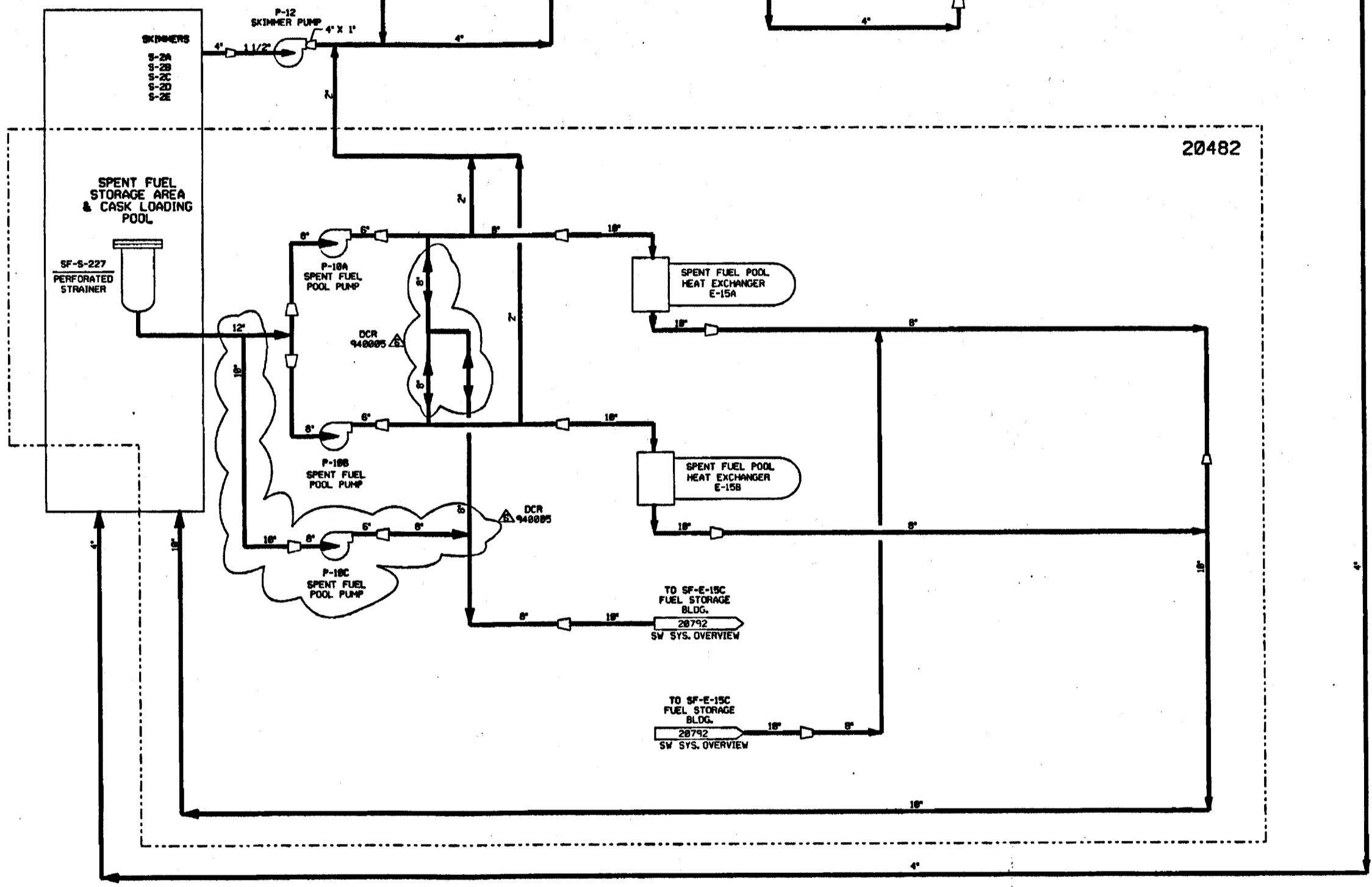
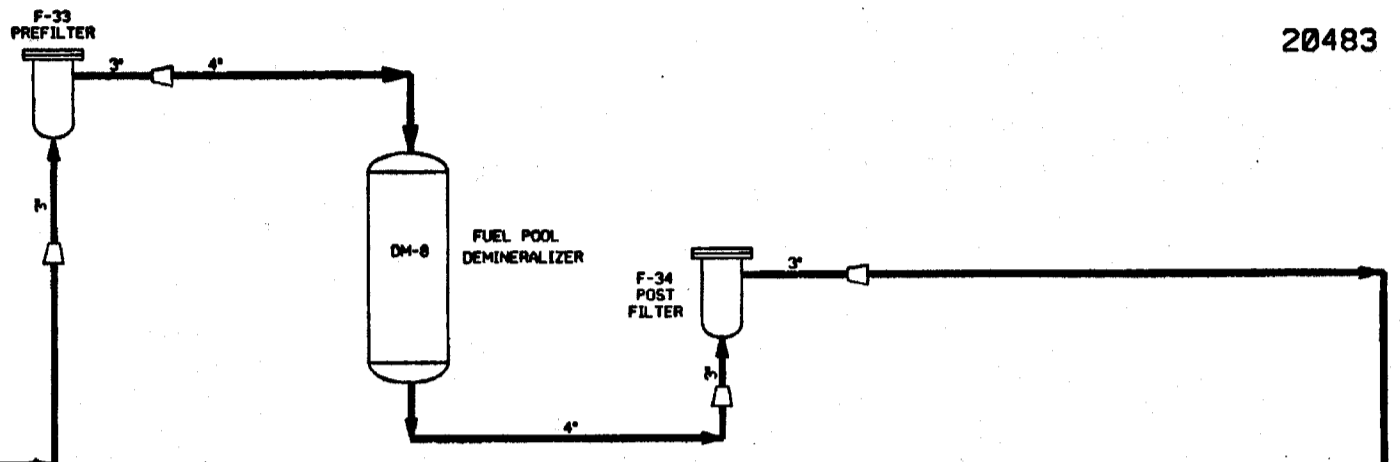
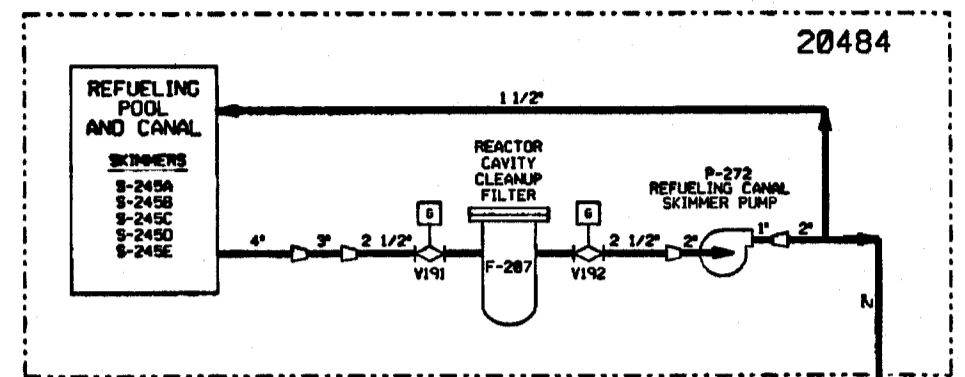


