

- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 20841 THROUGH 20846 & 2084A.
  2. ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS HAVE SYSTEM PREFIX RC UNLESS OTHERWISE NOTED.
  3. DELETED.
  4.  $\Delta$  - INDICATES REVISION LEVEL.

REV	DATE	DSGN	DRWN	CHKD	CDE	SES	DESCRIPTION
6	1/15/92	DWS	JM	BCL	DWS	RRC	INCORP DCR 908003 CA#8
5	12/16/91	RNC	JM	FCB	WRD	BCL	INCORP. MPOD 91-011 CARR
4	2/22/88	GPH	JM	BCL	DWS	RRC	TRANSFERRED GENERAL NOTES AND DETAILS AS B & C TO NEW DRAWING RC-B20848. REVISED NOTE 1. DELETED NOTE 3.
3	1/24/87	MPV	TAK	WRD	BCL	VWS	ADDED NOTE 4. REVISED PER LATEST SYSTEM DRAWINGS
2	3/26/86	TAK	WES	DWS	ASK	WFD	ISSUED FOR OPERATIONS
1	7/29/85	GFS	GFS	TAK	PEF	WFD	GENERAL REVISION
0	2/28/85	GFS	GFS	JNM	PEF	WFD	ISSUED FOR FIELD VERIFICATION

**North Atlantic** Energy Service Corporation

REACTOR COOLANT SYSTEM OVERVIEW

SEABROOK STATION PID-1-RC-B20840

REF. DRAWING NO.	REV	TITLE
9763-F-005011	19	CVCS PURIFICATION P&ID
9763-F-005018	18	SAFETY INJECTION SYS. HIGH HEAD P&ID
9763-F-005009	13	SAFETY INJECTION SYS. ACCUMULATORS P&ID
9763-F-005008	17	RESIDUAL HEAT REMOVAL P&ID
9763-F-005007	14	RCS PRESSURIZER P&ID
9763-F-005006	17	RCS LOOP NO. 4 P&ID
9763-F-005005	15	RCS LOOP NO. 3 P&ID
9763-F-005004	16	RCS LOOP NO. 2 P&ID
9763-F-005003	19	RCS LOOP NO. 1 P&ID
9763-F-005002	13	RCS REACTOR VESSEL P&ID

PID-1-RC-B20845

PHOTOGRAPHIC COPY

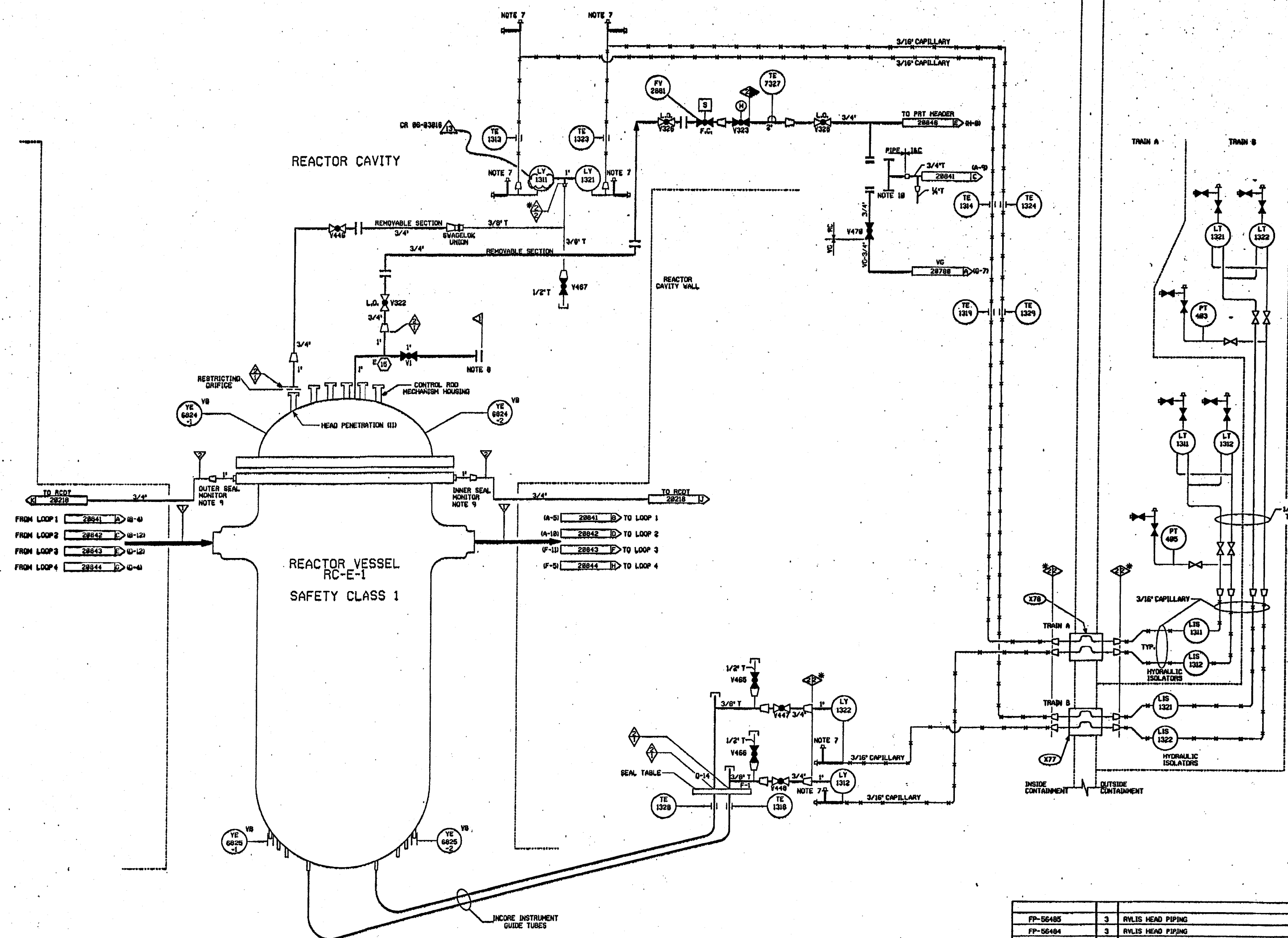
FOR PAID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS PAID - LEGEND 1 AND PAID - LEGEND 2

REACTOR CONTAINMENT BUILDING

TRAIN B ELECTRICAL TUNNEL

REACTOR CAVITY

REACTOR VESSEL RC-E-1 SAFETY CLASS 1



- NOTES:
- INDICATES GENERAL NOTE NUMBER - REFER TO DRAWING 28845 FOR GENERAL NOTES.
  - WORK THIS DRAWING WITH 28844, 28841, 28842, 28843, 28844, 28845 & 28846.
  - ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTATION HAVE SYSTEM PREFIX "RC" UNLESS OTHERWISE NOTED.
  - VENTS, DRAINS & TEST CONN. CODE BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER 1-4047-00001 UNLESS NOTED OTHERWISE.
  - △ INDICATES REVISION LEVEL.
  - DELETED
  - CAPILLARY FILL & VENT VALVES SEE FP-56419
  - DURING PLANT OPERATION VENT IS SEALED WITH A SAFETY CLASS 1 BLIND FLANGE
  - CLASS 1 TO CLASS 2 BOUNDARY AT THE METALLIC O-RINGS AND THE REACTOR VESSEL FLANGE.
  - SPOOL TO BE INSTALLED ONLY IN MODES 5, 6 FOR RCS VENTING, REFILLING, AND OTHER SHUTDOWN OPERATIONS.

PORTIONS OF THIS DRAWING ARE  
**NUCLEAR SAFETY RELATED**

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
13	11/22/95	MV	BCS	MHD	INCCORP. DCR '92-37 CA 81
9	11/12/95	MV	BCS	MHD	INCCORP. DCR '92-37 CA 81
8	11/11/89	MVB	PAL	GFH	INCCORP. DCR'S 87-136 CA-12 & 88-118 CA-83 REVISED CONTAINMENT TAG LETTERS
7	12/15/87	GFH	DMS	PAS	REVISED NOTES, REAPPROVED NOTES: ADDED NOTE 4 & 9, FLOW RESTRICTOR INDICATOR SYMBOL DELETED, NOTE 6 & NCS-1 CLASS BOUNDARY, INCOMPLETE ITEMS ECA 85/184/82P (CORRECTLY INCCORP. PER FP-56402 PREVIOUS REV.)
6	11/04/86	JOH	BCL	WRC	REVISED SEAL TABLE INST. TAP CONNECTIONS PER FP-56402, ADDED COMIT, FLAG REF. COORD'S AND INCOMPLETE ITEM, CORRECTED DRAFTING ERRORS, REMOVED ELECTRICAL SIGNALS PER LEAC PAID.
5	3-7-85	GFH	JMH	WFD	ISSUED FOR FIELD VERIFICATION

REF. DRAWING NO.	REV	TITLE
FP-56485	3	RVLIS HEAD PIPING
FP-56484	3	RVLIS HEAD PIPING
FP-56982	1	RVLIS SEAL TABLE TAP & PIPING
FP-56496	1	ITT BARTON TEE IN LINE FILL VALVES
FP-56493	1	HIGH VOLUME SENSOR
FP-56827	1	RVLIS CAPILLARY SCHEMATIC
9763-F-585275	8	INSTRUMENT INSTALLATION - RVLIS
9763-F-895882	13	RCS REACTOR VESSEL P&ID

