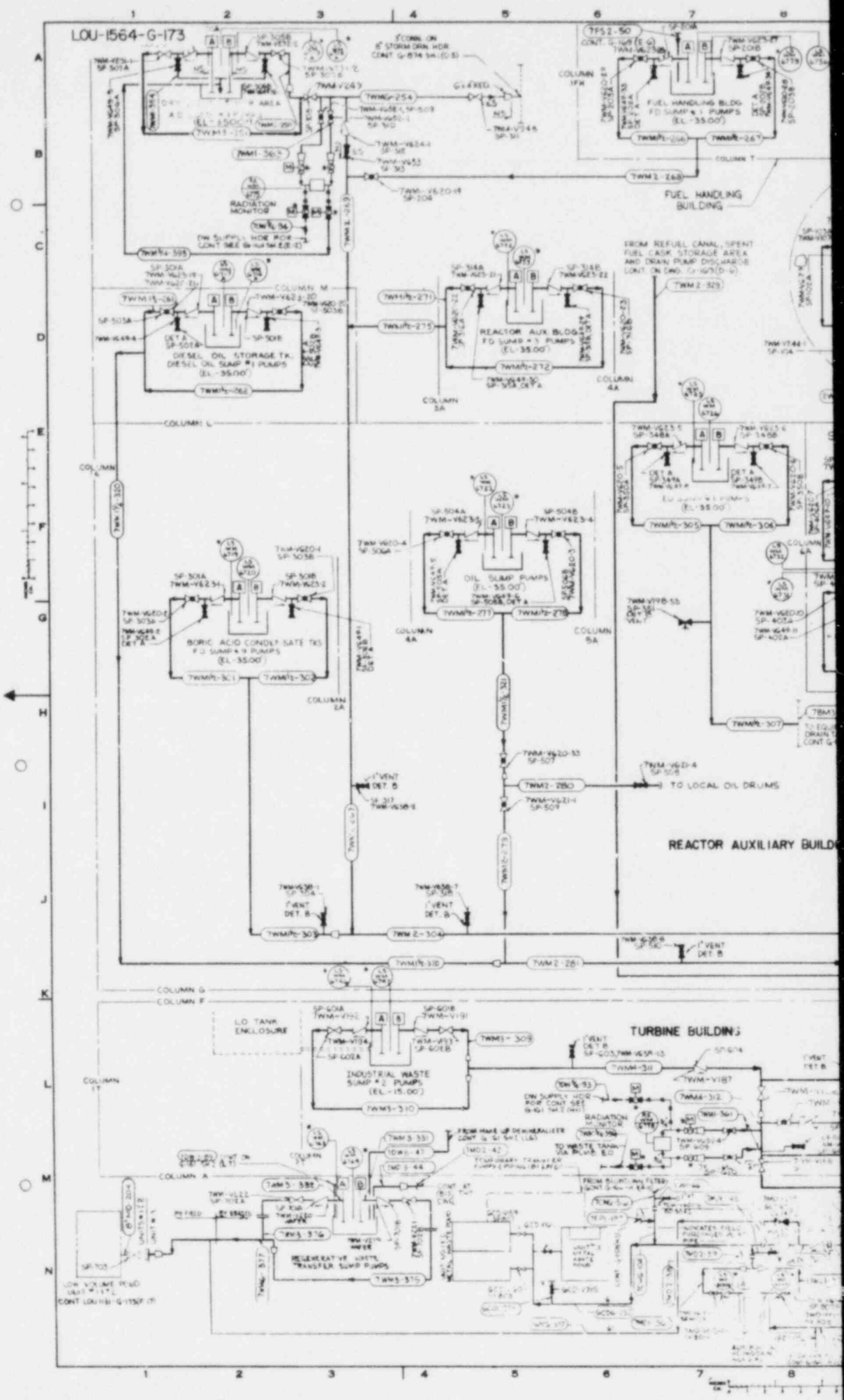

PLANT VENT
WASTE GAS COMPRESSORS
COMPRESSOR B
COMPRESSOR A
GAS DECAY TANKS
A
B
C
STACK
EXHAUST SYSTEM (BY HVAC)
WASTE CONCENTRATE STORAGE TANK
CHEMICAL WASTE PUMP
CHEMICAL WASTE TANK
RESIN ADDITION TANK
DETAIL A & A'
VENT, INST. LOCAL SAMPLE OR DRAIN
DETAIL B
VENT, INST. LOCAL SAMPLE OR DRAIN
DETAIL C
VENT INST LOCAL SAMPLE OR DRAIN
BLIND FLANGE
OVERFLOW TO FLOOR
NOTES:
1. FOR SYMBOLS, ABBREVIATIONS AND REFERENCE DWGS SEE E-9270-210-100 (EBASCO FF*1564-3) AND LOU 1564-B481
2. LOCAL ALARMS ARE GROUPED ON LOCAL PANELS EACH LOCAL PANEL HAS A CONTROL ROOM ALARM.
3. ALL FLOOR DRAINS DRAIN TO SUMP.
4. EQUIPMENT LOCATED BELOW OR AT THE SAME LEVEL AS THE WASTE TANKS, DRAIN TO SUMP.
5. FOR DETAILS ON ALL WASTE MANAGEMENT SYSTEM CE MEASUREMENT CHANNELS SEE BLOCK DIAGRAM DRAWING AS IDENTIFIED ON CE DRAWING B-9270-413-600(EBASCO FF-1564-92)
6. ASTERISK DENOTES INSTRUMENTATION FURNISHED BY EBASCO.
7. EQUIPMENT IDENTIFIED WITH THE FOLLOWING CODE LETTERS REQUIRE CLASS 1E POWER SOURCE - CODE: 5A 5B 5AB
AC POWER SOURCE FROM CHANNEL 5A, 5B OR 5AB RESPECTIVELY
8. SAMPLE LINES SHALL HAVE MINIMUM PRACTICABLE LENGTH OF 1" LINE PRIOR TO REDUCER WHICH IS SHOWN ON G-167 SH 1
9. * SUPPLIED BY C.E.
NUCLEAR SAFETY RELATED IN PART ONLY
THIS DOCUMENT IS THE PROPERTY OF EBASCO SERVICES INCORPORATED AND IS TO BE RETURNED UPON REQUEST. IT IS LOANED IN CONFIDENCE AND UPON THE CONDITION THAT NEITHER IT NOR THE INFORMATION CONTAINED IN IT WILL BE REPRODUCED, COPIED, DISCLOSED OR USED IN WHOLE OR IN PART EXCEPT FOR THE PURPOSES SPECIFIED IN WRITING BY EBASCO SERVICES INCORPORATED.
LOUISIANA POWER & LIGHT COMPANY
WATERFORD S.E.S. UNIT NO. 3
1977 - 1165 MW INSTALLATION
FLOW DIAGRAM
WASTE MANAGEMENT SYSTEM
EBASCO SERVICES INCORPORATED NEW YORK
LOU-1564
G-170
SHEET 2 OF 2

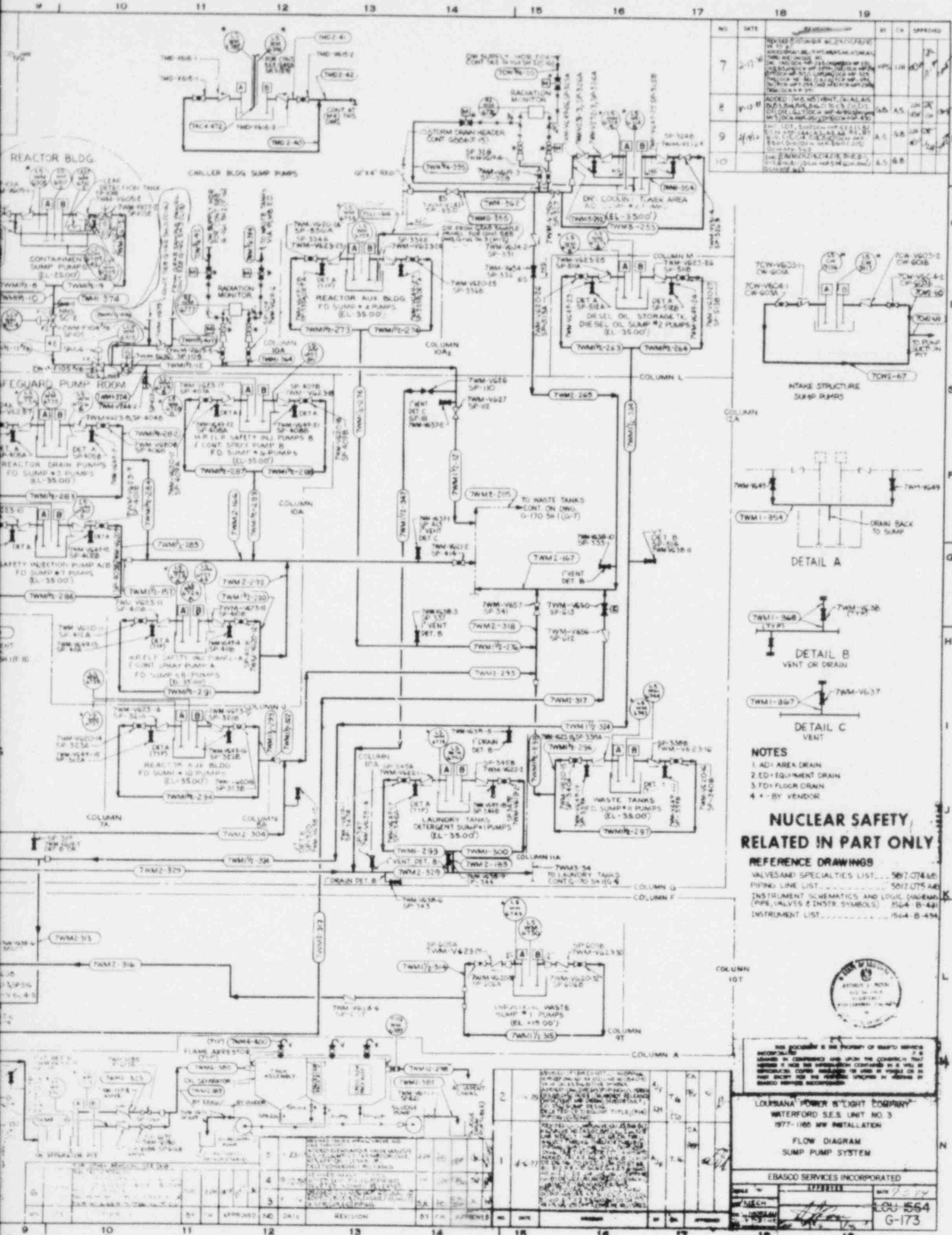

LOU-1564-G171 SHEET 1 OF 2
REACTOR DRAIN TANK
EQUIPMT DRAIN TANK
HOLDUP TANK
HOLDUP TANK
HOLDUP TANK
CONTAINMENT DRAIN HEADER
8
7
6