PID-1-SF-B20480

PROCESSED BY AM




NOTES:
 1. WORK THIS DRAWING WITH DRAWINGS 20482, 20483 & 20484.
 2. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX '1-SF' UNLESS OTHERWISE NOTED.
 3. Δ INDICATES REVISION LEVEL.

REV	DATE	DSGN	DRWN	CHKD	CDE	SES	DESCRIPTION
6	4/27/97	DWS		Bos	M/A	MSB	INCRP DCR 940005 CASH
5	12/23/91	MRB		RND	MPV	IRC	INCORPORATED DCR 98-42 CA32
4	9/14/91	GPM	JM	FCB	MRB	BCL	INCORPORATED DCR 98-42 CA31
3	8/8/91	MRB	JM	FCB	GPM	JEV	INCORPORATED DCR 98-47 CA04
2	1/28/87	MPV	OPD	PAL	BCL	IRC	REVISED PER LATEST SYSTEM DRAWINGS
1	2/18/85	TAK	MRB	TAK	DHF	WFD	CENTRAL REVISIONS & ISSUED FOR OPERATIONS
0	03/24/85	DWS	GJK	RSL	DHF	WFD	ISSUED FOR FIELD VERIFICATION

REF. DRAWING NO.	REV	TITLE
9763-F-805017	11	SPENT FUEL POOL COOLING & CLEAN-UP SYS. P&ID
9763-F-804988	5	REFUEL CAV CLEAN-UP SYS P & ID