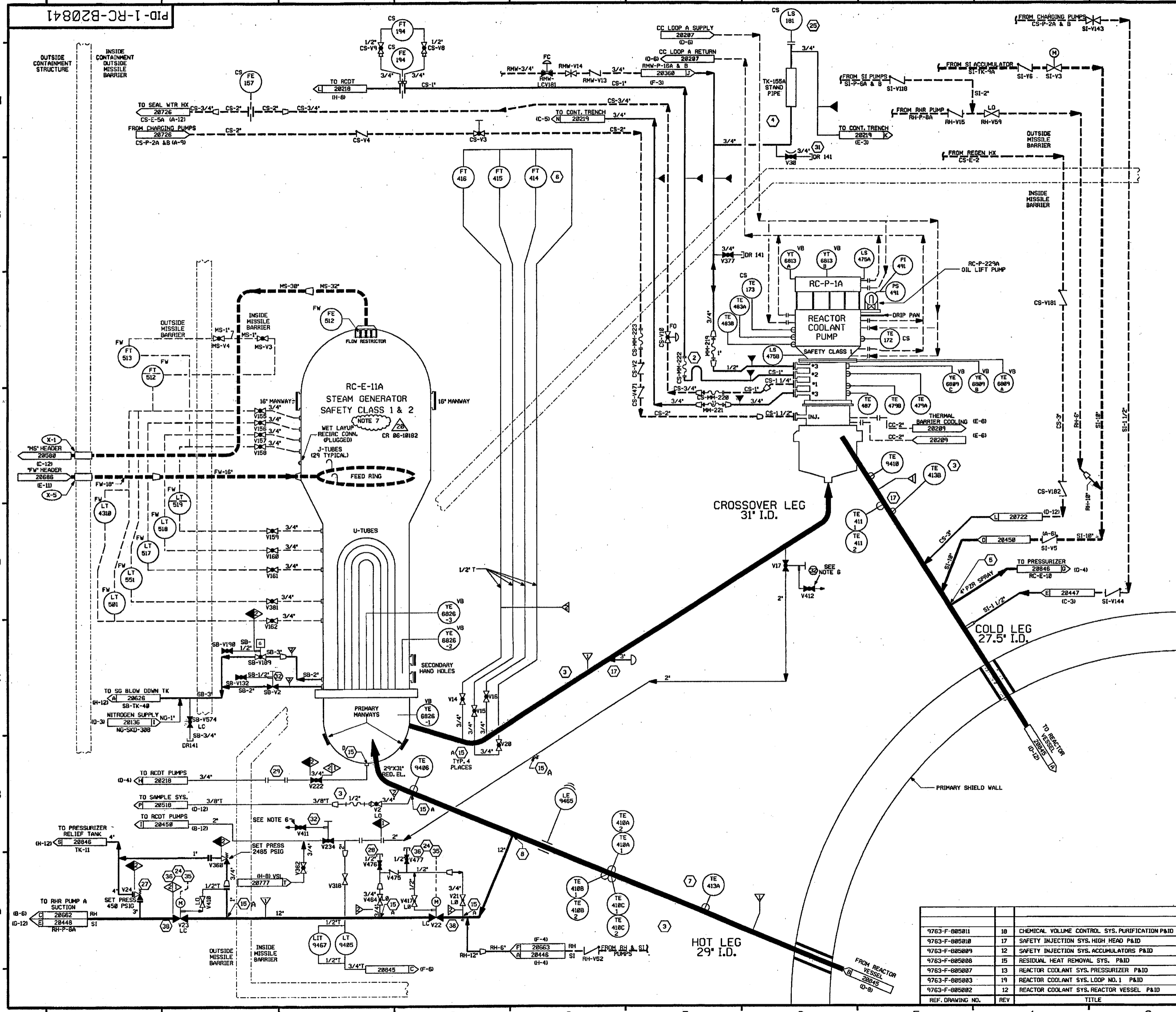
**FPL ENERGY** Seabrook Station



REACTOR COOLANT SYSTEM  
REACTOR VESSEL P & ID

PID- 1-RC-B20845

PID-1-RC-B20841



FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LEGEND 1 AND P&ID - LEGEND 2

- NOTES:
- INDICATES GENERAL NOTE NUMBER - REFER TO DRAWING 20848 FOR GENERAL NOTES.
  - WORK THIS DRAWING WITH DRAWINGS 20840 AND 20842 THROUGH 20846 AND 20848.
  - ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTATION HAVE SYSTEM PREFIX RC UNLESS OTHERWISE NOTED.
  - VENT, DRAIN & TEST CONN. CODE BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER 1-NHY-80511, UNLESS NOTED OTHERWISE.
  - INDICATES REVISION LEVEL.
  - VALVE STEM LEAK-OFF ISOLATION VALVES V411 & V412 ARE TO BE MAINTAINED CLOSED. VALVE STEM LEAK-OFF TO BE CONSIDERED INDETERMINATE.
  - STEAM GENERATOR SHELL SIDE IS AN SAFETY CLASS 2 AND MANUFACTURED AS ASME CODE CLASS 1.

PORTIONS OF THIS DRAWING ARE  
**NUCLEAR SAFETY RELATED**

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
20	1-23-07	BCS	JTM	QZK	INCCRP CR 86-10182 REV. 0
19	8/12/03	BCS	JH	MPW	INCCRP CR 83-86508 REV. 0
18	11/2/00	BCS	MPW	JPS	INCCRP DCR 00-0010 DCN-00
17	7/3/98	DWS	MPW	DJM	INCCRP M400 910046 DCN-00
16	6/3/97	MPW	DWS	JPS	INCCRP M400 97-567 DCN-00
15	11/17/95	BCS	RRC	BMD	INCCRP DCR 95-23 CA#11
14	11/11/95	BCL	MPW	RRB	INCCRP DCR 95-23 CA#8, 83
13	7/22/94	BCL	DWS	JEV	INCCRP DCR 94-14 CA#9
12	11/3/92	DWS	BCL	ES	INCCRP DCR 900003 CA#0
11	4-14-92	MRB	DWS	JEV	INCCRP M400 91-515 CA#0
10	4/5/91	GPM	FCB	IV	INCCRP DCR 86-239 CA#0
9	8/23/91	GPM	JM	WFD	INCCRP DCR 89-51 CA#0
8	12/27/89	MRB	APL	WFD	INCCRP DCR 87-135 CA-03 & M400 89-599 CA#0
7	10/14/88	MRB	GPM	RRC	INCCRP NCR 86-68 REV 1 ADD VALVE LEAKOFF SYMBOL TO CLARIFY CLASS BREAK FOR SB-V189 & V2 PER LE & C P & ID 862093.
6	10/20/87	GPM	BCL	PAG	REV'D PIPING PER ERECTION ISOMETRIC. GEN. NOTE W/PS NOTES, RE-NUMBERED NOTES, MOVED TYPICAL NOTES TO GEN. NOTES IN INCCRP 95-23 CA#8, 83. LETTER DESIGNATION FOR FLOW RESTRICTOR ADDED TO FLOW RESTRICTOR. INFLUP ASS'D. SYS'S, FLEX HOSES, REDUNDANT CL. BOUNDARY & NOTES.

REF. DRAWING NO.	REV	TITLE
9763-F-805011	18	CHEMICAL VOLUME CONTROL SYS. PURIFICATION P&ID
9763-F-805010	17	SAFETY INJECTION SYS. HIGH HEAD P&ID
9763-F-805009	12	SAFETY INJECTION SYS. ACCUMULATORS P&ID
9763-F-805008	15	RESIDUAL HEAT REMOVAL SYS. P&ID
9763-F-805007	13	REACTOR COOLANT SYS. PRESSURIZER P&ID
9763-F-805003	19	REACTOR COOLANT SYS. LOOP NO. 1 P&ID
9763-F-805002	12	REACTOR COOLANT SYS. REACTOR VESSEL P&ID

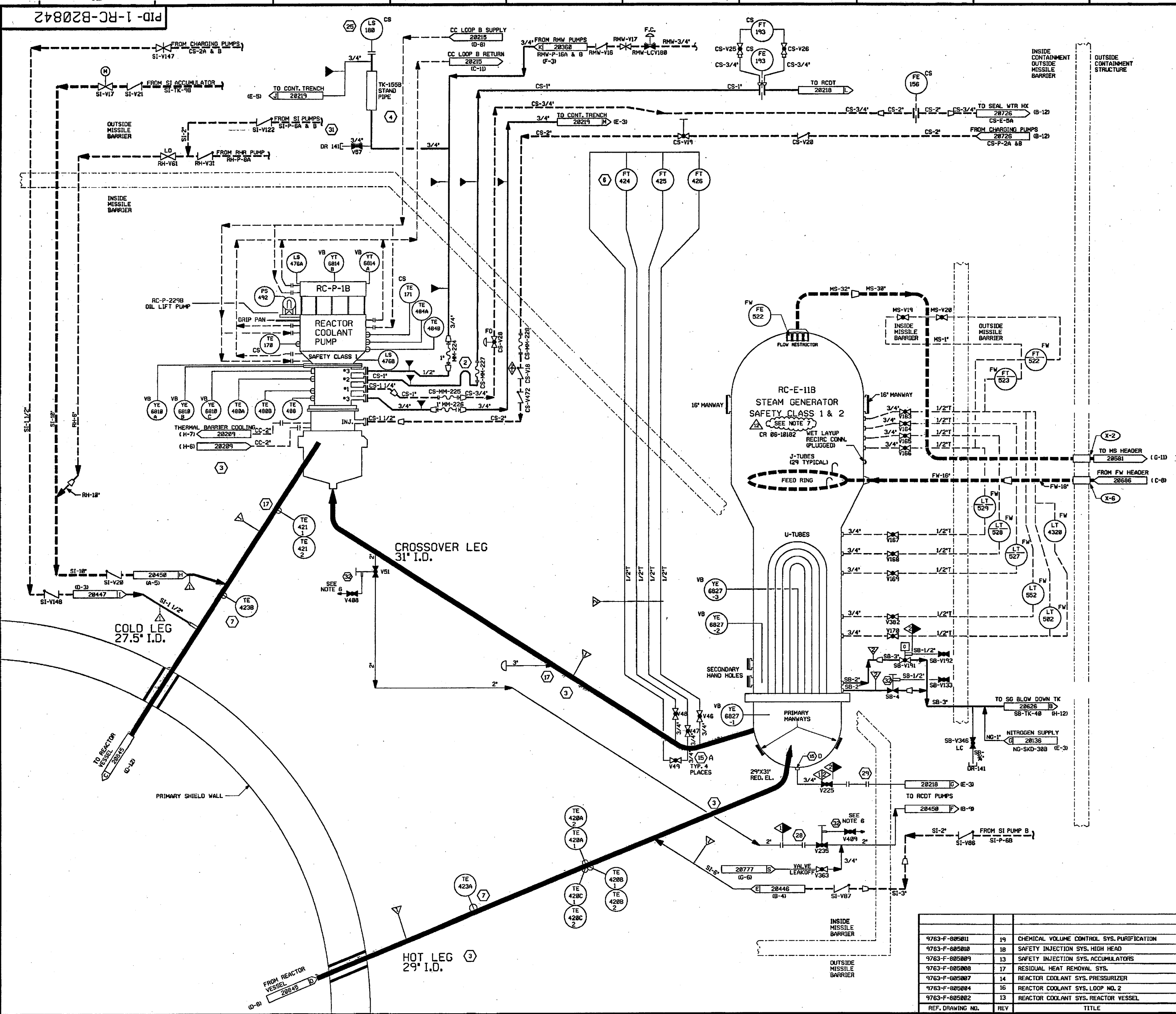
**FPL ENERGY**      Seabrook Station

REACTOR COOLANT SYSTEM  
LOOP NO. 1

PID-      1-RC-B20841

PD-1-RC-B20842

FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LEGEND 1 AND P&ID - LEGEND 2