FLASH TANK
PUMP A
PUMP B
FLASH TANK PUMPS
PRE CONCENTRATOR ION EXCHANGER A
PRE CONCENTRATOR ION EXCHANGER B
PRE CONCENTRATOR ION EXCHANGER STRAINER A
BORIC ACID PRE-CONCENTRATOR FILTERS
HOLDUP RECIRCULATION PUMP
HOLDUP TANK A
HOLDUP TANK B
HOLDUP RECIRC DRAIN PUMP
HOLDUP DRAIN PUMP
NUCLEAR SAFETY RELATED IN PART ONLY
NOTE:
LOUISIANA POWER & LIGHT COMPANY
WATERFORD S.E.S. UNIT NO. 3
1977 - 1165 MW INSTALLATION
FLOW DIAGRAM
BORON MANAGEMENT SYSTEM
EBASCO SERVICES INCORPORATED


LOU-1564-B-172
PRESSURIZER
CORE PROTECTION CALCULATOR
HI PRESS INTERLOCK BI-614,634,652
CORE PROTECTION CALCULATOR
CHARGING PUMPS & LETDOWN THROTTLE VALVES FOR CONT SEE G-168 SH1(D-4)
PROPORTIONAL HEATER CONTROLS
BACKUP HEATER CIRCUIT BREAKERS
REACTOR COOLANT PUMP 1B
REACTOR REGULATING SYSTEM, TAVG SUMMERS
CORE PROTECTION CALCULATORS
LOOP 1
STEAM GENERATOR
REACTOR COOLANT PUMP 1A
CORE PROTECTION CALCULATORS
NOTES:
8
7
6

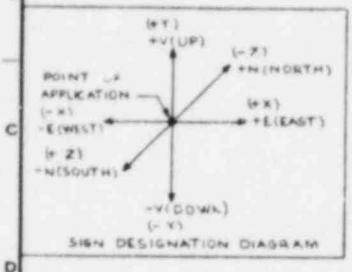

QUENCH TANK
SPRAY CONTROL VALVES
CORE PROTECTION CALCULATORS
REACTOR REGULATING SYSTEM, TAVG SUMMERS
LOOP 2A
LOOP 2
LOOP 2B
REACTOR VESSEL
STEAM GENERATOR 2
REACTOR COOLANT PUMP 2A
REACTOR COOLANT PUMP 2B
CORE PROTECTION CALCULATORS
LS - SAMPLE POINT
NUCLEAR SAFETY RELATED
LOUISIANA POWER & LIGHT COMPANY
WATERFORD S.E.S. UNIT NO. 3
1977 - 1160 MW INSTALLATION
FLOW DIAGRAM
REACTOR COOLANT SYSTEM
EBASCO SERVICES INCORPORATED NEW YORK
LOU-1564
G-172


LOU-1564-G-173
FUEL HANDLING BUILDING
REACTOR AUXILIARY BUILD
TURBINE BUILDING
FUEL HANDLING BLDG FD SUMP #1 PUMPS (EL. -35.00')
REACTOR AUX BLDG FD SUMP #3 PUMPS (EL. -35.00')
DIESEL OIL STORAGE TK. DIESEL OIL SUMP #1 PUMPS (EL. -35.00')
OIL SUMP PUMPS (EL. -35.00')
BORIC ACID CONDLT SATE TKS FD SUMP #4 PUMPS (EL. -35.00')
INDUSTRIAL WASTE SUMP #2 PUMPS (EL. -15.00')
REGENERATIVE WASTE TRANSFER SUMP PUMPS
LO TANK ENCLOSURE
TO LOCAL OIL DRUMS
RADIATION MONITOR
COLUMN A
COLUMN G
COLUMN F
COLUMN L
COLUMN M
COLUMN T
COLUMN 1A
COLUMN 2A
COLUMN 3A
COLUMN 4A
COLUMN 5A
COLUMN 6A



REACTOR BLDG.
CHILLER BLDG SUMP PUMPS
RADIATION MONITOR
CONTAINMENT SUMP PUMPS (EL-15.00')
REACTOR AUX BLDG F.D. SUMP #4 PUMPS (EL-35.00')
DIESEL OIL STORAGE TK. DIESEL OIL SUMP #2 PUMPS (EL-35.00')
SAFEGUARD PUMP ROOM
H.P. (L.P. SAFETY INJ) PUMPS B (CONT. SPRAY PUMP B) F.D. SUMP #6 PUMPS (EL-35.00')
REACTOR DRAIN PUMPS F.D. SUMP #5 PUMPS (EL-35.00')
SAFETY INJECTION PUMP A/B F.D. SUMP #7 PUMPS (EL-35.00')
TO WASTE TANKS CONT. ON DWG. G-170 SH 1 (G-7)
REACTOR AUX BLDG F.D. SUMP #10 PUMPS (EL-35.00')
LAUNDRY TANKS DETERGENT SUMP #1 PUMPS (EL-35.00')
WASTE TANKS F.D. SUMP #8 PUMPS (EL-38.00')
TO LAUNDRY TANKS CONT G-170 SH 1 (G-4)
INDUSTRIAL WASTE SUMP #1 PUMPS (EL +15.00')
FLAME ARRESTOR
OIL SEPARATOR
SLUDGE PUMP
INTAKE STRUCTURE SUMP PUMPS
DETAIL A
DRAIN BACK TO SUMP
DETAIL B VENT OR DRAIN
DETAIL C VENT
NOTES
1. AD = AREA DRAIN
2. ED = EQUIPMENT DRAIN
3. FD = FLOOR DRAIN
4. * - BY VENDOR
NUCLEAR SAFETY RELATED IN PART ONLY
REFERENCE DRAWINGS
VALVES AND SPECIALTIES LIST ... 5817-074 A/B
PIPING LINE LIST ... 5817-075 A/B
INSTRUMENT SCHEMATICS AND LOGIC (HARDWARE) (PIPE, VALVES & INSTR. SYMBOLS) ... 1564-B-431
INSTRUMENT LIST ... 1564-B-434
LOUISIANA POWER & LIGHT COMPANY
WATERFORD S.E.S. UNIT NO. 3
1977-1165 MW INSTALLATION
FLOW DIAGRAM
SUMP PUMP SYSTEM
EBASCO SERVICES INCORPORATED
LOU 1564
G-173

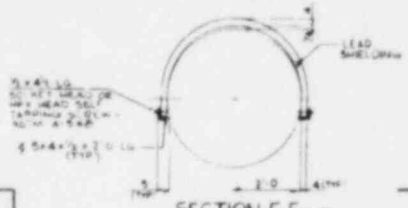
LOU-1564
G-175

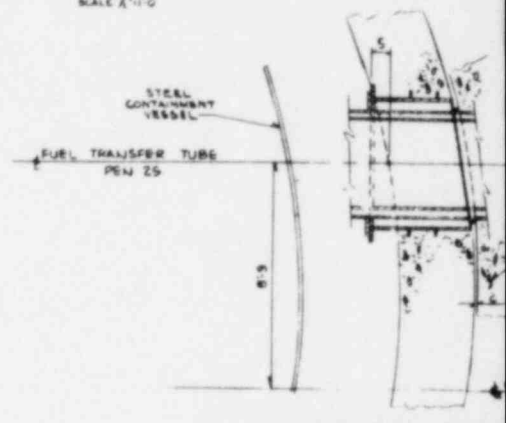


SIGN DESIGNATION DIAGRAM

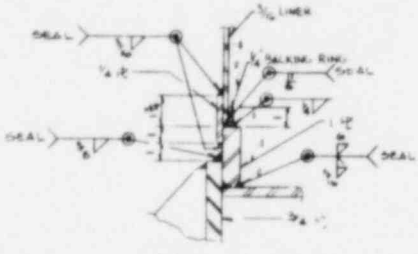
BELLOWS	TOTAL THERMAL & PRESSURE GROWTH (SEE NOTE 11)		
	N/S (IN.)	E/W (IN.)	VERT (IN.)
A	.31	.00	.00
B	1.74	-.21	.19
C	1.63	-.21	.19
D	◇	◇	◇

◇ NO THERMAL (SEISMIC ONLY)