North Atlantic Energy Service Corporation

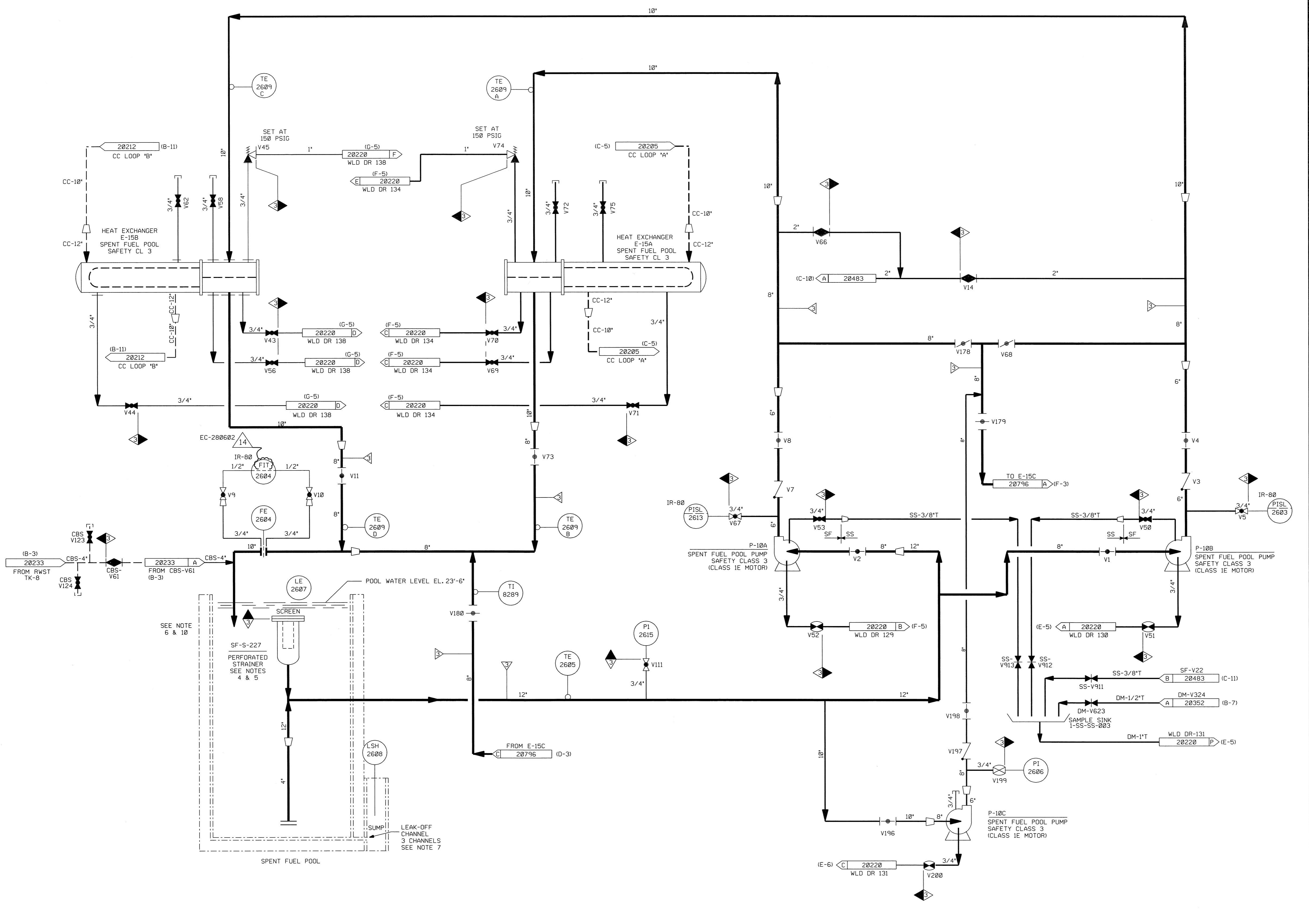


SPENT FUEL POOL COOLING AND CLEAN-UP SYSTEM OVERVIEW

PID- 1-SF-B20480

PID-1-SF-B20482

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



- NOTES:
1. WORK THIS DRAWING WITH 20460, 20483 & 20484.
 2. PIPING, VALVES, EQUIPMENT & INSTRUMENTS HAVE SYSTEM PREFIX 'SF', UNLESS OTHERWISE NOTED.
 3. VENTS, DRAINS AND TEST CONNECTIONS CODE BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER 1-NHY-805111 UNLESS NOTED OTHERWISE.
 4. PROVIDE BLIND FLANGE; NECESSARY ONLY WHEN DEWATERING POOL. PIPE IS SAFETY CLASS 3; STRAINER IS CLASS NNS.
 5. SUCTION IS LOCATED 2 FT BELOW THE NORMAL WATER LEVEL.
 6. RETURN TERMINATES 11 FT ABOVE SPENT FUEL ASSEMBLIES.
 7. PORTABLE PUMP IS USED TO REMOVE WATER AS REQUIRED FROM LEAK-OFF CHANNEL SUMP TO FLR DRAIN SUMP.
 8. Δ INDICATES REVISION LEVEL.
 9. DELETED
 10. EMERGENCY MAKE-UP TO SPENT FUEL POOL FROM THE CST USING TEMPORARY HOSE (CO-20426 G-7).

PORTIONS OF THIS DRAWING ARE NUCLEAR SAFETY RELATED

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
14	1/23/14	JM	EC	TJM	INCORP. EC-200602
13	8/30/99	BCS	MPW	MAP	INCORP. MSE 99-040 REV. 0,1,2
12	7/28/98	BCS	MPW	RLP	INCORP. DCR 97-14 DCN 01
11	8/18/97	MPW	BCS	VWS	INCORP. MMOD 96-550 DCN 01
10	5/23/97	DWS	MPW	PEB	FINAL INCORP DCR 940005 DCN#0 & 14
9	3/23/97	DWS	BCS	PEB	2ND PARTIAL INCORP DCR 940005 DCN#0 & 1
8	3/21/97	DWS	BCS	PEB	PARTIAL INCORP DCR 940005 DCN#0 & 1
7	12/23/91	RMC	MRB	RRC	INCORP. DCR 90-42 CA32
6	8/14/91	MRB	FCB	BCL	INCORP. DCR 90-042 CA0
5	5/21/91	MRB	JM	GRM	INCORP. DCR 87-294 CA0
4	9/8/88	MAP	GPM	RRC	REVISED; NOTE 3 AND 4 ADDED; OUT OF FUNCTION INFORMATION ON CBS SYSTEM FOR CLARIFICATION & REFERENCE. DELETED: NNS-1 CL BOUNDARY
3	11/20/86	MPW	WRD	RRC	ADDED CONT. REF. LOCKS, SPEC. BREAKS DELETED NOTE 4; REVISED VALVE NO'S PER ERECTION ISO.
2	6/16/86	JDM	DWS	RRC	REVISE & UPDATE CONTINUATIONS
1	12/10/85	DWS	TAK	WFD	ADDED CODE BREAKS AND CORRECTED VALVE POSITIONS PER DWG CHANGE SHT
0	3/29/85	DWS	RSL	WFD	ISSUED FOR FIELD VERIFICATION