- NOTES:
- INDICATES GENERAL NOTE NUMBER - REFER TO DRAWING 20848 FOR GENERAL NOTES.
  - WORK THIS DRAWING WITH DRAWINGS 20848, 20841 AND 20843 THROUGH 20846 AND 20849.
  - ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTATION HAVE SYSTEM PREFIX RC UNLESS OTHERWISE NOTED.
  - VENT, DRAIN & TEST CONN. CODE BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER 1-NHY-005111 UNLESS NOTED OTHERWISE.
  - INDICATES REVISION LEVEL.
  - VALVE STEM LEAK-OFF ISOLATION VALVES V488 & V489 ARE TO BE MAINTAINED CLOSED. VALVE STEM LEAK-OFF TO BE CONSIDERED INDENIABLE.
  - THE STEAM GENERATOR SHELL SIDE IS ANS SAFETY CLASS 2 AND WAS MANUFACTURED AS ASME CODE CLASS 1 UNLESS OTHERWISE NOTED. CR 06-10182

PORTIONS OF THIS DRAWING ARE  
**NUCLEAR SAFETY RELATED**

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
12	2-23-97	BCS	JWA	222	INCRP CR 06-10182 REV. 0
11	7/3/98	DWS	MPV	DJM	INCRP DCR 910946 DCM#08
10	7/22/94	BCL	DWS	JM+C	INCRP DCR 94-14 CA#0
9	11/3/92	DWS	BCL	ES	INCRP DCR 900093 CA#0
8	4/14/92	MRB	DWS	JEV	INCRP. MM00 91-515 CA#0
7	12/29/89	MRB	APL	WFD	INCRP. MM00 89-593 CA
6	10/14/88	MRB	GPH	RRC	INCRP. NCR 86-60 REV 1 ADDED VALVE LEAKOFF SYMBOL TO CLARIFY CLASS BREAK FOR SB-V191 & SB-V4 PER LEAC PAID 885904
5	12/15/87	GPH	DWS	PAG	REV'D PIPING PER ERECTION ISD. NOTES, RENUMBERED NOTES, TRANSFERRED TECH. NOTES TO GENERAL NOTES ON DWG RC-20848. ADDED GENERAL NOTE NO'S. DETAIL LETTER DESIGNATION FOR FLOW RESTRICTOR. CONT. COORD. DELETED. DUPLICATED PIPING & INFO. OF ASSOC. SYS'S. FLEX HOSES, REDUNDANT CL. BOUNDARY & NOTES.
4	3/18/87	GPH	DWS	VWS	DELETED Y1742A & B AND NOTE 5. ADDED Y6810A, B & C, Y16814A & B PER DRAWING 9763-H-806309
3	3/18/87	JDM	OPD	VWS	INCRP DCR 87-0074
2	10/17/86	PAL	BCL	RRC	ADDED 3/4" DIM TO ROOT VLV LINES. CORRECTED TUBING LINE SIZE TO 1/2" WAS 3/4". DELETED REF DWGS N/A REVISED TO CLARIFY DUPLICATIONS OF ASSOC. SYS. ADDED NCR 86/680A TO INCRP. ITEMS LIST. MS-V296 WAS V296 PER LEAC PAID ADDED REF LOCA COORD. RELOCATED MS-V19 & MS-V28 IN ERROR ADDED NOTE 12
1	3/21/86	TRK	DWS	WFD	ISSUED FOR OPERATIONS
0	7/16/85	GFS	TRK	WFD	ISSUED FOR FIELD VERIFICATION

REF. DRAWING NO.	REV	TITLE
9763-F-805011	19	CHEMICAL VOLUME CONTROL SYS. PURIFICATION
9763-F-805010	18	SAFETY INJECTION SYS. HIGH HEAD
9763-F-805009	13	SAFETY INJECTION SYS. ACCUMULATORS
9763-F-805008	17	RESIDUAL HEAT REMOVAL SYS.
9763-F-805007	14	REACTOR COOLANT SYS. PRESSURIZER
9763-F-805004	16	REACTOR COOLANT SYS. LOOP NO. 2
9763-F-805002	13	REACTOR COOLANT SYS. REACTOR VESSEL

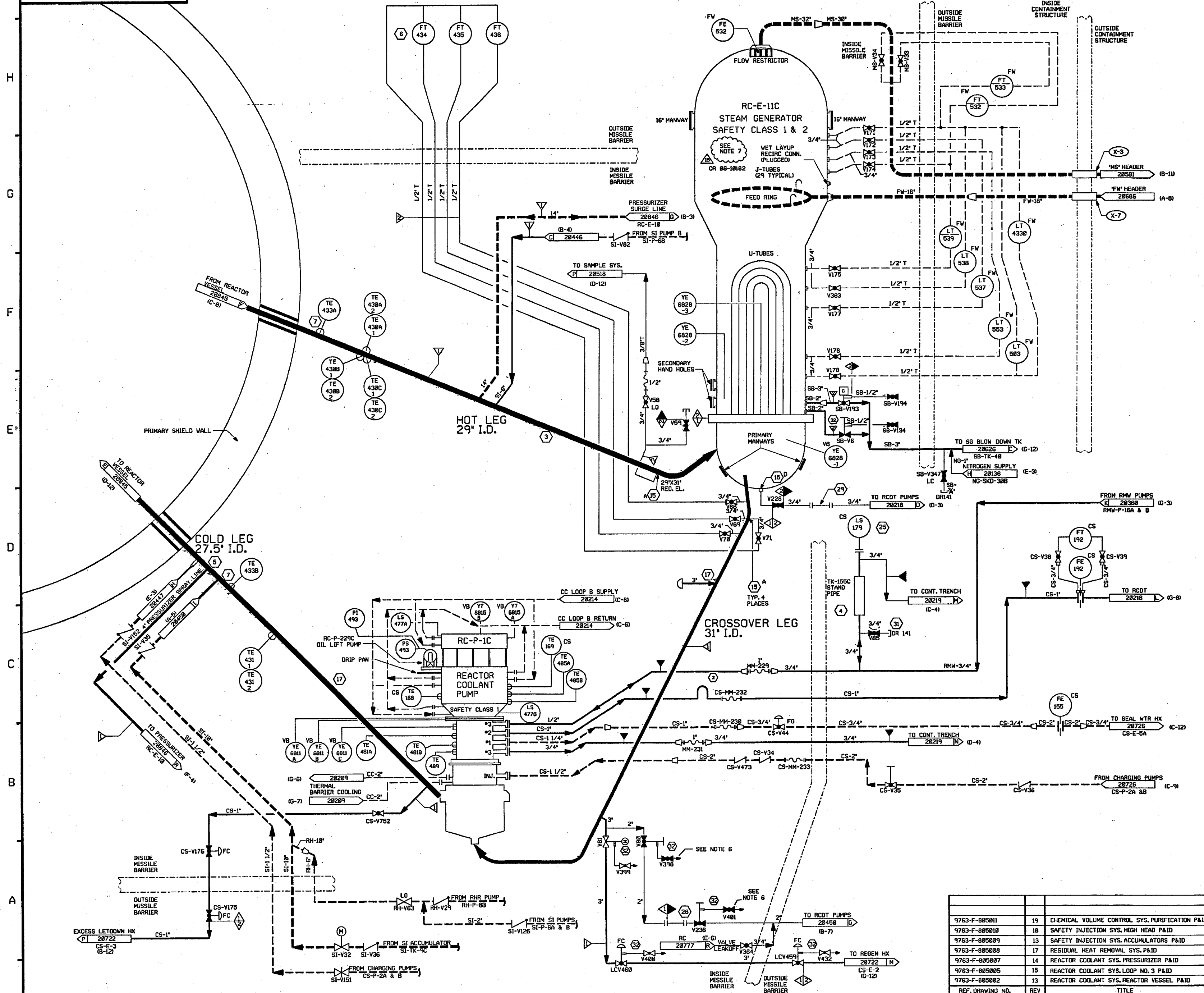
**FPL ENERGY** Seabrook Station

**REACTOR COOLANT SYSTEM LOOP NO. 2**

PID- 1-RC-B20842



PID-1-RC-B20843



FOR PAID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS  
REFER TO DRAWINGS P&ID - LEGEND 1 AND P&ID - LEGEND 2

- NOTES:
1. INDICATES GENERAL NOTE NUMBER - REFER TO DRAWING 20846 FOR GENERAL NOTES.
  2. WORK THIS DRAWING WITH DRAWINGS 20840, 20841, 20842, AND 20844 THROUGH 20846 AND 20848.
  3. ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTATION HAVE SYSTEM PREFIX RC UNLESS OTHERWISE NOTED.
  4. VENTS, DRAINS & TEST CONN. CODE BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER I-NHY-005111 UNLESS NOTED OTHERWISE.
  5. INDICATES REVISION LEVEL.
  6. VALVE STEM LEAK-OFF ISOLATION VALVES V392, V394, V395, V396, V398, V401 & V402 ARE TO BE MAINTAINED CLOSED. VALVE STEM LEAK-OFF TO BE CONSIDERED INOPERABLE.
  7. THE STEAM GENERATOR SHELL SIDE IS ANS SAFETY CLASS 2 AND WAS MANUFACTURED AS ASME CODE CLASS 1.  
CR 06-10182