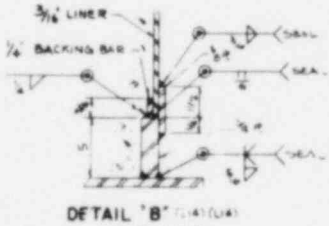

SECTION F-F (A-D)
SCALE 3/4"=1'-0



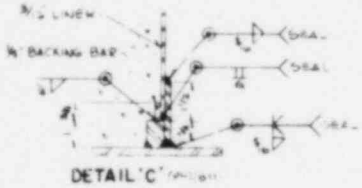
PARTIAL PLAN
SCALE: NONE



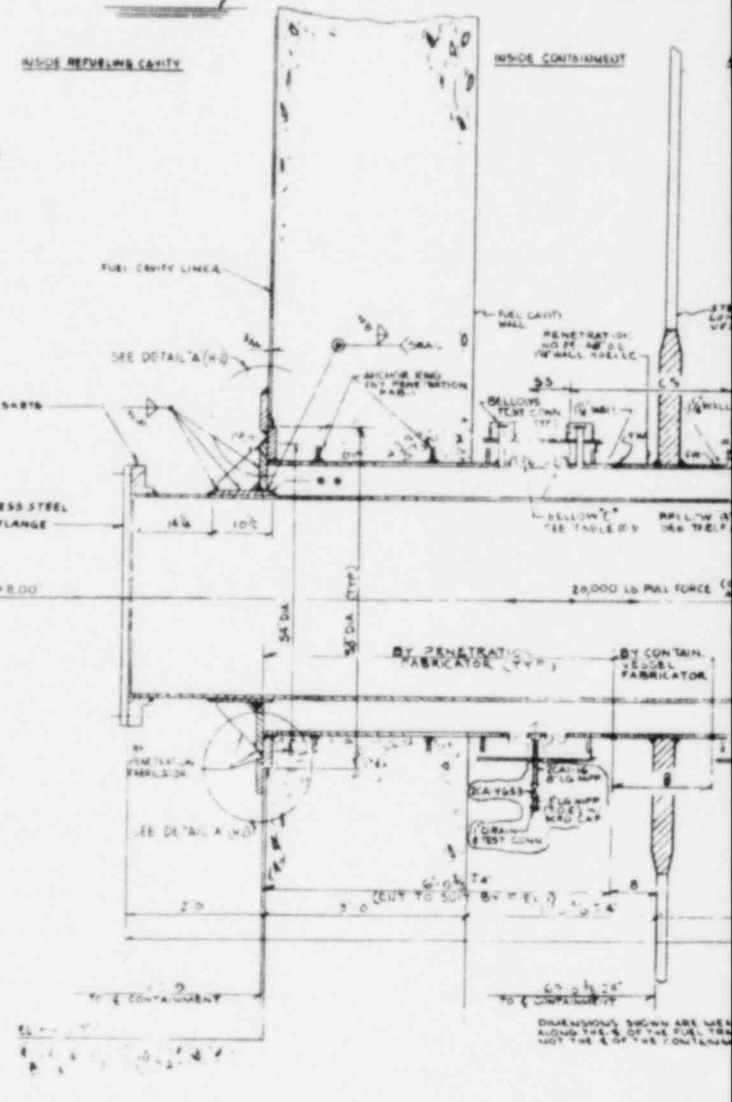
DETAIL "A" (3S,L5)
SCALE: NONE



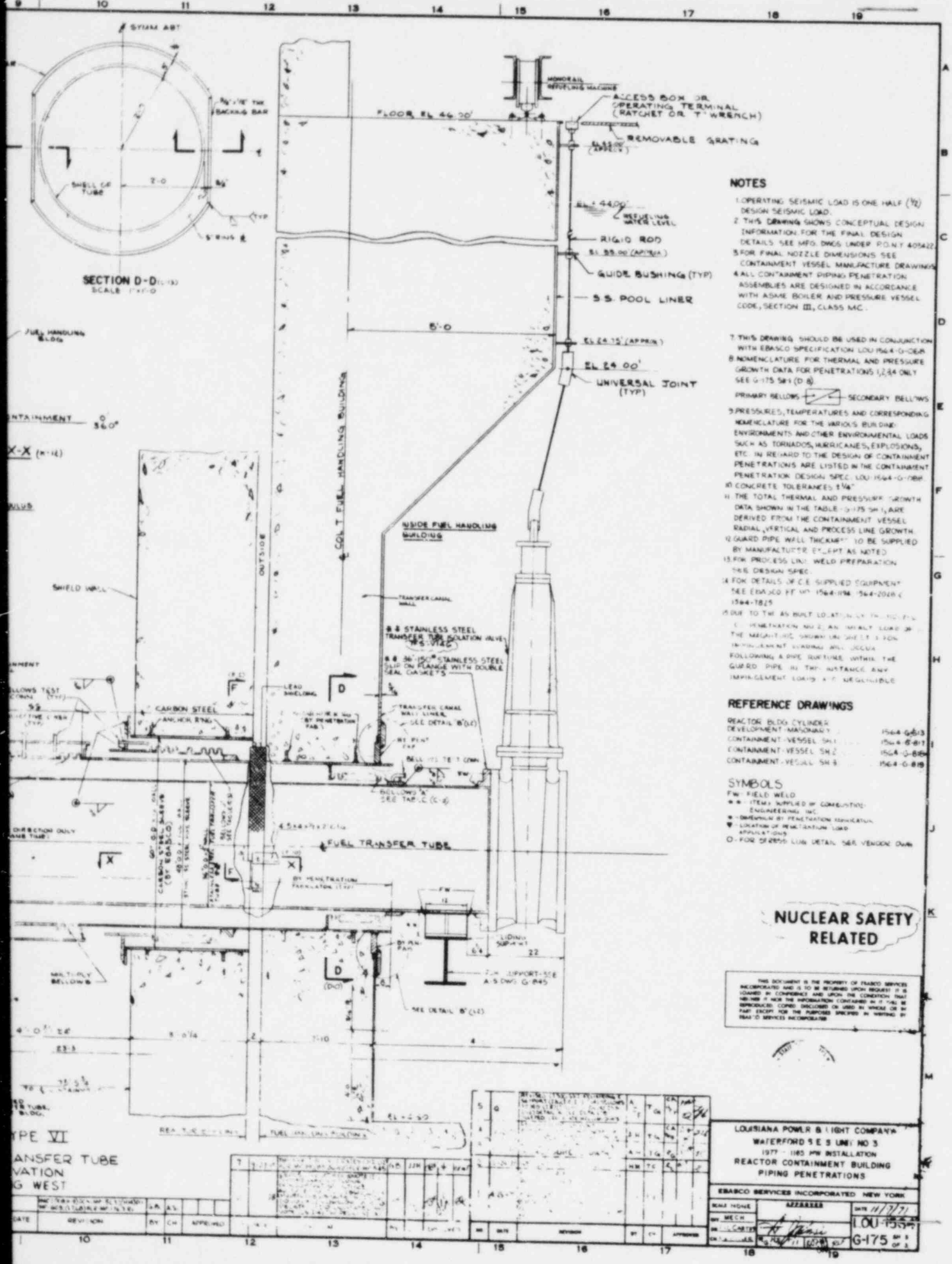
DETAIL "B" (L4)(U4)
SCALE: NONE



DETAIL "C" (P-D11)
SCALE: NONE



FUEL
E
LOCK



NOTES

1. OPERATING SEISMIC LOAD IS ONE HALF (½) DESIGN SEISMIC LOAD.
2. THIS DRAWING SHOWS CONCEPTUAL DESIGN INFORMATION FOR THE FINAL DESIGN DETAILS SEE MFG. DWGS UNDER P.O. N.Y 405422.
3. FOR FINAL NOZZLE DIMENSIONS SEE CONTAINMENT VESSEL MANUFACTURE DRAWINGS.
4. ALL CONTAINMENT PIPING PENETRATION ASSEMBLIES ARE DESIGNED IN ACCORDANCE WITH ASME BOILER AND PRESSURE VESSEL CODE, SECTION III, CLASS MC.
7. THIS DRAWING SHOULD BE USED IN CONJUNCTION WITH EBASCO SPECIFICATION LOU 1564-G-108R.
8. NOMENCLATURE FOR THERMAL AND PRESSURE GROWTH DATA FOR PENETRATIONS 1,2,34 ONLY SEE G-175 SH 1 (D-8).

PRIMARY BELLOWS — SECONDARY BELLOWS

9. PRESSURES, TEMPERATURES AND CORRESPONDING NOMENCLATURE FOR THE VARIOUS BUILDING ENVIRONMENTS AND OTHER ENVIRONMENTAL LOADS SUCH AS TORNADOS, HURRICANES, EXPLOSIONS, ETC. IN REGARD TO THE DESIGN OF CONTAINMENT PENETRATIONS ARE LISTED IN THE CONTAINMENT PENETRATION DESIGN SPEC. LOU 1564-G-108P.
10. CONCRETE TOLERANCES ± ⅛"
11. THE TOTAL THERMAL AND PRESSURE GROWTH DATA SHOWN IN THE TABLE G-175 SH 1, ARE DERIVED FROM THE CONTAINMENT VESSEL RADIAL, VERTICAL AND PROCESS LINE GROWTH.
12. GUARD PIPE WALL THICKNESS TO BE SUPPLIED BY MANUFACTURER EXCEPT AS NOTED.
13. FOR PROCESS LINE WELD PREPARATION SEE DESIGN SPEC.
14. FOR DETAILS OF C.E. SUPPLIED EQUIPMENT SEE EBASCO ET NO. 1564-[illegible], 1564-2028 & 1564-7825
15. DUE TO THE AS BUILT LOCATION OF THE PIPE PENETRATION NOZZLE AN INFINITE LOAD OF THE MAGNITUDE SHOWN ON SHEET 3 FOR IMPINGEMENT LOADING WILL OCCUR FOLLOWING A PIPE RUPTURE WITHIN THE GUARD PIPE IN THIS INSTANCE ANY IMPINGEMENT LOADS ARE NEGLIGIBLE

REFERENCE DRAWINGS

REACTOR BLDG CYLINDER DEVELOPMENT-MASONARY	1564-G-813
CONTAINMENT-VESSEL SH 1	1564-G-811
CONTAINMENT-VESSEL SH 2	1564-G-812
CONTAINMENT-VESSEL SH 3	1564-G-813

SYMBOLS

FW - FIELD WELD
★★ - ITEMS SUPPLIED BY COMBUSTION ENGINEERING, INC.
★ - DIMENSION BY PENETRATION FABRICATOR
▼ - LOCATION OF PENETRATION LOAD APPLICATIONS
O - FOR SPARE LINE DETAIL SEE VENDOR DWG