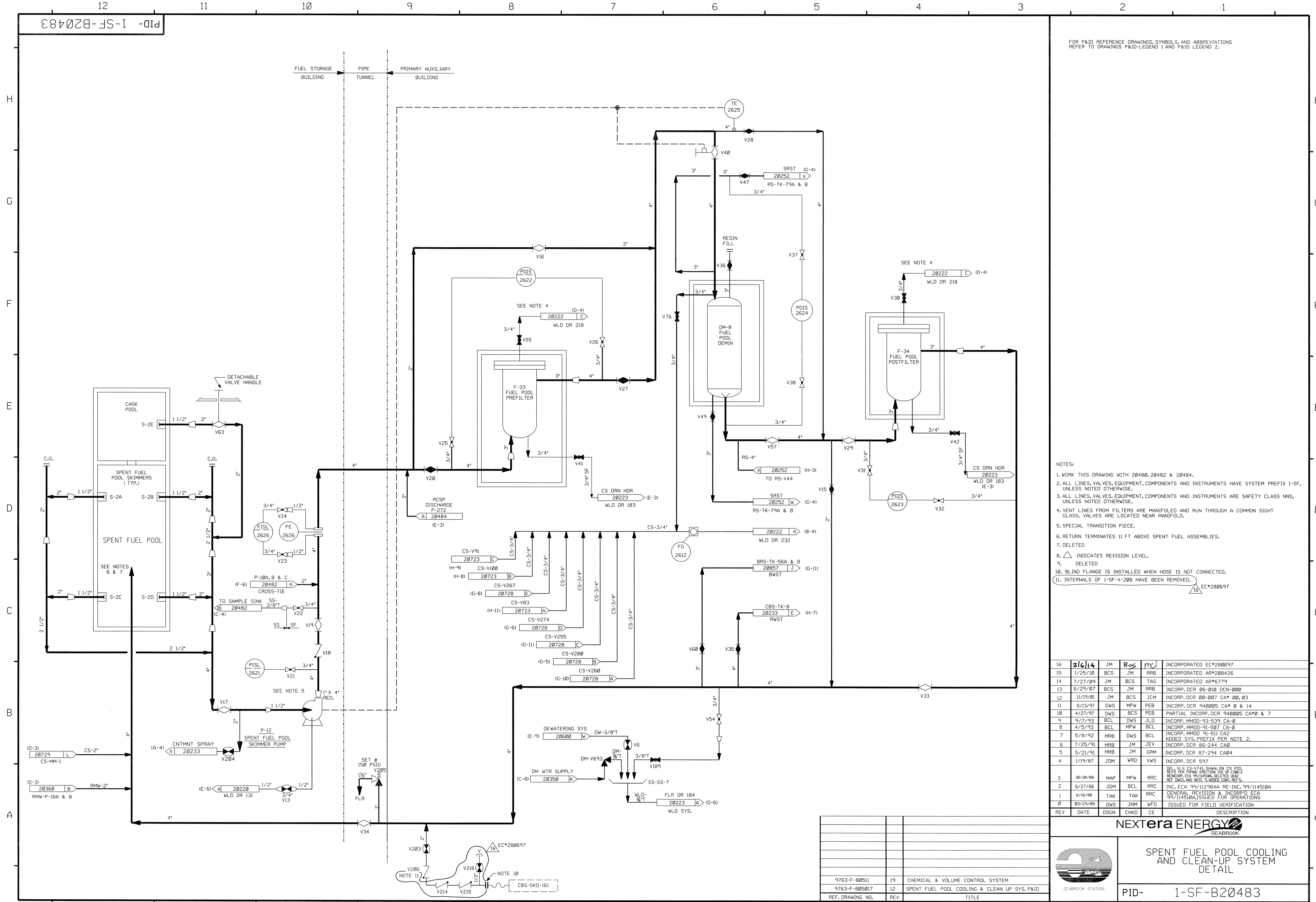
NEXTERA ENERGY
SEABROOK

SPENT FUEL POOL COOLING AND CLEAN-UP SYSTEM
DETAIL

PID- 1-SF-B20482

REF. DRAWING NO.	REV	TITLE
9763-F-805017	12	SPENT FUEL POOL COOLING & CLEAN UP SYS P & ID

PID-1-SF-B20483

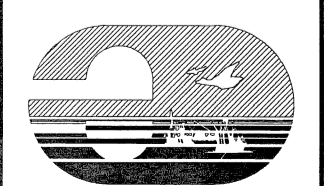


FOR P&ID REFERENCE DRAWINGS, SYMBOLS, AND ABBREVIATIONS
REFER TO DRAWINGS P&ID-LEGEND 1 AND P&ID LEGEND 2.

- NOTES:
1. WORK THIS DRAWING WITH 20480, 20482 & 20484.
 2. ALL LINES, VALVES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX 1-SF, UNLESS NOTED OTHERWISE.
 3. ALL LINES, VALVES, EQUIPMENT, COMPONENTS AND INSTRUMENTS ARE SAFETY CLASS NNS, UNLESS NOTED OTHERWISE.
 4. VENT LINES FROM FILTERS ARE MANIFOLDED AND RUN THROUGH A COMMON SIGHT GLASS. VALVES ARE LOCATED NEAR MANIFOLD.
 5. SPECIAL TRANSITION PIECE.
 6. RETURN TERMINATES 11 FT ABOVE SPENT FUEL ASSEMBLIES.
 7. DELETED
 8. Δ INDICATES REVISION LEVEL.
 9. \square DELETED
 10. BLIND FLANGE IS INSTALLED WHEN HOSE IS NOT CONNECTED.
 11. INTERNALS OF 1-SF-V-206 HAVE BEEN REMOVED.