PORTIONS OF THIS DRAWING ARE  
**NUCLEAR SAFETY RELATED**

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
15	2-23-97	BCS	JM	MB	INCRP. CR 06-10182 REV.0
14	7/3/90	MMW	DWS	DJM	INCRP. DCR 91-46 DCN 00
13	7/22/94	BCL	DWS	JMCC	INCRP. DCR 94-14 CA#0
12	11-3-92	DWS	BCL	ES	INCRP. DCR 90-3 CA#0 & 90-40 CA#0
11	4-21-92	MRB	BCL	JEV	INCRP. MMOD 91-515 CA#0
10	9/24/91	MRB	GPM	WFD	INCRP. MMOD 91-582 CA26
9	10/18/90	MRB	JM	RSG	RE-INCRP. ECA 05/103386B

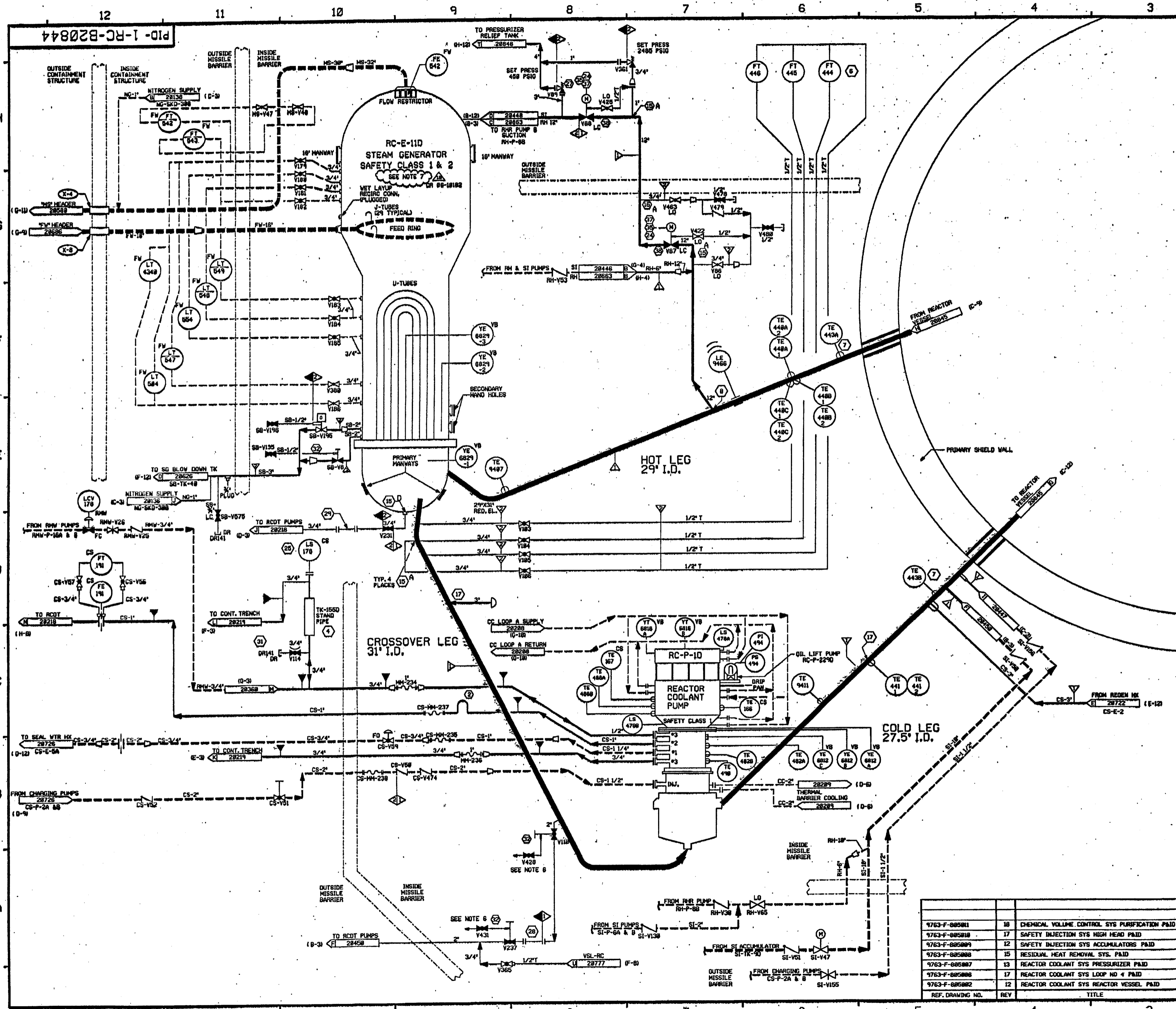
REF. DRAWING NO.	REV	TITLE
9763-F-085011	19	CHEMICAL VOLUME CONTROL SYS. PURIFICATION P&ID
9763-F-085010	18	SAFETY INJECTION SYS. HIGH HEAD P&ID
9763-F-085009	13	SAFETY INJECTION SYS. ACCUMULATORS P&ID
9763-F-085008	17	RESIDUAL HEAT REMOVAL SYS. P&ID
9763-F-085007	14	REACTOR COOLANT SYS. PRESSURIZER P&ID
9763-F-085005	15	REACTOR COOLANT SYS. LOOP NO. 3 P&ID
9763-F-085002	13	REACTOR COOLANT SYS. REACTOR VESSEL P&ID

**FPL ENERGY**

Seabrook Station

REACTOR COOLANT SYSTEM  
LOOP NO. 3

PID- 1-RC-B20843



FOR PAID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS PAID - LEGEND 1 AND PAID - LEGEND 2

- NOTES:
- INDICATES GENERAL NOTE NUMBER - REFER TO DRAWING 28040 FOR GENERAL NOTES.
  - NOTE THIS DRAWING WITH DRAWINGS 28040 THROUGH 28043 AND 28045 THROUGH 28048 & 28044.
  - ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTATION HAVE SYSTEM PREFIX RC UNLESS OTHERWISE NOTED.
  - VENT, DRAIN AND TEST CONN. CODE BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER 1-MHT-88533 UNLESS NOTED OTHERWISE.
  - △ - INDICATES REVISION LEVEL.
  - VALVE STEM LEAK-OFF ISOLATION VALVES V428 & V431 ARE TO BE MAINTAINED CLOSED. VALVE STEM LEAK-OFF TO BE CONSIDERED INOPERABLE.
  - THE STEAM GENERATOR SHELL SIDE IS AWS CLASS 2 AND WAS MANUFACTURED AS AWS CODE CLASS 1.  
CR 86-1882

PORTIONS OF THIS DRAWING ARE  
**NUCLEAR SAFETY RELATED**

REV	DATE	DSGN	CHGD	CE	DESCRIPTION
18	3-21-77	BCS	JTM	SES	INCRP CR 86-1882 REV. 8
17	1/2/76	MPW	DWS	DJM	INCRP DCR '81-46 DCM 88
16	8/28/76	MPW	BCS	VUS	INCRP MHD '80-558 DCM 81
15	1/22/76	MPW	BCS	DMD	INCRP DCR '85-23 CA* B, C, & D
14	7/22/74	BCL	DWS	JDOC	INCRP DCR '84824 CA* B
13	11/3/72	DMS	BCL	ES	INCRP DCR '80883 CA* B
12	4-28-72	MFB	DWS	RFB	INCRP MHD '81-515 CA8
11	9/21/70	MFB	GPM	WFD	INCRP MHD '81-582 CA28
10	9/5/70	GPM	FCB	IV	INCRP DCR 86-231 CAH

REF. DRAWING NO.	REV	TITLE
9763-F-885811	10	CHEMICAL VOLUME CONTROL SYS PURIFICATION PAID
9763-F-885818	17	SAFETY INJECTION SYS HIGH HEAD PAID
9763-F-885809	12	SAFETY INJECTION SYS ACCUMULATORS PAID
9763-F-885808	15	RESIDUAL HEAT REMOVAL SYS. PAID
9763-F-885807	13	REACTOR COOLANT SYS PRESSURIZER PAID
9763-F-885806	17	REACTOR COOLANT SYS LOOP NO 4 PAID
9763-F-885802	12	REACTOR COOLANT SYS REACTOR VESSEL PAID