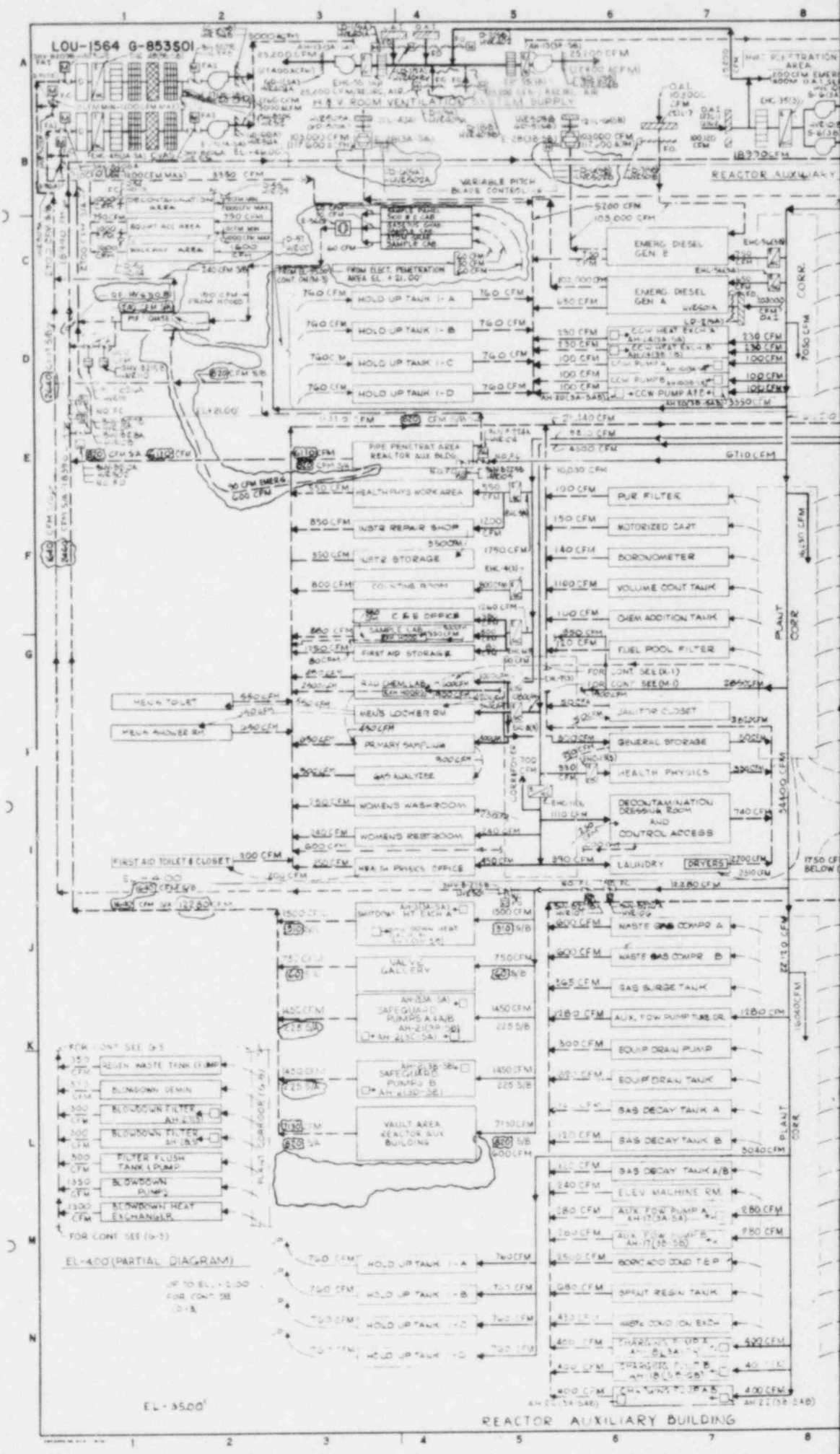
NUCLEAR SAFETY RELATED

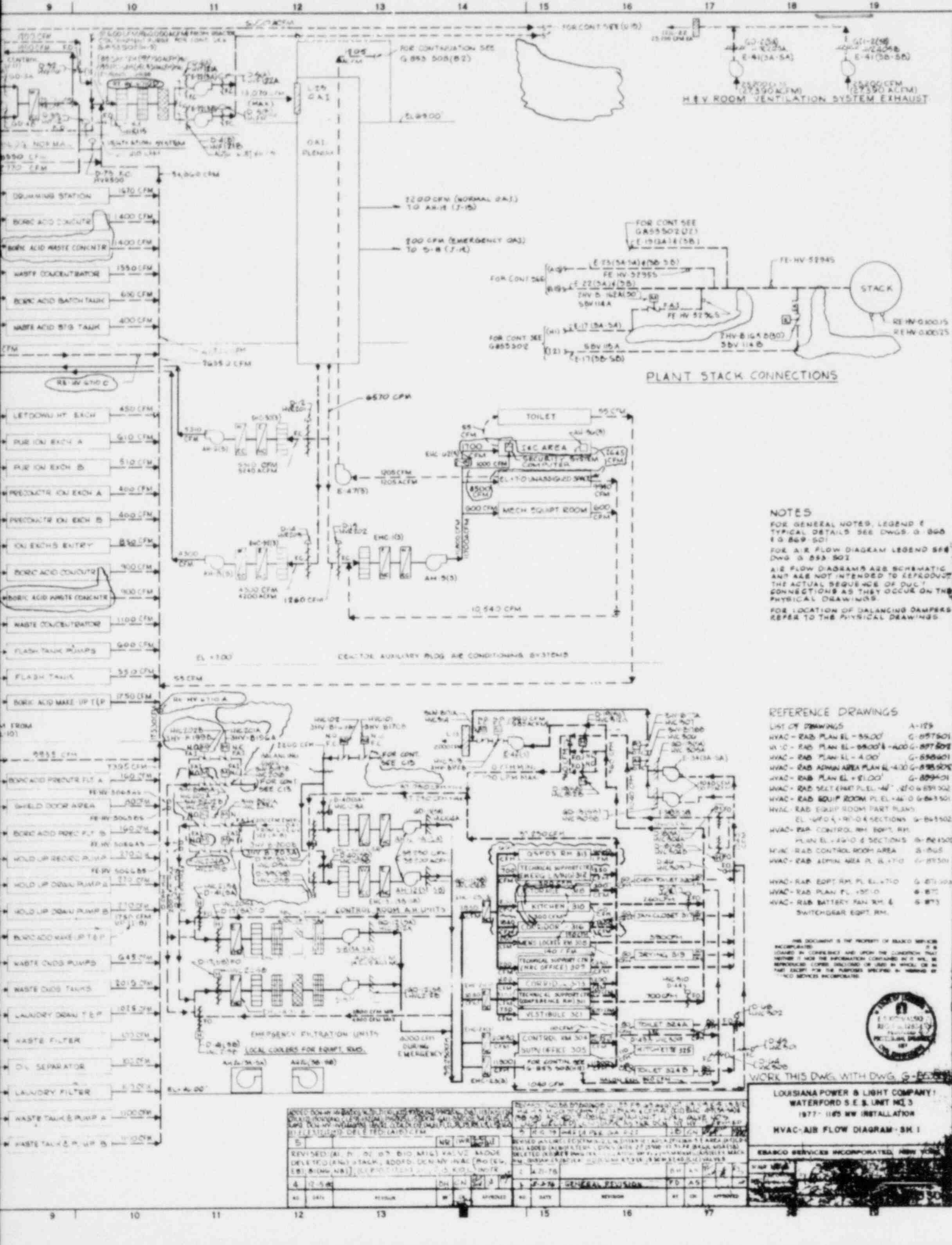
LOUISIANA POWER & LIGHT COMPANY
WATERFORD S E S UNIT NO 3
1977 - 1985 MW INSTALLATION
REACTOR CONTAINMENT BUILDING
PIPING PENETRATIONS

EBASCO SERVICES INCORPORATED NEW YORK

DRAWN	APPROVED	DATE 11/7/71
DES. MECH		LOU-1564
CHECKED		G-175 SH 3 OF 3

NO	DATE	REVISION	BY	CH	APPROVED


LOU-1564 G-853501
H & V ROOM VENTILATION SYSTEM SUPPLY
REACTOR AUXILIARY
EMERG. DIESEL GEN. B
EMERG. DIESEL GEN. A
HOLD UP TANK 1-A
HOLD UP TANK 1-B
HOLD UP TANK 1-C
HOLD UP TANK 1-D
PIPE PENETRAT AREA REACTOR AUX BLDG
HEALTH PHYS WORK AREA
INSTR REPAIR SHOP
INSTR STORAGE
C & E OFFICE
FIRST AID STORAGE
RAW CHEM. LAB
MENS LOCKER RM
PRIMARY SAMPLING
GAS ANALYZER
WOMENS WASHROOM
WOMENS REST ROOM
HEALTH PHYSICS OFFICE
MENS TOILET
MENS SHOWER RM
FIRST AID TOILET & CLOSET
PUR FILTER
MOTORIZED CART
BORONOMETER
VOLUME CONT TANK
CHEM ADDITION TANK
FUEL POOL FILTER
JANITOR CLOSET
GENERAL STORAGE
HEALTH PHYSICS
DECONTAMINATION DRESSING ROOM AND CONTROL ACCESS
LAUNDRY
DRYERS
SHUTDOWN HT EXCH A
VALVE GALLERY
SAFEGUARD PUMPS A & A/B
SAFEGUARD PUMPS B & B/B
VAULT AREA REACTOR AUX BUILDING
WASTE GAS COMPR A
WASTE GAS COMPR B
GAS SURGE TANK
AUX. FDW PUMP TURB DR.
EQUIP DRAIN PUMP
EQUIP DRAIN TANK
GAS DECAY TANK A
GAS DECAY TANK B
GAS DECAY TANK A/B
ELEV MACHINE RM.
AUX FDW PUMP A
AUX FDW PUMP B
BORIC ACID EQUIP & P
SPENT RESIN TANK
WASTE COND EQUIP
REGEN WASTE TANK & PUMP
BLOWDOWN DEMIN
BLOWDOWN FILTER A
BLOWDOWN FILTER B
FILTER FLUSH TANK & PUMP
BLOWDOWN PUMP
BLOWDOWN HEAT EXCHANGER
EL-400 (PARTIAL DIAGRAM)
EL-35.00'
REACTOR AUXILIARY BUILDING
PLANT CORR
CORRIDOR



NOTES

FOR GENERAL NOTES, LEGEND & TYPICAL DETAILS SEE DWGS. G-868 & G-869-S01

FOR AIR FLOW DIAGRAM LEGEND SEE DWG. G-853-S01

AIR FLOW DIAGRAMS ARE SCHEMATIC AND ARE NOT INTENDED TO REPRODUCE THE ACTUAL SEQUENCE OF DUCT CONNECTIONS AS THEY OCCUR ON THE PHYSICAL DRAWINGS.