16	2/6/14	JM	BCS	MC	INCORPORATED EC*200697
15	1/25/10	BCS	JM	RRB	INCORPORATED AR*200426
14	7/27/09	JM	BCS	TAS	INCORPORATED AR*6779
13	6/29/07	BCS	JM	RRB	INCORP. DCR 06-010 DCN-000
12	11/19/01	JM	BCS	JCM	INCORP. DCR 00-007 CA* 00.03
11	5/13/97	DWS	MPW	PEB	INCORP. DCR 940005 CA* 0 & 14
10	4/27/97	DWS	BCS	PEB	PARTIAL INCORP. DCR 940005 CA* 0 & 7
9	9/7/93	BCL	DWS	JLD	INCORP. MMOD-93-539 CA-0
8	4/5/93	BCL	MPW	BCL	INCORP. MMOD-91-507 CA-0
7	5/8/92	MRB	DWS	BCL	INCORP. MMOD 91-511 CA2
6	7/25/91	MRB	JM	JEV	ADDED SYS. PREFIX PER NOTE 2.
5	5/21/91	MRB	JM	GRM	INCORP. DCR 86-244 CA0
4	1/19/87	JDM	WRD	VWS	INCORP. DCR 87-294 CA04
3	10/10/86	MAP	MPW	RRB	DEL. VLV. CS-V741 SHWN. ON CS PID. REV. 3 PER PIPING SECTION 100-2-100-2. INCORP. ECA 99/114510A DELETED VLV. REF. ENCL. AND NOTE 3. 4/20/02 DOWNSHIPS.
2	6/27/86	JDM	BCL	RRB	INC. ECA 99/112984A RE-INC. 99/114510A
1	6/16/86	TAK	TAK	RRB	GENERAL REVISION & INCORP'D ECA 99/114510A. ISSUED FOR OPERATIONS
0	03/29/85	DWS	JNM	WFD	ISSUED FOR FIELD VERIFICATION
REV	DATE	DSGN	CHKD	CE	DESCRIPTION

NEXTERA ENERGY
SEABROOK



SPENT FUEL POOL COOLING AND CLEAN-UP SYSTEM
DETAIL

PID-1-SF-B20483

9763-F-80511	19	CHEMICAL & VOLUME CONTROL SYSTEM
9763-F-805017	12	SPENT FUEL POOL COOLING & CLEAN UP SYS. P&ID
REF. DRAWING NO.	REV	TITLE

NOTES (CONTINUED)
 5. MODIFY SHEAVE ASSY. (IT.06) MTG PLATE (IT.48) PER ECA 99/11271B & SHAFT ASSY (IT.02) PER ECA 08/802627A - FOR TRACK (IT.05) SEE ECA 08/110160B FOR MTR BASE PLATE (IT.07) & SHEAVE ASSY (IT.06) SEE DCR 87-224, CA-2.

BILL OF MATERIAL		REV	
ITEM #	DESCRIPTION	QTY	REV
01	CARRIAGE ASSY	1	
02	SHAFT ASSY	1	
03	MOUNTING R ASSY	1	
04	MOUNTING R ASSY	1	
05	TRACK ASSY	1	
06	SHEAVE ASSY	1	
07	ADAPTER R ASSY	1	
08	LINK	1	
09	SHIM	1	
10	SHIM	1	
11	WHEEL	1	
12	BUSHING	1	
13	HEAVY HEX BOLT .750-10 X 2.75 LG 6A193 GR BRM	1	
14	STOP BAR	1	
15	CONNECTOR A240-TYPE 304 SST	1	
16	SHIM	1	
17	LOCKING TAB	1	
18	TURNBUCKLE .625 LG JAW W M-16 ST 18-8 SST	1	
19	ROLLER	1	
20	BRACKET	1	
21	SHAFT	1	
22	NAMEPLATE GxG	1	
23	LOCTITE # 271-250 CC	1	
24	LOCTITE PRIMER-T 6 OZ SPRAY	1	
25	TURNBUCKLE .625 LG JAW W M-16 ST 18-8 SST	1	
26	WINCH	1	
27	TENSIONER # 3E-15	1	
28	LIMIT SWITCH P/N RRLTR	1	
29	COLLAR STD 1-PIECE LOCK LD.	1	
30	RETAINING RING # H5100-100 PH 15-7MO	1	
31	HEAVY HEX NUT .750-10 SA504 GR 630	1	
32	SCREW HEX M 8 X 1.25 X 50MM LG (METRIC) 18-8 SST	1	
33	SCREW .375-16 X 1.50 LG HEX HD	1	
34	SCREW .500-13 X 1.50 LG SOC HD CAP	1	
35	SCREW .500-13 X 1.50 LG SOC HD CAP	1	
36	SCREW .190-26 X 1.75 LG SOC HD CAP	1	
37	SHDR BOLT .500 DIA X 1.75 LG SHDR SOC HD CAP	1	
38	LOCK NUT FLEXLOC .500-13 SOFAP-818 HEX	1	
39	LOCK NUT FLEXLOC .375-16 SOFAP-616 HEX	1	
40	LOCK NUT FLEXLOC .190-26 SOFAP-1024 HEX	1	
41	NUT .175-10 HEX HD	1	
42	WASHER STD 1.25 DIA X .125 THK .052 THK FLAT	1	
43	LOCK WASHER .750 LG	1	
44	WASHER STD .500 FLAT	1	
45	WASHER STD .375 FLAT	1	
46	WASHER STD .190 FLAT	1	
47	SAFETY WIRE .03 DIA	1	
48	MOUNTING R SEE NOTE 5	1	
49	SPACER	1	
50	COTTER PIN .127 X 2.50 LG	1	