**FPL ENERGY** Seabrook Station

**REACTOR COOLANT SYSTEM LOOP NO. 4**

PID- 1-RC-B20844

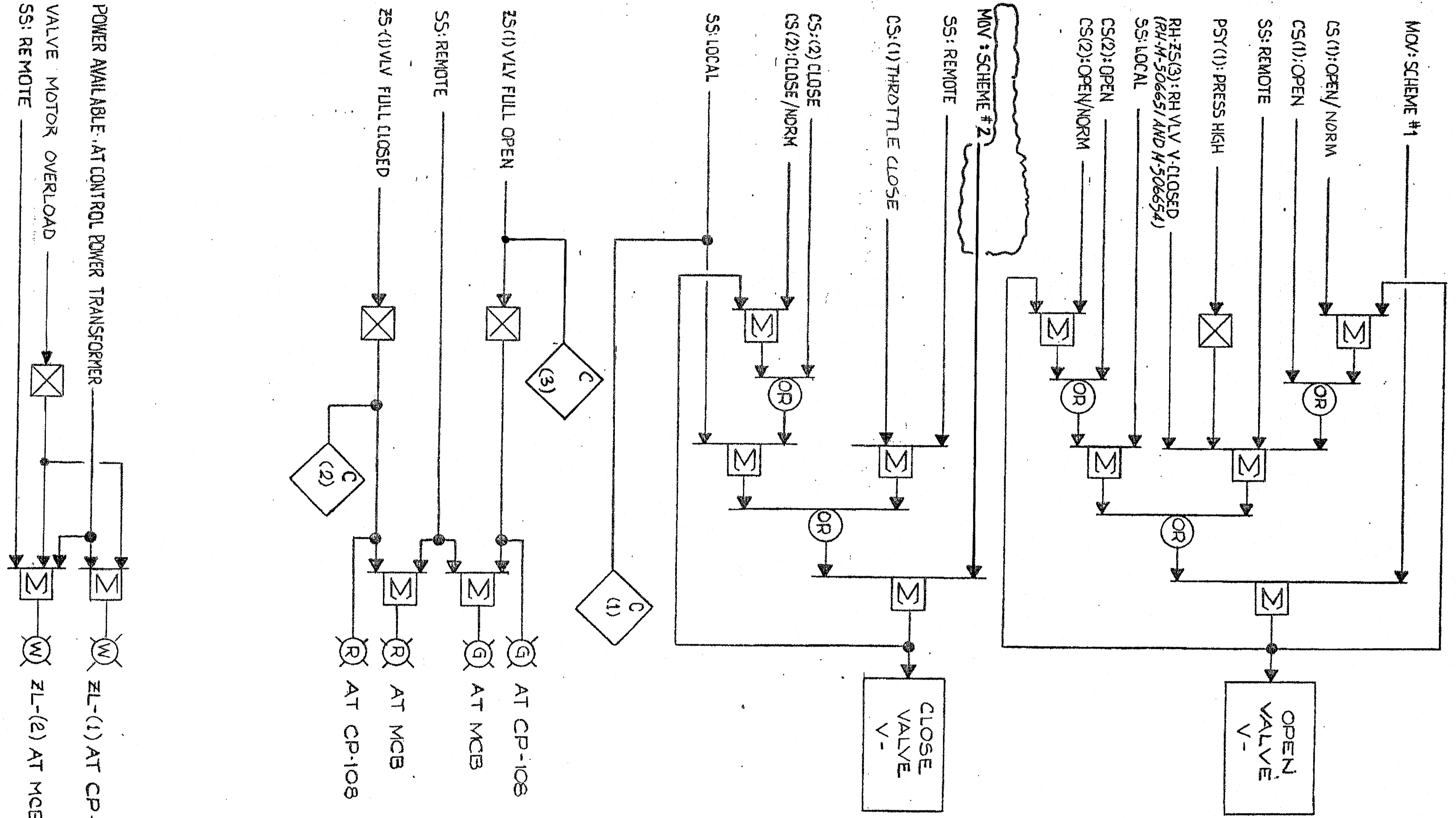












POWER AVAILABLE AT CONTROL POWER TRANSFORMER  
 VALVE MOTOR OVERLOAD  
 SS: REMOTE  
 ZL-(1) AT CP-108  
 ZL-(2) AT MCB-BF

SEE DWG. M-503748 FOR  
 TABULATION & NOTES

THIS DWG SUPERSEDES  
 9763-M-500010 SHT 82 REV-P1

**ISSUED-FOR-CONSTRUCTION**

REV	DATE	DRWN	CHKD	CE	LDE	DESCRIPTION
15	8/21/99	MRJ	JWB	RPN	RWM	INCORP DCR 97-21 DCN-15
14	9/23/98	JWB	MRB	JWR	CM	PART OF DCR 97-21 DCN-13
13	6/12/97	MRB	JWB	JPS	RWM	PARTIAL INCORP. DCR 97-21, DCN-0
12	6-5-97	MRB	JWB	JPS	JPS	INCORP. DCR 97-021, DCN-0
11	8/29/91	MRB	GPM	APL	RPN	INCORP: DCR 89-24, CA- DCR 86-239, CA-1
10	3/26/87	BCE	WK	TPN	RPN	ECA 05/118 202 B 9763-M-503747 AND SUPERCEDES UE&C DWG. 5

NUCLEAR SAFETY RELATED

RC-ISOLATION VALVES  
 LOGIC DIAGRAM

New Hampshire  
**Yankee**

Seabrook  
 Station

1-NHY- 503747 REV 15



DWG. TRANSFERRED TO CUSTODY OF NHY AT REV. 6  
 LTR. #A0729 DTD. 10-21-86

CONTINUED FROM DWG M-503747

TRAIN	VALVE No. V-	CS (1)		ZL (1)		PST (1)		RH-ZS (3)		ZS (1)	FP 30001 SHT-	COMPUTER ID/IRTLU			
		CS (2)	ZL (2)	SS	PST (2)	RH-V	ZS (1)	(1)	(2)			(3)			
B	V22	7302-1		7302-1	403A	2465-B	7302B				370	D7442	D4446	D7467	5
A	V23	7303-1		7303-1	405A	2465-A					369	D7440	D4447	D7469	7
A	V88	7311-1		7311-1	405A	2466-A	7311A				371	D7441	D4449	D7464	6
B	V87	7310-1		7310-1	403A	2466-B					372	D7443	D4448	D7468	6

THIS DWG SUPERSEDES 9763-M-500010 SH 83 REV P1

**ISSUED-FOR-CONSTRUCTION**

NUCLEAR SAFETY RELATED

RC-ISOLATION VALVES LOGIC DIAGRAM

New Hampshire Yankee  
Seabrook Station

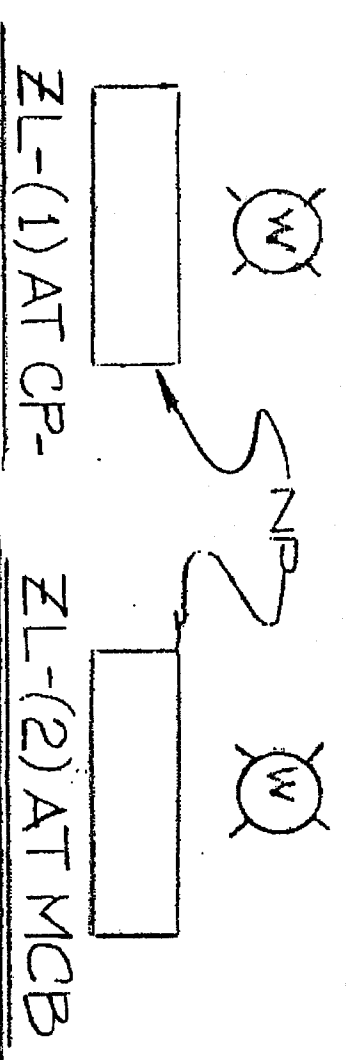
1-NHY- 503748 REV 10

**NOTES**

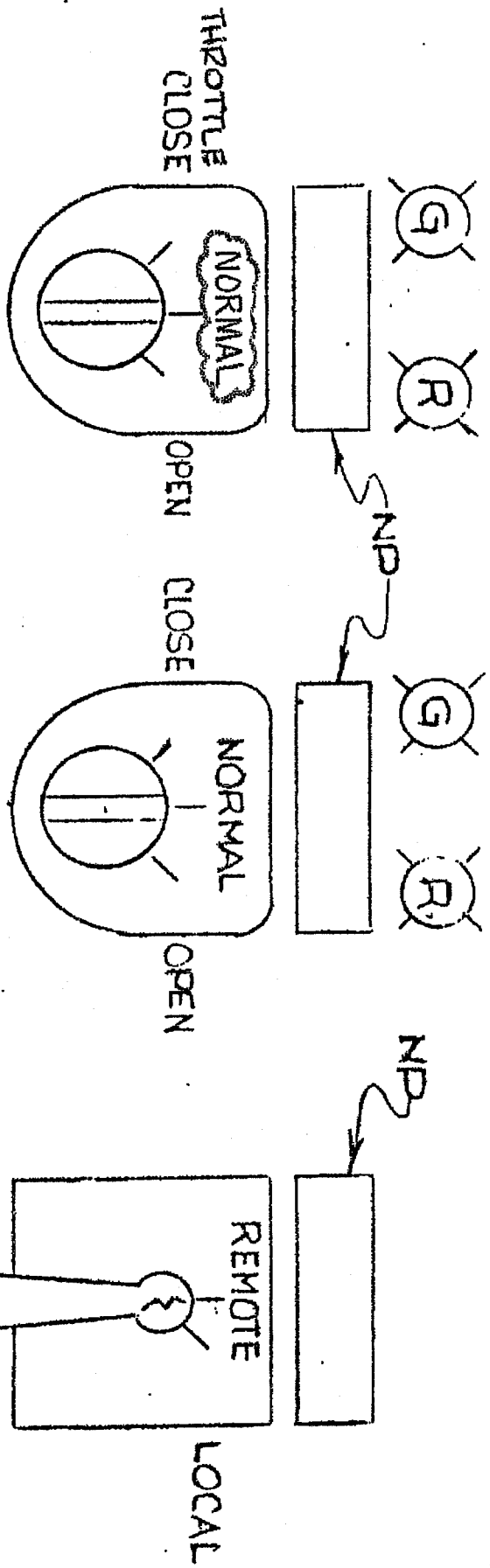
- FOR DESCRIPTION OF LOGIC SYMBOLS SEE M-503100.
- ZS-(1) LIMIT SWITCH ARE MOUNTED INSIDE MOTOR.

**REFERENCE DOCUMENTS**

- FP No (SEE TABLE)  
 SD-NAH/NCH-281  
 M-506635  
 M-506636  
 M-503747  
 RH-M-506651  
 RH-M-506654  
 C-509036



(PART OF THIS DWG. WAS PART OF M-503747)