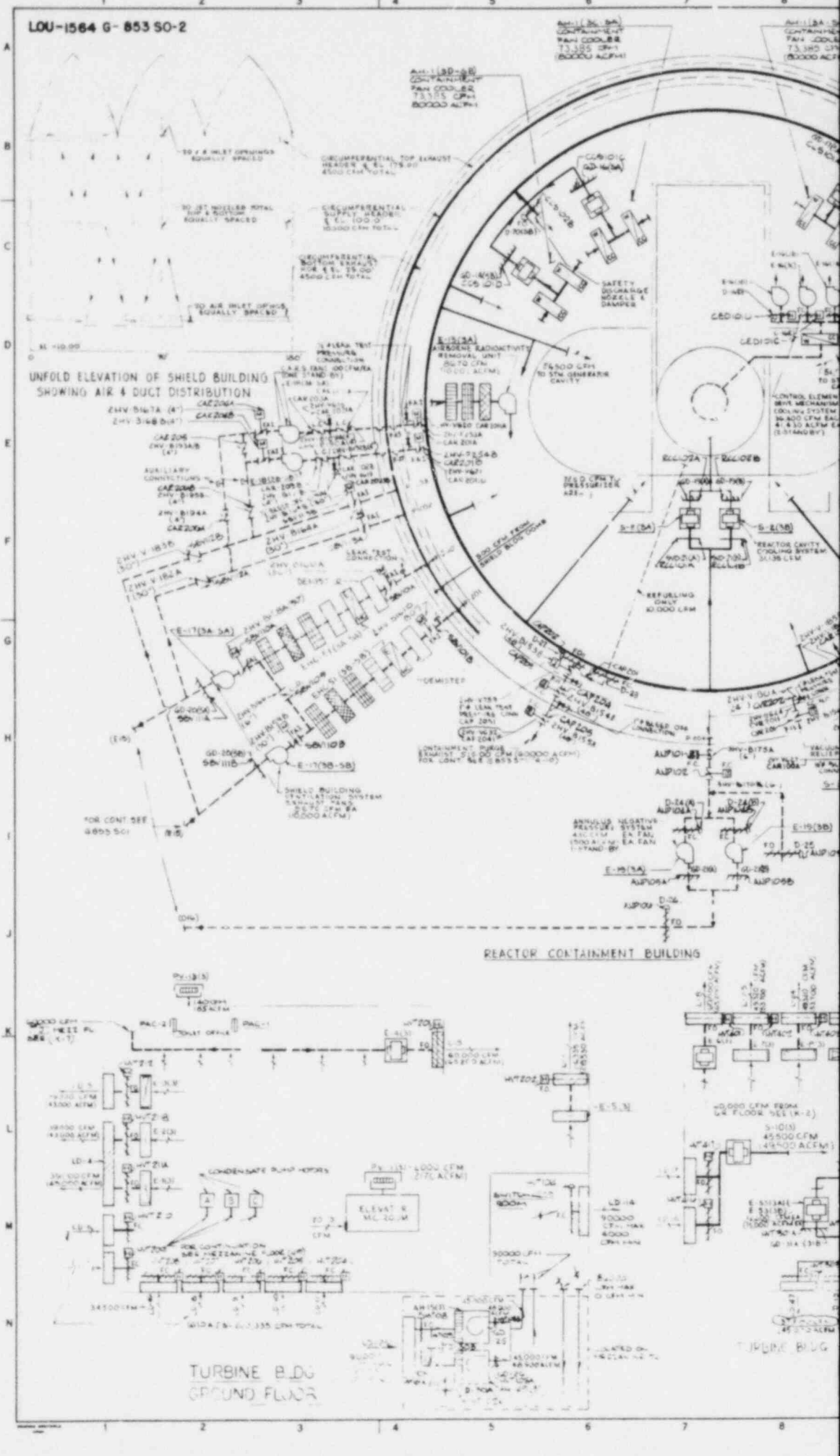
FOR LOCATION OF BALANCING DAMPERS REFER TO THE PHYSICAL DRAWINGS.

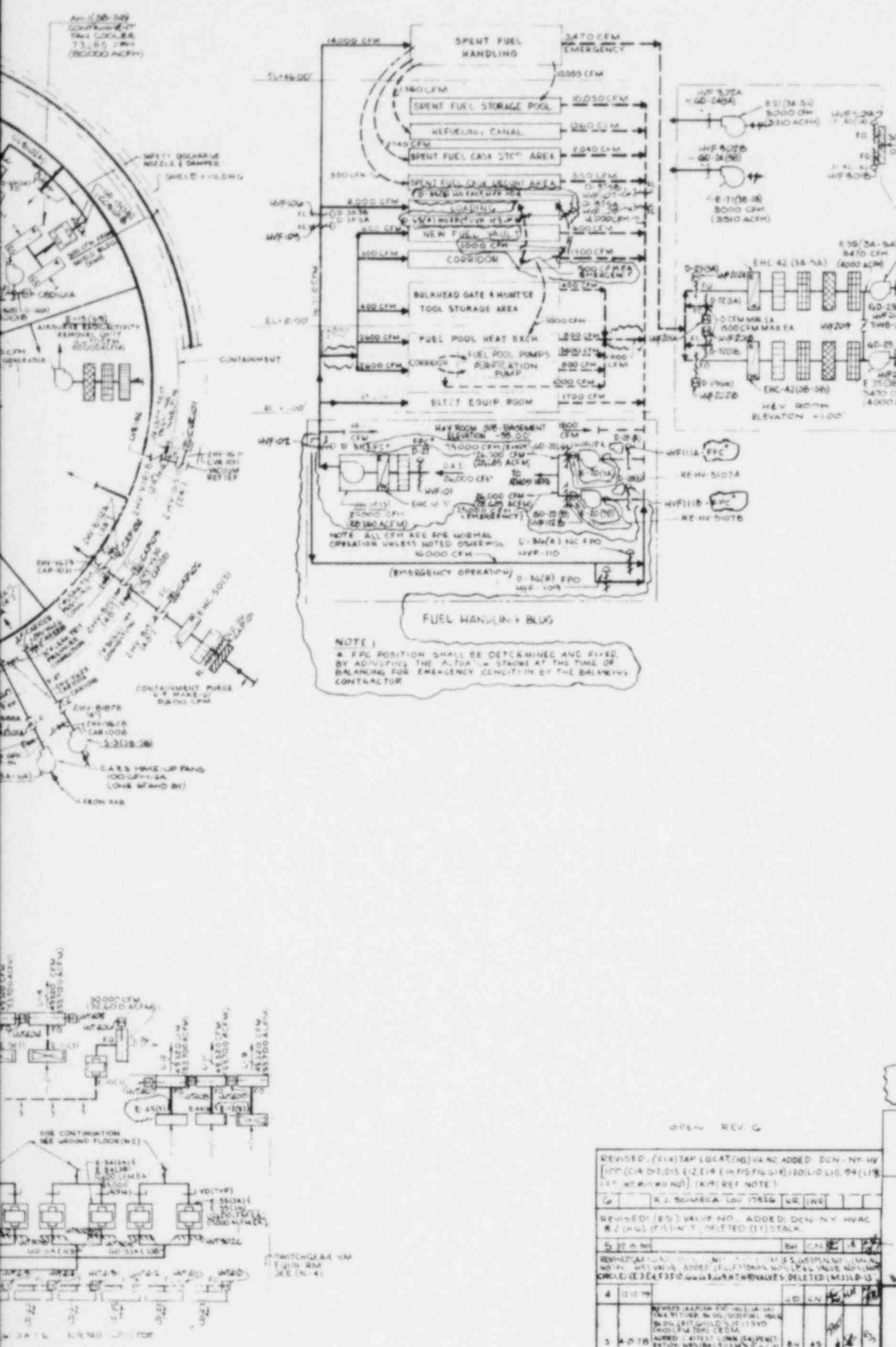
WORK THIS DWG. WITH DWG. G-[illegible]

LOUISIANA POWER & LIGHT COMPANY
WATERFORD S.E.S. UNIT NO. 3
1977 - 1165 MW INSTALLATION

HVAC-AIR FLOW DIAGRAM-SH. 1

EBASCO SERVICES INCORPORATED, NEW YORK


LOU-1564 G- 853 SO-2
UNFOLD ELEVATION OF SHIELD BUILDING
SHOWING AIR & DUCT DISTRIBUTION
REACTOR CONTAINMENT BUILDING
TURBINE BLDG
GROUND FLOOR



LEGEND AIR FLOW DIAGRAMS

- GD — GRAVITY DAMPER
- VD — VOLUME DAMPER
- OPPOSED BLADE OR DIRECT ACTING DAMPER
- PNEUMATIC DIAPHRAGM OPERATOR
- PNEUMATIC PISTON OPERATOR
- MOTOR OPERATOR
- OUTSIDE AIR INTAKE LOUVER
- DISCHARGE LOUVER
- LOW OR MEDIUM EFFICIENCY FILTER
- HEPA FILTER
- CHARCOAL FILTER
- L.C. — LOCKED CLOSED
- L.O. — LOCKED OPEN
- FPC — FAIL PARTIALLY CLOSED
- FPO — FAIL PARTIALLY OPEN
- COIL (A) W - WATER, E - ELECTRIC, DX DIRECT EXPANSION; (B) HC - HEATING COIL, CC - COOLING COIL
- BUTTERFLY VALVE
- GATE VALVE
- CHECK VALVE
- CENTRIFUGAL FAN
- AXIAL FAN
- PROPELLER FAN
- POWER ROOF VENTILATOR
- TRANSFER AIR
- SUPPLY AIR
- EXHAUST OR RETURN AIR
- HYDROMOTOR OPERATOR

NOTES

FOR GENERAL NOTES, LEGEND & TYPICAL DETAILS SEE DWGS G-868 & G-869-S01

AIR FLOW DIAGRAMS ARE SCHEMATIC AND ARE NOT INTENDED TO REPRODUCE THE ACTUAL SEQUENCE OF DUCT CONNECTIONS AS THEY OCCUR ON THE PHYSICAL DWGS

FOR LOCATION OF BALANCING DAMPERS REFER TO THE PHYSICAL DRAWINGS.