ISSUE NO.	DATE	DESCRIPTION
7	10/16/89	ADDED NOTE 5 REF. ECA'S 08/110160B & 802627A & ECA 99/11271B

- A- SUPPLIED BY W - STAMP PER P.O. INSTRUCTIONS
- B- 80 FR LOCTITE CORP - NEWINGTON, CT
- C- 80 FR MERRILL BROS - MASPETH, NY
- D- SUPPLIED BY WESTINGHOUSE (E-SPEC NO. 955396 & 953475)
- E- 80 FR LOVEJOY/ROSTA - DOWNERS GROVE, IL
- F- 80 FR WESTINGHOUSE ELECTRIC SUPPLY CO. PITTSBURGH, PA.
- G- 80 FR MAC-IT CO - LANCASTER, PA
- H- 80 FR WALDES KOHNOOR INC - LONG ISLAND, NY
- J- 80 FR STANDARD PRESSED STEEL CORP - JENKINTOWN, PA
- K- FURNISHED BY UNITED ENGINEERS AND CONST. CO.

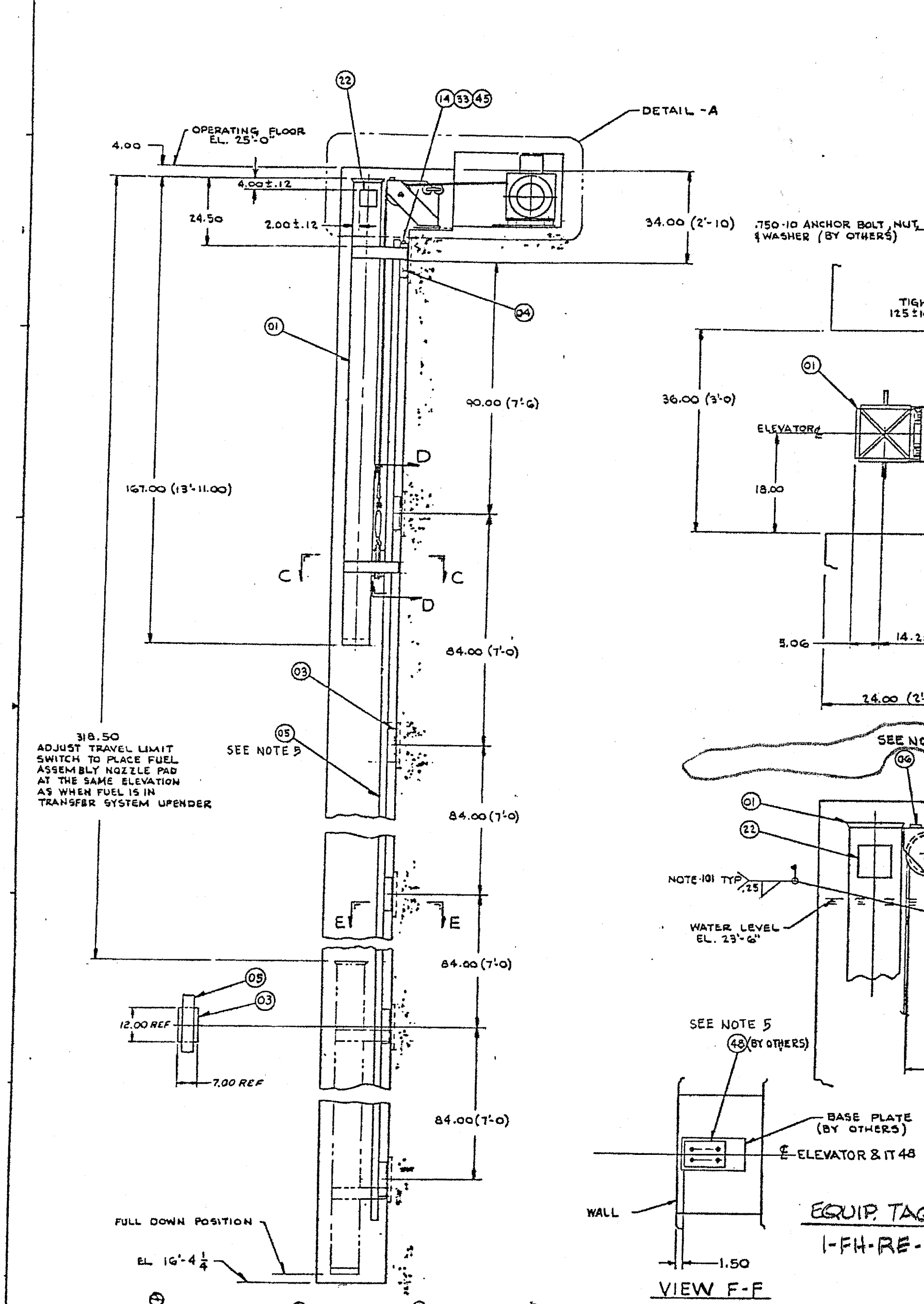
- NOTES:
1. ALL UNTOLERANCED DIMENSIONS ARE REFERENCE DIMENSIONS
 2. ALL SCREWS TO BE LOCKWIRED PER W PS 82310 GA. DRILL HEADS OF SCREWS .04/.09 DIA FOR SAFETY WIRE (ITEM 47)
 3. WELD PER W PS 82121 RP OR 82127 KH. VISUALLY INSPECT AT 5X MAGNIFICATION. NO CRACKS PERMITTED
 4. INSTALL BUSHINGS (ITEMS 12 & 13) PER ME-RE-0087 (75)
- FIELD NOTES: 101. WELD PER W PS 82121 RP. VISUALLY INSPECT AT 5X MAGNIFICATION. NO CRACKS PERMITTED
102. AFTER FIELD INSTALLATION OF ELEVATOR (WINCH), LOOSEN NUTS (ITEM 40) & MOVE LIMIT SWITCH (ITEM 28) TOWARD TENSIONER (ITEM 27) UNTIL SWITCH JUST ACTUATES (WITH ELEVATOR BASKET SUPPORTED BY CABLES). TIGHTEN