THROTTLE CLOSE  
 NORMAL  
 OPEN  
 SPRING RETURN TO CENTER FRDM OPEN  
 CS(1) AT MCB-BF

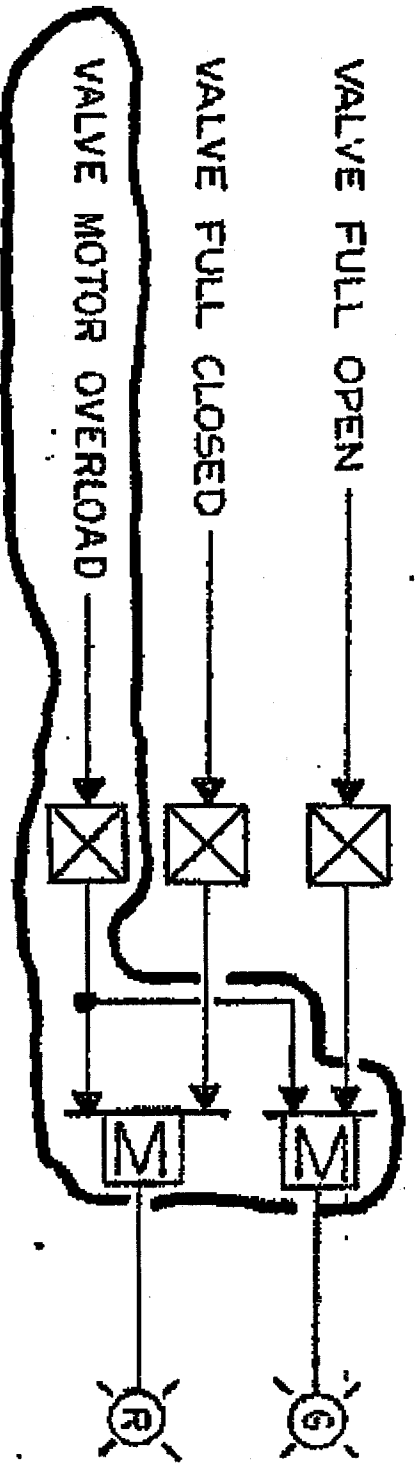
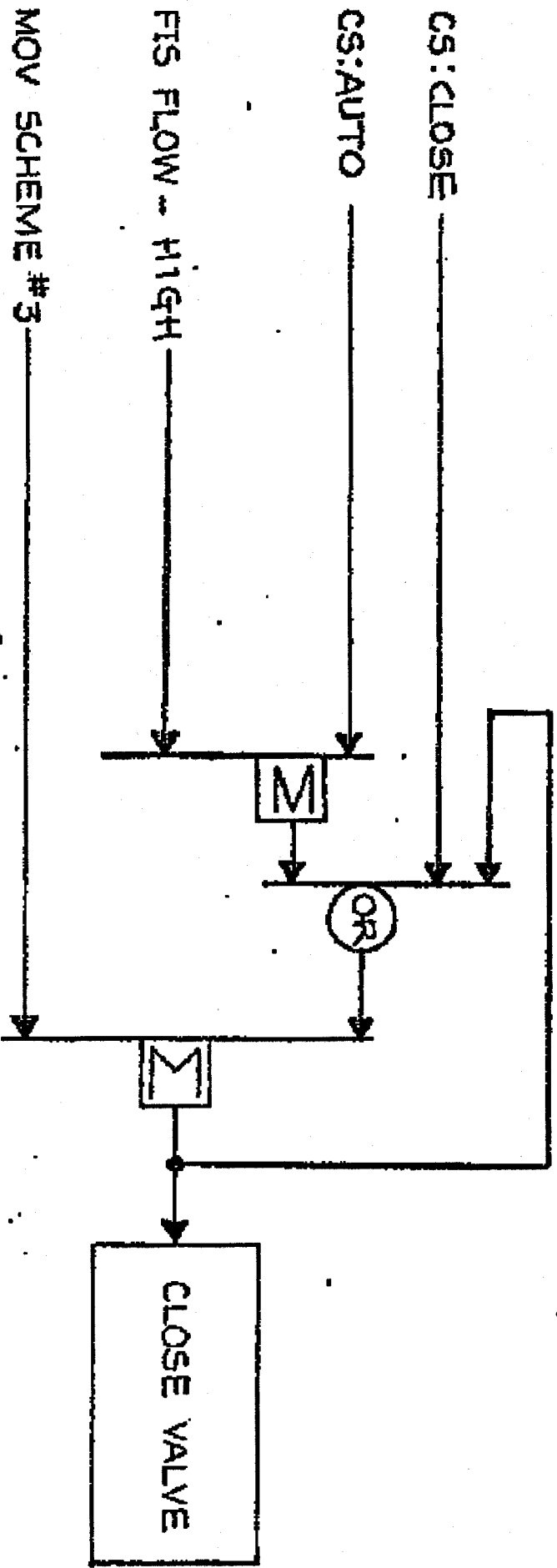
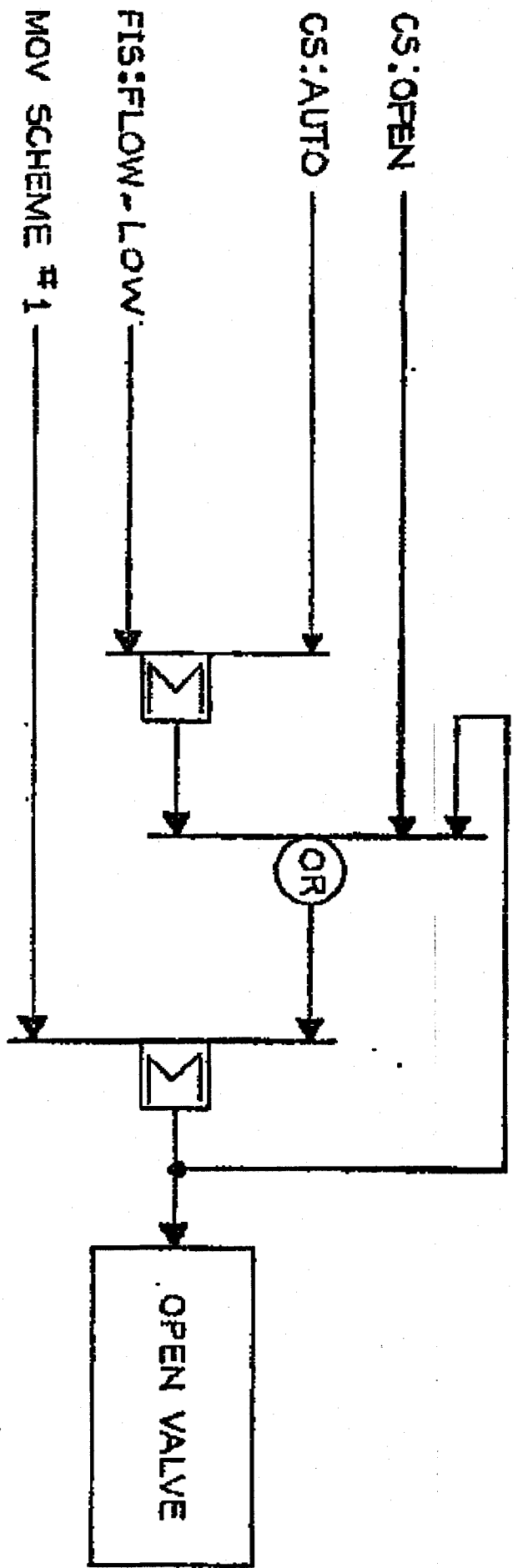
SPRING RETURN TO CENTER  
 NORMAL  
 OPEN  
 SPRING RETURN TO CENTER  
 CS(2) AT CP-

REMOTE LOCAL  
 MAINTAINED POSITION KEY LOCK & REMOVABLE IN ANY POSITION.  
 SS AT CP-

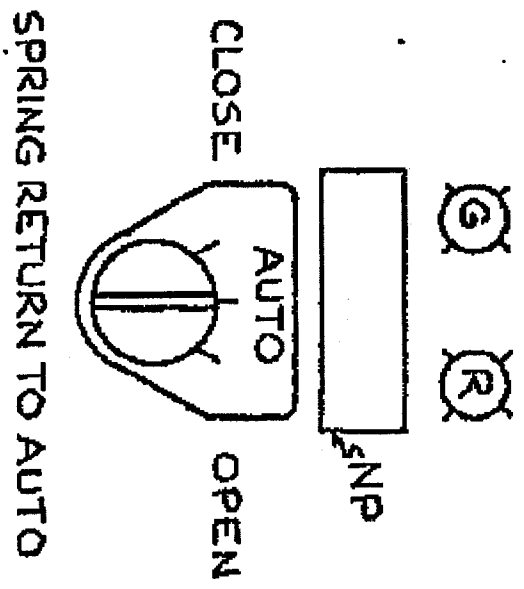
REV	DATE	DRWN	CHKD	CE	LDE	DESCRIPTION
10	6-5-91	MRB	JWB	JPS	JPS	INCRP. DCR 97-021, DCN #6
9	8/29/91	MLL	AMR	WHC	RPN	INCRP. DCR 86-239, CA-1
8	3/24/87	ACE	NK	TPN		INCRP. ECA 05/118202B 9763-M-503748 AND SUPERCEDES UE&C DWG.

REV	DATE	DESCRIPTION	PE	DWN BY	CHK BY	DES ENG	SDE
7	8/1/84	REV'D PER DCN 230016A & EDITORIAL CHANGES	RPH	JT	AC	JW	RPN

1-NHY- 503748 REV 10



TRAIN	RH PUMP RECIRC. VLV FCV-	CS-	FIS-	LOGIC REF. FP-30001 5H.
A	610	610	610	212
B	611	611	611	213



CS AT MCB

NUCLEAR SAFETY RELATED

RH PUMPS LOW FLOW RECIRC VLVS LOGIC DIAGRAM

New Hampshire  
**Yankee**  
 Seabrook  
 Station

1-NHY-503764

**ISSUED-FOR-CONSTRUCTION**

6	2-28-85	SB-16055	RPN	EM	HK	LRV	RPM	-	-
5	11-15-80	DCN 03-0884A		JAW	M	JFO	RPM	-	-
4	2-14-80	REV'D REFERENCE		II	WEM	JFB	TR	-	-
3	5-3-78	REV'D NOTE 1		ME	CE	JIC	AL	-	-
9	4/2/84	HP APL	CEM	JFB	DCR 86-403, CA-4, TRN 'E'				
8	3/2/84	HP APL	CEM	BER	DCR 86-403, CA-0, TRN 'A'				
7	3/2/87	RCE HK	TRN	NA	9763-M-503764				
REV	DATE	DRWN	CHKD	CE	LDE	DESCRIPTION			