REFERENCE DRAWINGS

LIST OF DRAWINGS	A-129
HVAC - REACTOR BLDG SH 1	G-844
HVAC - REACTOR BLDG SH 2	G-855
HVAC - REACTOR BLDG SH 3	G-856
HVAC - FUEL HAND BLDG SH 1	G-860
HVAC - FUEL HAND BLDG SH 2	G-861
HVAC - TURBINE BLDG SH 1	G-863
HVAC - TURBINE BLDG SH 2	G-870 S01
HVAC - TURBINE BLDG SH 3	G-870 S02

FOR ADDITIONAL REFERENCE DWGS REFER TO DWG G-853 S01

FOR LOCATION OF LEAK TEST AND BLEED OFF CONNECTIONS ON CONTAINMENT PENETRATION NOZZLES SEE DRAWING G 856 S01

NO	DATE	REVISION	BY	CH.	APPROVED
G		REVISED: (E14) TAP LOCAT. (H5) VA NO. ADDED: DCN-NY-HVAC ... R.J. SCIMECA - LOU 17636	VR	WR	
5		REVISED: (B5) VALVE NO. ADDED: DCN-NY-HVAC ... DELETED (I1) STALK	BH		
4	12-12-79	REVISED ... VALVES DELETED (M3) LD-13			
3	4-21-78	REVISED ... ADDED LATEST ...	BH	AS	
2	2-2-78	GENERAL REVISION	BH	AS	
1		[illegible]			

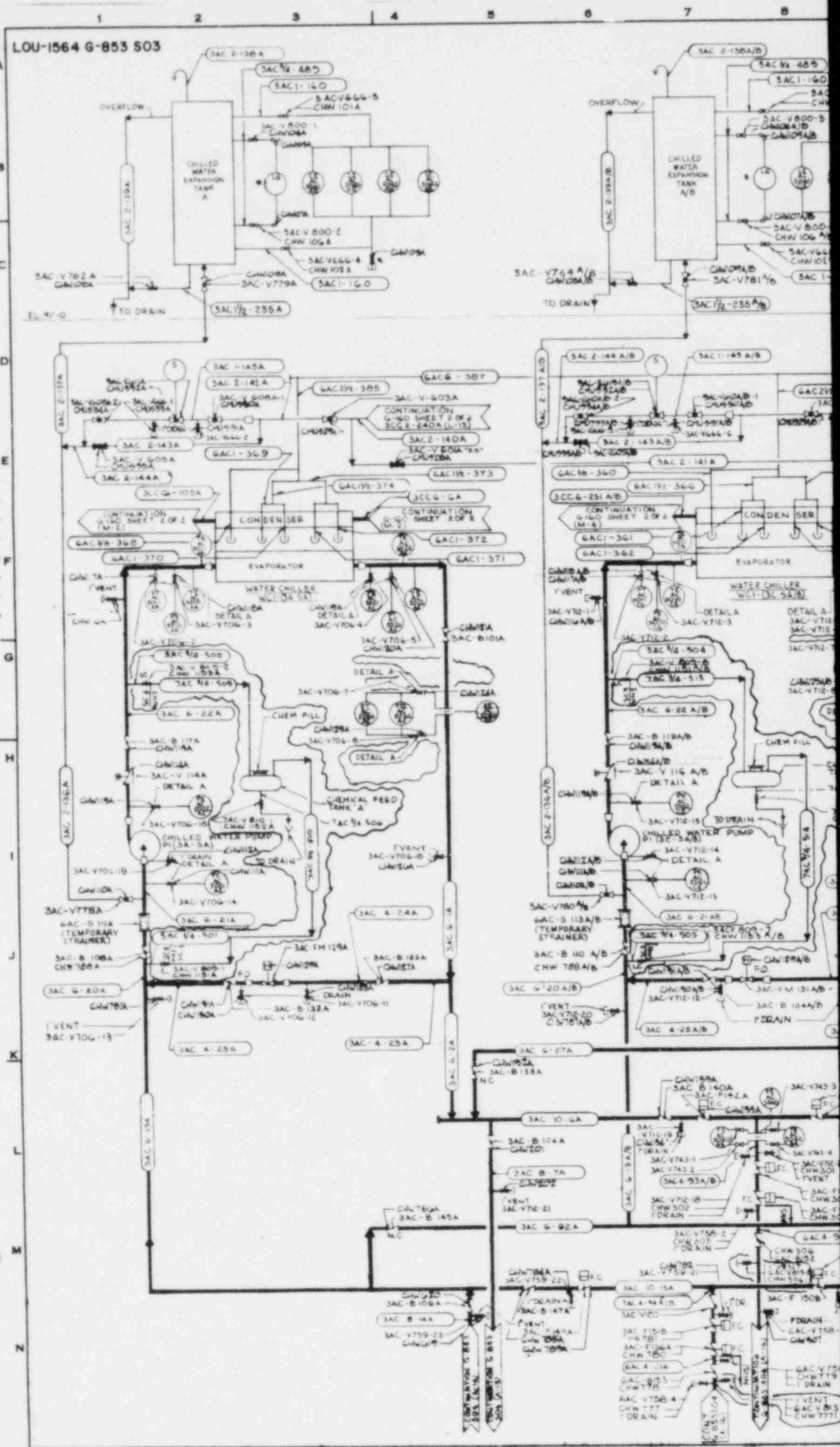
WORK THIS DRAWING WITH G 853 S01

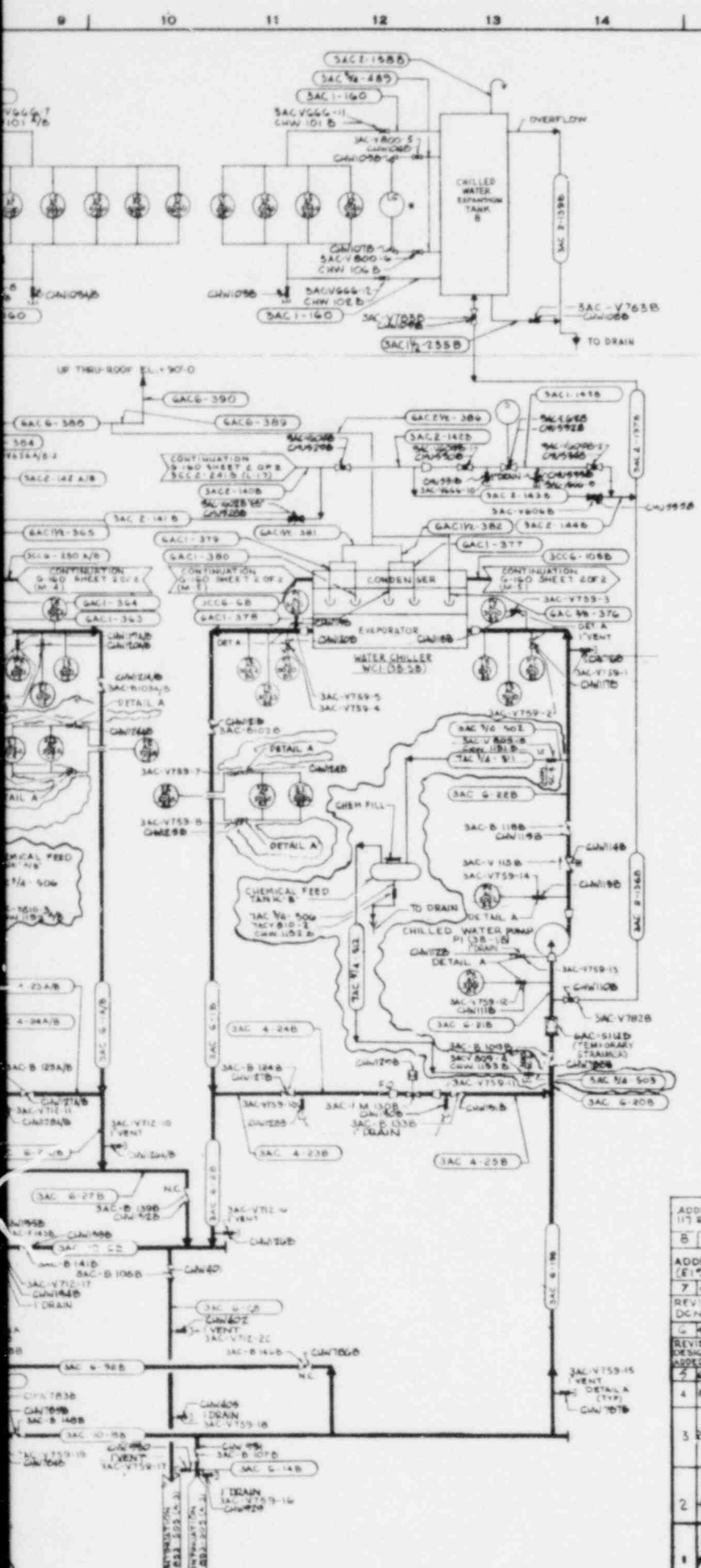
LOUISIANA POWER & LIGHT COMPANY
WATERFORD S.E.S. UNIT NO. 3
1977 - 1165 MW INSTALLATION
HVAC - AIR FLOW DIAGRAMS
SH. 2

EBASCO SERVICES INCORPORATED NEW YORK

DATE 9-4-73

LOU-1564
G-853 S02


LOU-1564 G-853 S03
CHILLED WATER EXPANSION TANK A
CHILLED WATER EXPANSION TANK A/B
OVERFLOW
TO DRAIN
CONDENSER
EVAPORATOR
WATER CHILLER
CHEM FILL
CHEMICAL FEED TANK 'A'
CHILLED WATER PUMP
DETAIL A
TEMPORARY STRAINER
VENT



REFERENCE DRAWINGS

LIST OF DRAWINGS	A-125
HVAC-RAB EQUIP RM CHILLED WATER PIPING PL EL+46-0	G-863503
HVAC-RAB EQUIP RM CHILLED WATER PIPING PART PLAN & SECTIONS AT EL 46-0, 69-0, & 91-0	G-863504
HVAC-RAB EQUIP RM REFRIGERANT RELIEF PIPING PL EL 46-0	G-863505

NOTES

1. FOR SYMBOLS & LEGEND SEE DWG G-868.
2. FOR CONTINUATION OF CHILLED WATER FLOW DIAGRAMS SEE G-853-504 & G-853-508.
3. FOR DETAILS SEE DWGS G-863-506 & G-863-507.
4. EXPANSION TANK GAGE GLASS & GAGE GLASS TRIM DENOTED BY ⓑ SHALL BE FURNISHED BY TANK VENDOR