NOTES  
 1-FOR DESCRIPTION OF LOGIC SYMBOLS SEE M-503100

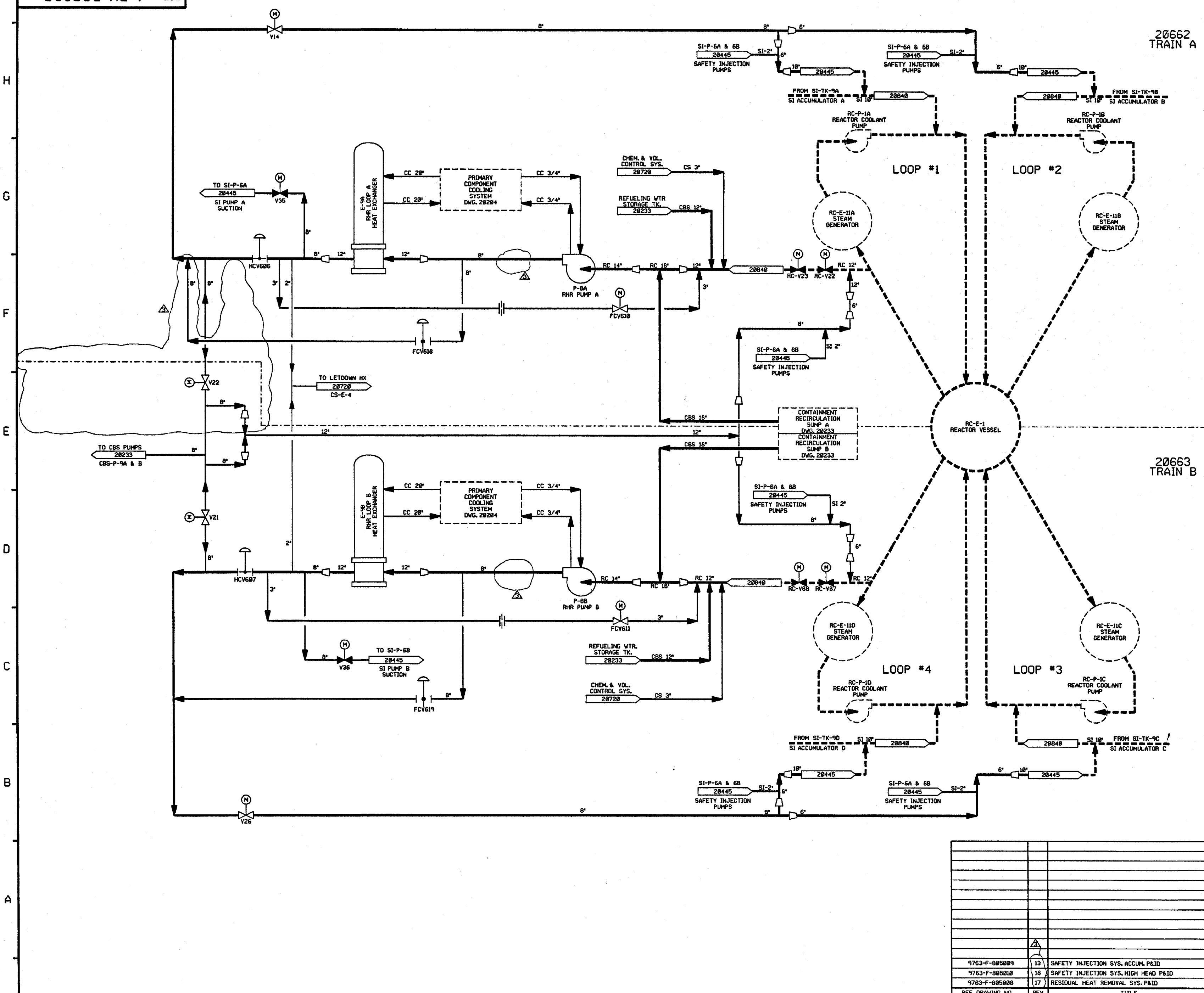
REFERENCE DOCUMENTS  
 9763-M-506650  
 9763-F-805008  
 9763-M-506653  
 SD-NAH/NCH-283

1-NHY-503764



PID-1-RH-B20660

INCOMPLETE ITEMS	ITEM NUMBER



20662 TRAIN A

20663 TRAIN B

- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 20662 & 20663.
  2. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX RH, UNLESS NOTED OTHERWISE.
  3.  $\Delta$  INDICATES REVISION LEVEL

PORTIONS OF THIS DRAWING ARE  
**NUCLEAR SAFETY RELATED**

REF. DRAWING NO.	REV	TITLE
9763-F-805009	13	SAFETY INJECTION SYS. ACCUM. PAID
9763-F-805010	18	SAFETY INJECTION SYS. HIGH HEAD PAID
9763-F-805008	17	RESIDUAL HEAT REMOVAL SYS. PAID

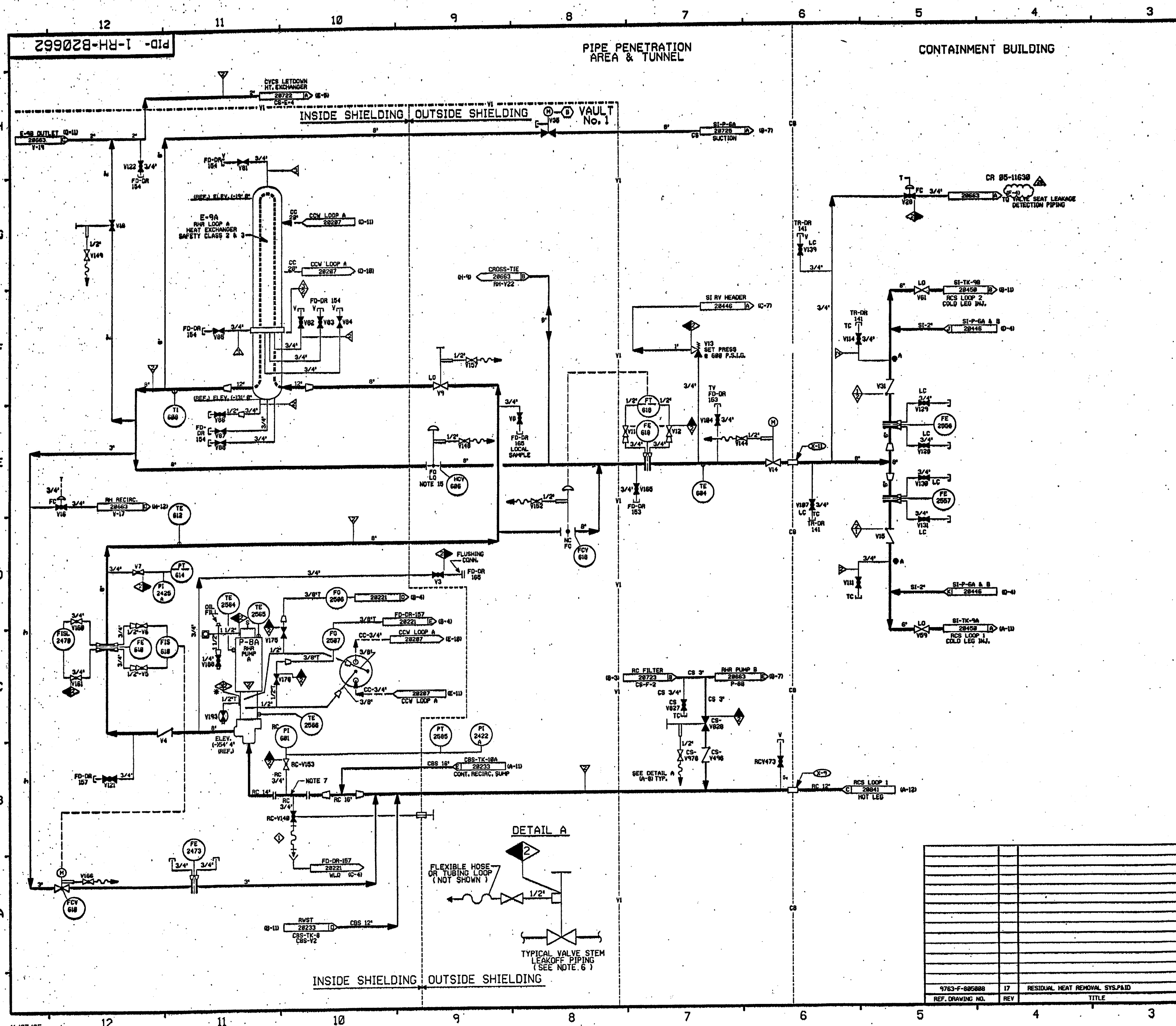
REV	DATE	DSGN	DRWN	CHKD	CE	LDE	DESCRIPTION
3	4/23/87	WDS	DWS	WRD	BCL	VALS	REVISED PER LATEST SYSTEM DWGS AND ADDED NOTE 3.
2	1/28/86	DEE	SKN	DWS	WFD	EWJ	ISSUED FOR OPERATIONS
1	4/19/85	DWS	GFS	TAK	PEF	WFD	GENERAL REVISION INCOMP. ECA 99/1977B & 99/1974A
0	11/07/84	DWS	HRD	RSL	PEF	PEF	ISSUED FOR FIELD VERIFICATION

PSNH PUBLIC SERVICE OF NEW HAMPSHIRE

SEABROOK STATION

**RESIDUAL HEAT REMOVAL SYS. OVERVIEW**

PID- 1-RH-B20660



FOR P&ID REFERENCE DRAWING SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS PAID - LEGEND 1 AND PAID - LEGEND 2  
 FURTHER ENGINEERING EVALUATION TO EFFECT DCR 94-1038

- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 28658 & 28663. PORTIONS OF THIS DRAWING ARE DUPLICATED ON DRAWINGS 28658 & 28663. SEE LEGEND 2 FOR SYSTEM FUNCTIONALITY.
  2. ALL LINES, VALVES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX UNLESS NOTED OTHERWISE.
  3. DELETED.
  4. @ INDICATES 3/8" FLOW RESTRICTOR INSTALLED. SEE APPLICABLE DETAIL ON DRAWING 1-RC-28046.
  5. DELETED.
  6. REFER TO DRAWING VSL-28774 FOR VALVE LEAKOFFS.
  7. PERMANENT SPOOL PIECE INSTALLATION SHOWN TEMP. STRAINER IS USED IN PLACE OF SPOOL PIECE DURING INITIAL FLUSHING OPERATION. STRAINER TO BE REMOVED BEFORE START-UP.
  8. INSTRUMENTATION:
    - (a) INTERLOCKED WITH SI-V9, SI-V8, SI-V5, DWS-28446, CBS-V6, DWS-28233, RC-V22, & RC-V23. DWS-28040
  9. VENTS, DRAINS, TEST COILS & ORIFICE TAP PIPING CODE BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER 1-RC-28046, UNLESS NOTED OTHERWISE.
  10. DELETED.
  11. DELETED.
  12. △ - INDICATES REVISION LEVEL.
  13. DELETED.
  14. DELETED.
  15. HANDJACK WINDWHEEL, LOCKED OPEN EXCEPT DURING WELDING.

PORTIONS OF THIS DRAWING ARE  
**NUCLEAR SAFETY RELATED**

REV	DATE	DSGN	CHKD	SES	DESCRIPTION
28	11/7/85	BCS	JL-L	W.S.D.	INCORP. DCR 85-11638
19	11/7/85	BCS	MPW	RRB	INCORP. DCR 85-11638
18	9/15/85	BCS	MRS	RHM	INCORP. DCR 85-11638
17	2/25/85	BCS	DWS	MAP	INCORP. DCR 85-11638
16	11/2/79	DWS	MPW	VWS	INCORP. DCR 85-11638
15	4/18/75	BCL	DWS	JMC	INCORP. DCR 85-11638
14	3/27/74	BCL	DWS	DMD	INCORP. DCR 85-11638
13	3/25/72	BCL	MRS	GRM	INCORP. DCR 85-11638
12	3/3/72	MRS	DWS	DHP	INCORP. DCR 85-11638
11	4/17/70	MRS	DWS	RRB	INCORP. DCR 85-11638
10	1/18/78	GPM	PAL	IRC	INCORP. DCR 87-274 CA B
9	9/6/69	MRS	APL	MFD	INCORP. DCR 87-274 CA B
8	2/2/69	GPM	MRS	GRM	INCORP. DCR 87-274 CA B
7	10/30/67	GPM	DWS	PAG	INCORP. DCR 86-551 & DCR 87-274 CA B. PIPING TO REFLECT AS INSTALLED. SEE DETAIL A FOR VALVE LEAKOFF PIPING. NEW FLOW RESTRICTOR INDICATOR SYM. SEE LEGEND 2 FOR VALVE LEAKOFF PIPING. CONT. DWS & MRS-1 CL BOUNDARY.

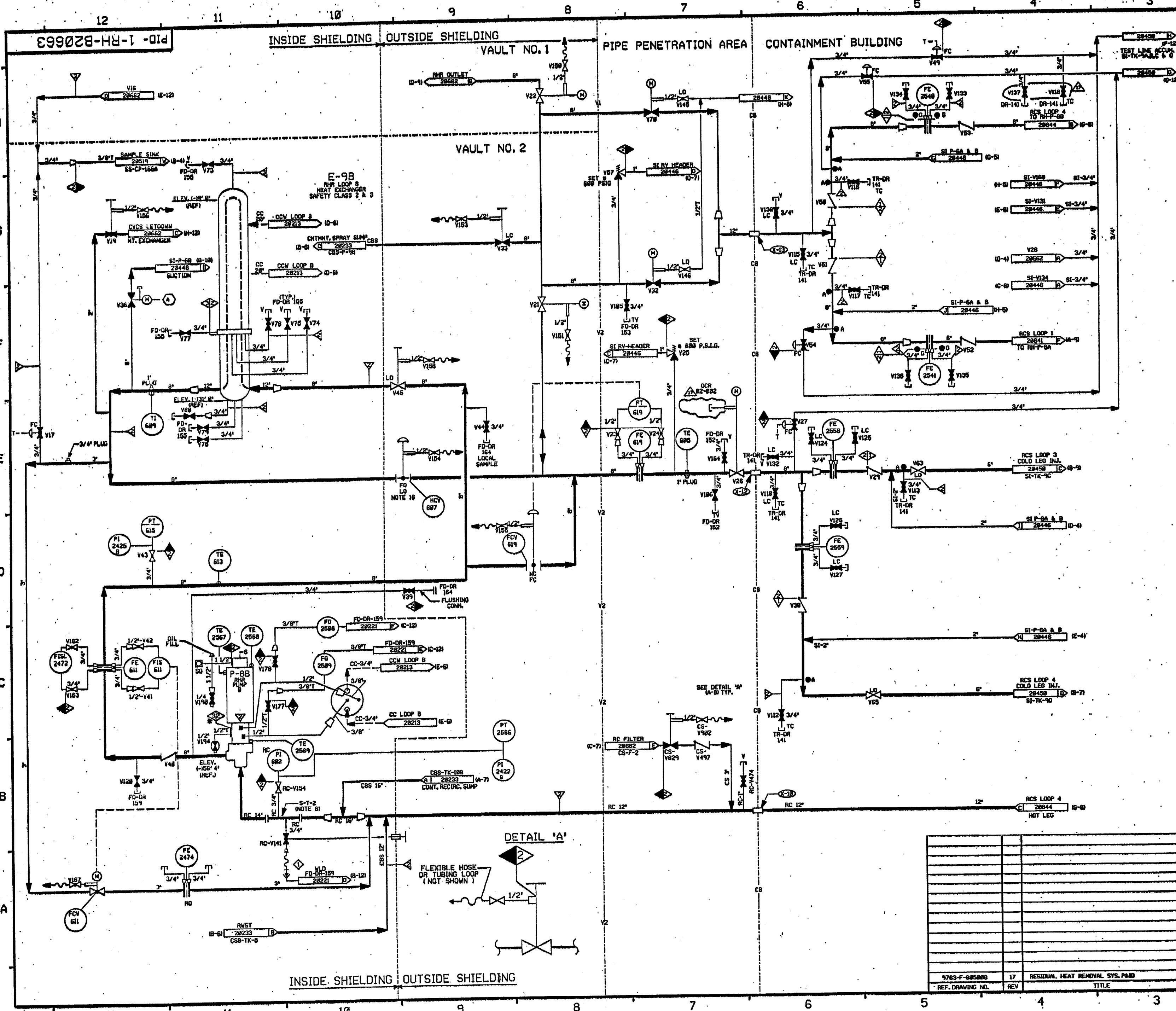
**FPL ENERGY** Seabrook Station

RESIDUAL HEAT REMOVAL SYS. TRAIN A  
 DETAIL

PID- 1-RH-B20662

9763-F-855888	17	RESIDUAL HEAT REMOVAL SYS-PAID
REF. DRAWING NO.	REV	TITLE





FOR PAID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS PAID - LEGEND 1 AND PAID - LEGEND 2  
 ◆ FURTHER ENGINEERING EVALUATION TO EFFECT ECA 99/125/13C

- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 28658 & 28652. PORTIONS OF THIS DRAWING ARE DUPLICATED ON DRAWING SI-28446, SI-28448 & SI-28449 DUE TO DUAL SYSTEM FUNCTIONS.
  2. ALL LINES, VALVES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX (SI) UNLESS NOTED OTHERWISE.
  3. ○ INDICATES 3/8" FLOW RESTRICTOR INSTALLED. SEE APPLICABLE DETAIL ON DRAWING RC-28848.
  4. DELETED.
  5. REFER TO DRAWING VSL-28774 FOR VALVE LEAKOFFS.
  6. PERMANENT SPOOL PIECE INSTALLATION SHOWN TEMP. STRAINER IS USED IN PLACE OF SPOOL PIECE DURING INITIAL FLUSHING OPERATION. STRAINER TO BE REMOVED BEFORE PLANT START-UP.
  7. INSTRUMENTATION:  
 (A) INTERLOCKED WITH SI-V98, SI-V96, SI-V126, 28446 CBS-VI-140, 28233 RC-V07, & RC-V08 CDS 28844.
  8. VENTS, DRAINS, TEST COILS & GRIPICE TAP PIPING CODE BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER 1-WHY-BEHOUL UNLESS NOTED OTHERWISE.
  - 9 - 11. DELETED
  12. △ INDICATES REVISION LEVEL.
  13. DELETED
  14. DELETED
  15. ◇ INDICATES OPEN ITEM NUMBER.
  16. HANDJACK HANDWHEEL LOCKED OPEN EXCEPT DURING MISCLOP.

PORTIONS OF THIS DRAWING ARE  
**NUCLEAR SAFETY RELATED**

REV	DATE	DSGN	CHKD	SES	DESCRIPTION
17	4-8-05	JH	Bas	RFB	INCORP DCR 82-882 DCR 88 & CLOSED DRAIN VALVES
16	8/22/88	BGS	DWS	MRB	INCORP DCR 99-8263 DCR-88
15	4/7/88	DWS	BGS	NPV	INCORP RC-19881 DCR-88
14	9/21/99	DWS	NPV	NPV	INCORP RC-19881 DCR-88
13	11/14/97	BGS	NPV	DND	PARTIAL INCORP RC-19881 DCR-88
12	11/22/95	BCL	NPV	DND	INCORP DCR 92-523 CA 1
11	4/18/95	BCL	DWS	NPV	INCORP DCR 89-52 CA 1
10	3/28/94	BCL	DWS	NPV	INCORP RC-19881 DCR-88
9	10/5/92	MRB	DWS	NPV	INCORP RC-19881 DCR-88
8	4/17/92	MRB	DWS	NPV	INCORP RC-19881 DCR-88
7	11/11/89	MRB	PAL	GRN	INCORP DCR 87-325 CA 1 & 89-13 CA 82, 88-32 CA 87, 126 CA 1 & 86-712 DRAWING EDITIONS
6	10/30/87	GPH	DWS	MRB	REWORKING TO REFLECT AS INSTALLED DRAIN VALVES TO CORRECT REWORKING SYSTEM FLOW RESTRICTOR INDICATOR SYMBOLS. THIS DRAWING IS A REF. DWS'S DESIGNATION. SEE NOTE 14. DELETED. ITEM 15. D. SUMMARY
5	11/28/88	MRJ	MRB	MRB	REVISED RC-19881 TO BE SHOWN OPEN PER LOOP DRAINING PROC. RC-19881
4	10/9/86	MRJ	MRB	MRB	ADDED ASME CLASS BREAKS AND PIPE LINE SIZES PER LEGAL PAID. ADDED DRAIN INFO PER ECA 99/125/13C. CONTINUATION FLAG REFS. ADDED. ADDED REF. DWS AND NOTE 14. DELETED. NOTE 13
3	6-12-86	JDM	DWS	MRB	INCORP RC-19881 DCR-88
2	1/21/86	DEE	DWS	END	REV. OF PREPARATIONS
1	4/19/85	DWS	TAK	MRB	UPDATED DESIGN & DWS REV. 8253 INCORP ECA 99/125/13C & 99/125/13A
0	11/19/84	DWS	RSJ	PEP	ISSUED FOR FIELD VERIFICATION

**FPL ENERGY** Seabrook Station

RESIDUAL HEAT REMOVAL SYS. TRAIN B CROSS-TIE DETAIL

PID- 1-RH-B20663

REV	DATE	DSGN	CHKD	SES	DESCRIPTION
17	4-8-05	JH	Bas	RFB	RESIDUAL HEAT REMOVAL SYS. PAID