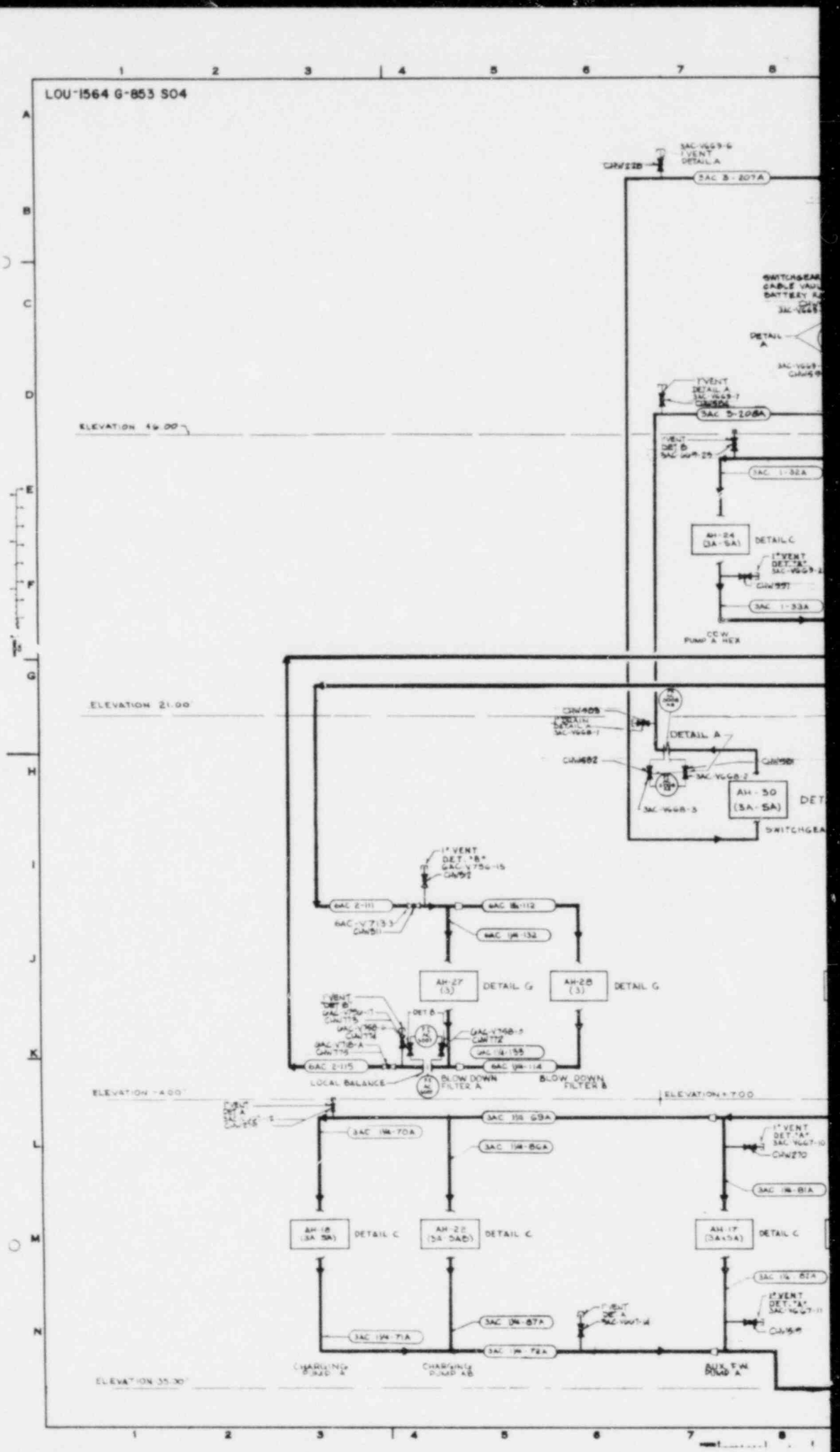
ADDED DCN-NY-HV-104 [(G4, G9, G11, H4, H9, H11); 117 R1 (H2, H7, H12); 161 (M8, N7)]							
8			NR	WR	[illegible]	[illegible]	
ADDED (B3, B8, B7, C3, C8, C12) FCR-MP-855; (E15) REF DWG.							
7	11-19-80		CN	AAP	[illegible]	[illegible]	[illegible]
REVISED (N6) VALVE NO ADDED (D1, D6, D14) DCN-NY-HV-77							
6	4-28-80		BH	CN	[illegible]		[illegible]
REVISED [illegible] INSTR DESIG, [illegible] VALVE NOS, [illegible] VALVE POSITION. ADDED (L7) INSTR, (M7) VALVE, LP & L VALVE NOS [illegible]							
5	6-20-79		JB	CN	[illegible]	[illegible]	[illegible]
4	8-14-78	REVISED [illegible] VALVES [illegible] TAG SYMBOLS ADDED [illegible] VALVE NUMBERS AS CIRCLED	BH	CN	[illegible]	[illegible]	[illegible]
3	2-28-78	REVISED [illegible] INSTRUMENT NO. [illegible] VALVE NO. [illegible] VENTS & DRAINS [illegible] RELIEF PIPING. ADDED [illegible]	JG	BE	[illegible]	[illegible]	[illegible]
2	4-19-77	[illegible]					
1	[illegible]	[illegible]					
[illegible]	[illegible]	[illegible]					

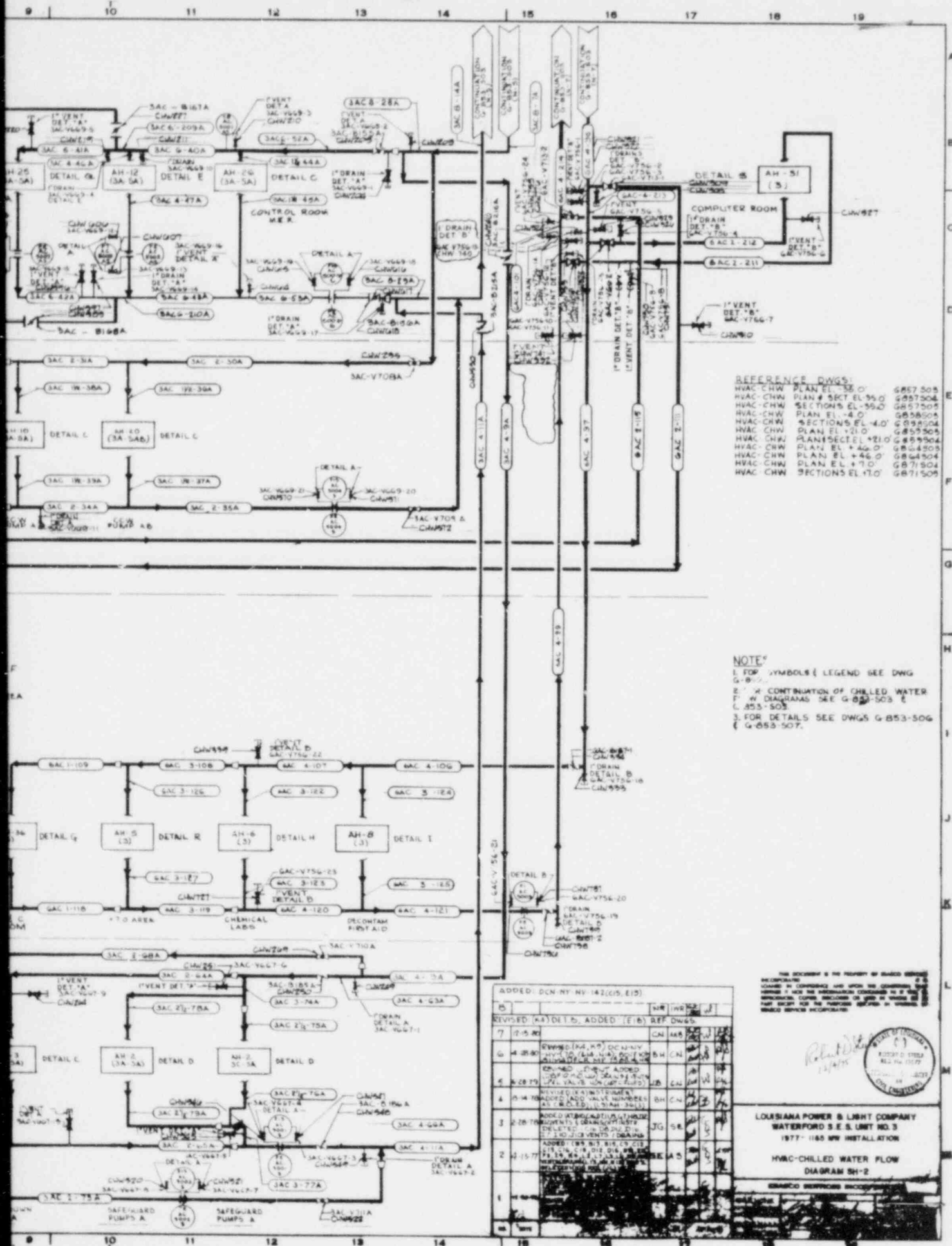
Robert D. Stuler 12/4/75

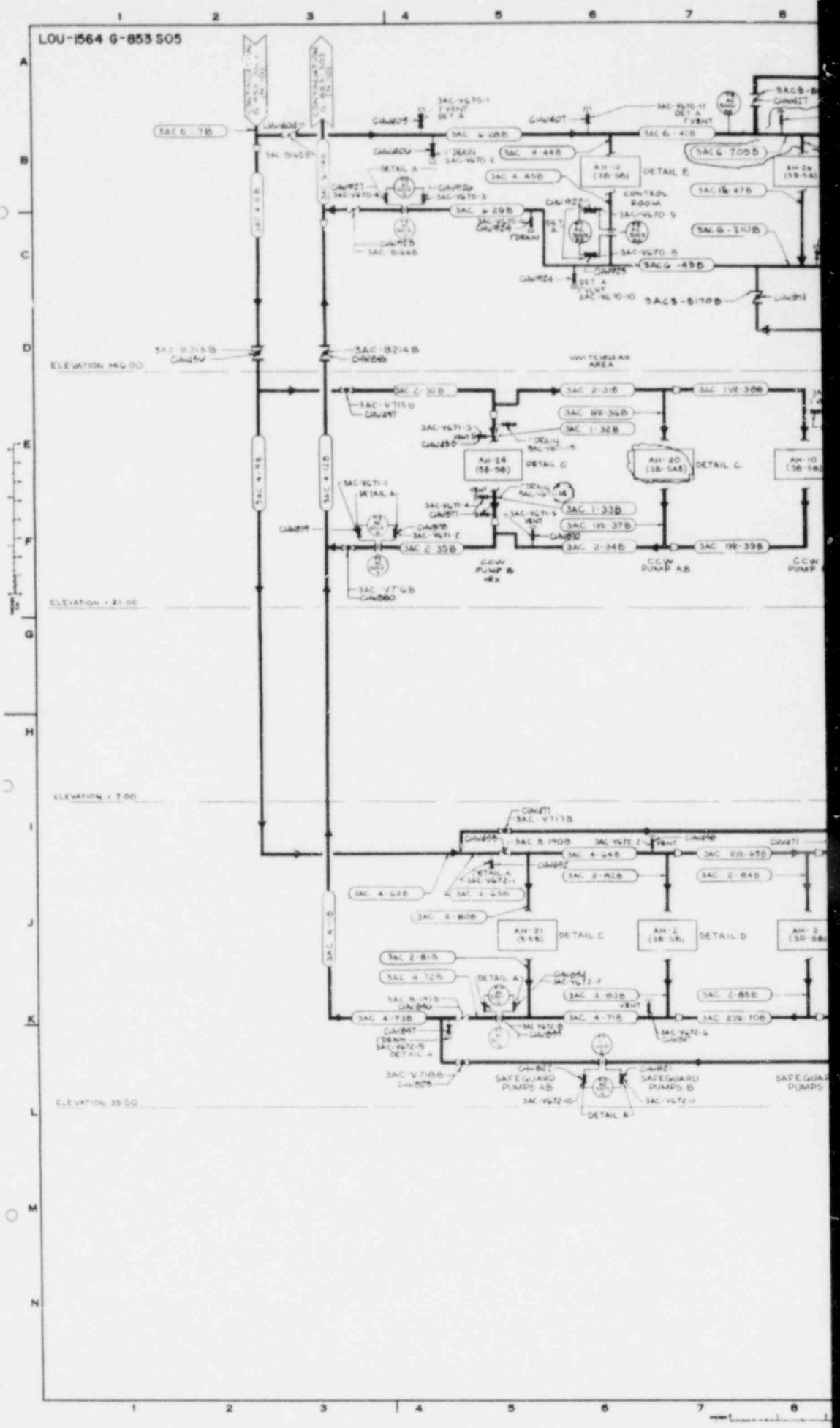
[illegible stamp]

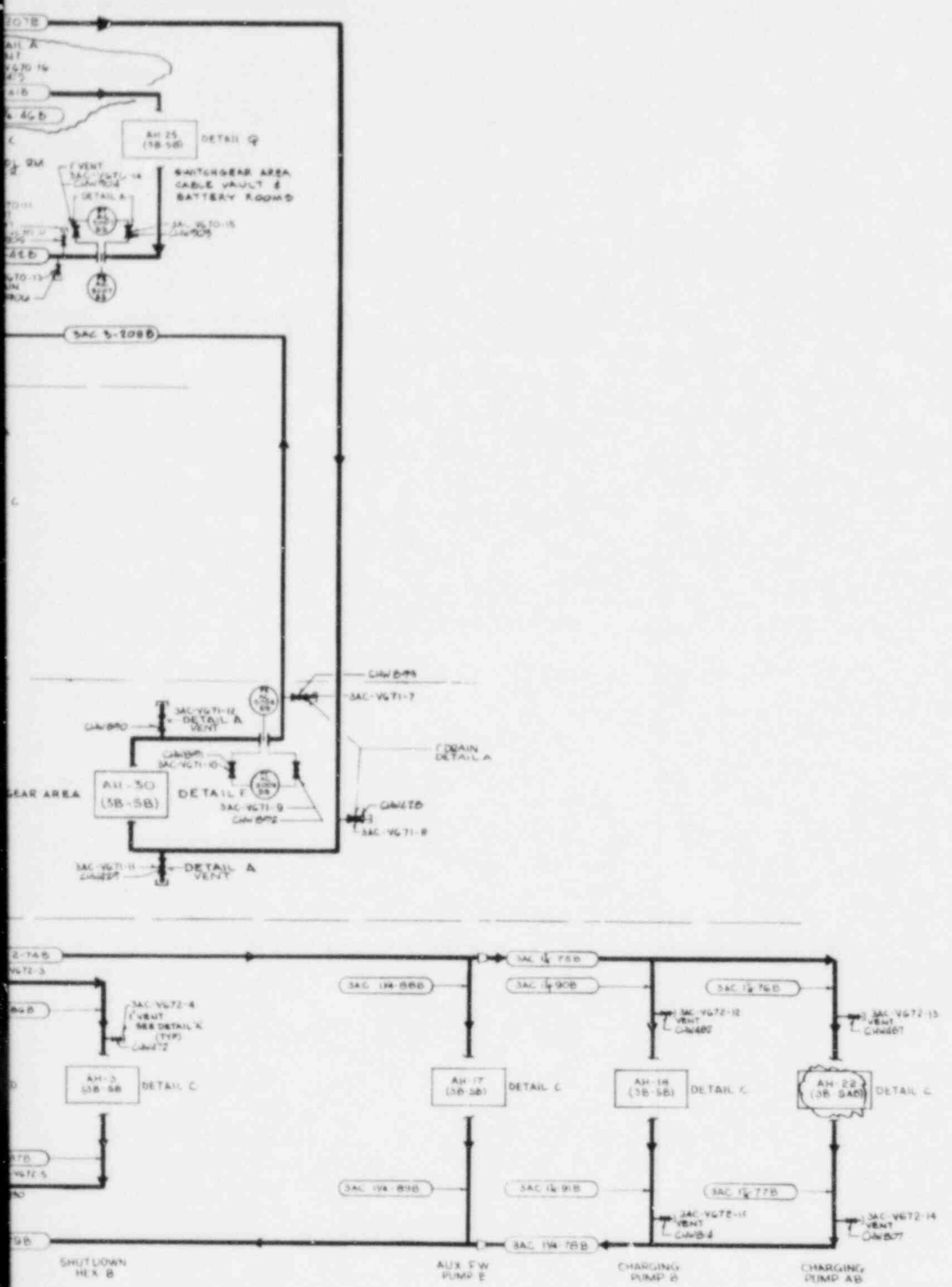
LOUISIANA POWER & LIGHT COMPANY
WATERFORD S.E.S. UNIT NO. 3
1977 - 1100 MW INSTALLATION

HVAC - CHILLED WATER FLOW DIAGRAM [illegible]


LOU-1564 G-853 S04
ELEVATION 46.00'
ELEVATION 21.00'
ELEVATION -4.00'
ELEVATION +7.00'
ELEVATION 35.30'
AH-24 (3A-5A)
DETAIL C
AH-30 (3A-5A)
AH-27 (3)
DETAIL G
AH-28 (3)
DETAIL G
AH-18 (3A-5A)
AH-20 (3A-5AB)
AH-17 (3A-5A)
DETAIL A
BLOW DOWN FILTER A
BLOW DOWN FILTER B
LOCAL BALANCE
CHARGING PUMP A
CHARGING PUMP AB
AUX FW PUMP A
CCW PUMP A HEX
SWITCHGEAR


AH-12 (3A-5A)
AH-20 (3A-5A)
AH-51 (3)
COMPUTER ROOM
CONTROL ROOM M.E.R.
AH-10 (3A-5A)
AH-10 (3A-5AB)
AH-5 (3)
AH-6 (3)
AH-8 (3)
CHEMICAL LABS
DECONTAM FIRST AID
AH-2 (3A-5A)
AH-2 (3C-5A)
SAFEGUARD PUMPS A
SAFEGUARD PUMPS A
REFERENCE DWGS:
HVAC-CHW PLAN EL. -55.0' G857505
HVAC-CHW PLAN @ SECT. EL. 55.0' G857504
HVAC-CHW SECTIONS EL. -55.0' G857505
HVAC-CHW PLAN EL. -4.0' G858505
HVAC-CHW SECTIONS EL. -4.0' G858504
HVAC-CHW PLAN EL. +21.0' G859505
HVAC-CHW PLAN SECT. EL. +21.0' G859504
HVAC-CHW PLAN EL. +46.0' G864505
HVAC-CHW PLAN EL. +46.0' G864504
HVAC-CHW PLAN EL. +71.0' G871504
HVAC-CHW SECTIONS EL. +71.0' G871505
NOTES:
1. FOR SYMBOLS & LEGEND SEE DWG G-870...
2. FOR CONTINUATION OF CHILLED WATER FLOW DIAGRAMS SEE G-853-503 & G-853-505.
3. FOR DETAILS SEE DWGS G-853-506 & G-853-507.
ADDED: DCN-NY-NY-142 (C15, E15)
REVISED (K4) DET. 5, ADDED (E16) REF DWGS.
LOUISIANA POWER & LIGHT COMPANY
WATERFORD S.E.S. UNIT NO. 3
1977 - 1165 MW INSTALLATION
HVAC-CHILLED WATER FLOW
DIAGRAM SH-2


LOU-1564 G-853 S05
CONTROL ROOM
SWITCHGEAR AREA
CCW PUMP B HEX
CCW PUMP AB
SAFEGUARD PUMPS AB
SAFEGUARD PUMPS B
ELEVATION 46.00
ELEVATION 21.00
ELEVATION 7.00
ELEVATION 35.00



NOTES

1. FOR SYMBOLS & LEGEND SEE DWG G-868.
2. FOR CONTINUATION OF CHILLED WATER FLOW DIAGRAMS SEE G-853-503 & G-853-504
3. FOR DETAILS SEE DWGS G-853-506 & G-853-507
4. FOR REFERENCE DWGS SEE G-853-504

REVISE: (F6) VALVE NO. ADDED DCN-NY-HVAC [80 (E7), 81 (J6)] FCR MP-785 (B9), (I18) NOTE

NO	DATE	REVISION	BY	CK	APPROVED		
6	12-19-80		BH	CN			
5	6-20-79	ADDED (E5,F5) VALVES, LP&L VALVE NOS. (NOT CIRCLED)	JB	CN			
4	8-14-78	ADDED (ADD VALVE NUMBER AS CIRCLED)	BH	CN			
3	2-28-78	ADDED (I5, K6, D4, C5, G1, H12) VENTS & DRAINS, (B11) INSUL. DELETED (C, B3, B8, C12) AS VENTS/DRAINS SPECS	JG	SE			
2	4-15-77	REVISED (C,8) LINE NO. ADDED (I,K,7,8,15,16) (J,10) (B,5,8) (F,5) (G,6) (B,D,8,10) (B,8) (C,3,4,5) VENTS/DR. (E,F,5,7) REDUCERS	SE	AS		GDS	
1	12-20-76	REV (B-7, B-7, C-4, D-7, D) VALVE NO'S (D-4, F-4, K-5) INSTR. ADDED (I-1) ELEV. (H-10) AH-30 AND PIPE LINES (B-9) LINE NO'S	SSS	LD		GDS	

LOUISIANA POWER & LIGHT COMPANY
WATERFORD S.E.S. UNIT NO. 3
1977 - 1165 MW INSTALLATION

HVAC-CHILLED WATER FLOW
DIAGRAM SH-3

EBASCO SERVICES INCORPORATED

SCALE NONE
APPROVED
DATE 12-4-75
DR B.S. HALL
LOU-1564
G-853S05