NUTS. PLACE A SUPPORT BLOCK ON THE FLOOR BELOW THE ELEVATOR TO SUPPORT THE BASKET ABOVE THE FULL DOWN POSITION. LOWER THE ELEVATOR TO THE SUPPORT & CHECK THAT THE DRIVE STOPS WHEN CABLES BECOME SLACK.
103. ON ALL FASTENERS WITHOUT LOCKING DEVICES REMOVE THREAD LUBRICANT AND COAT THREADS WITH LOCTITE (ITEM 24) AND LOCTITE 271 (ITEM 23) BEFORE APPLYING REQUIRED TORQUE

- SHOP TESTING NOTES: 1.1 ASSEMBLE MOUNTING PLATES (ITEMS 03 & 04) TO TRACK ASSEMBLY (ITEM 05) & PLACE COMPLETE ASSEMBLY ON A FLAT SURFACE, WITH THE TRACK UP, SUCH THAT THE TRACK IS STRAIGHT IN BOTH PLANES WITHIN ±.25 INCH
- 1.2 PLACE THE CARRIAGE ASSEMBLY ON THE TRACK AND ADJUST THE GUIDE ROLLERS FOR MINIMUM CLEARANCE IN BOTH DIRECTIONS
- 1.3 MANUALLY MOVE THE CARRIAGE ASSEMBLY THE LENGTH OF THE TRACKS TO INSURE NO BINDING OCCURS. RE-ADJUST GUIDE ROLLERS IF NECESSARY
- REFERENCE: UNITED ENGINEERS DRAWINGS 9763-F-102200 AND 102201 FOR EMBEDDED BASE PLATE DETAILS AND BUILDING DETAILS FOR ELEVATOR AREA
- PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
 PLANT: SEABROOK STATION
 UNITS: 1 & 2 SPIN: FHSTFR
 STATUS: APPROVED FIELD MODIFICATION
 CERTIFICATION LTR. NO. NAH-U-3535
 AUTHORITY: D. R. GREGG
 ENGR. LTR. NO. EP/SA-50803

PRO. N55 185
 FOREIGN PRINT NO. 55944-09 DATE 7-16-91

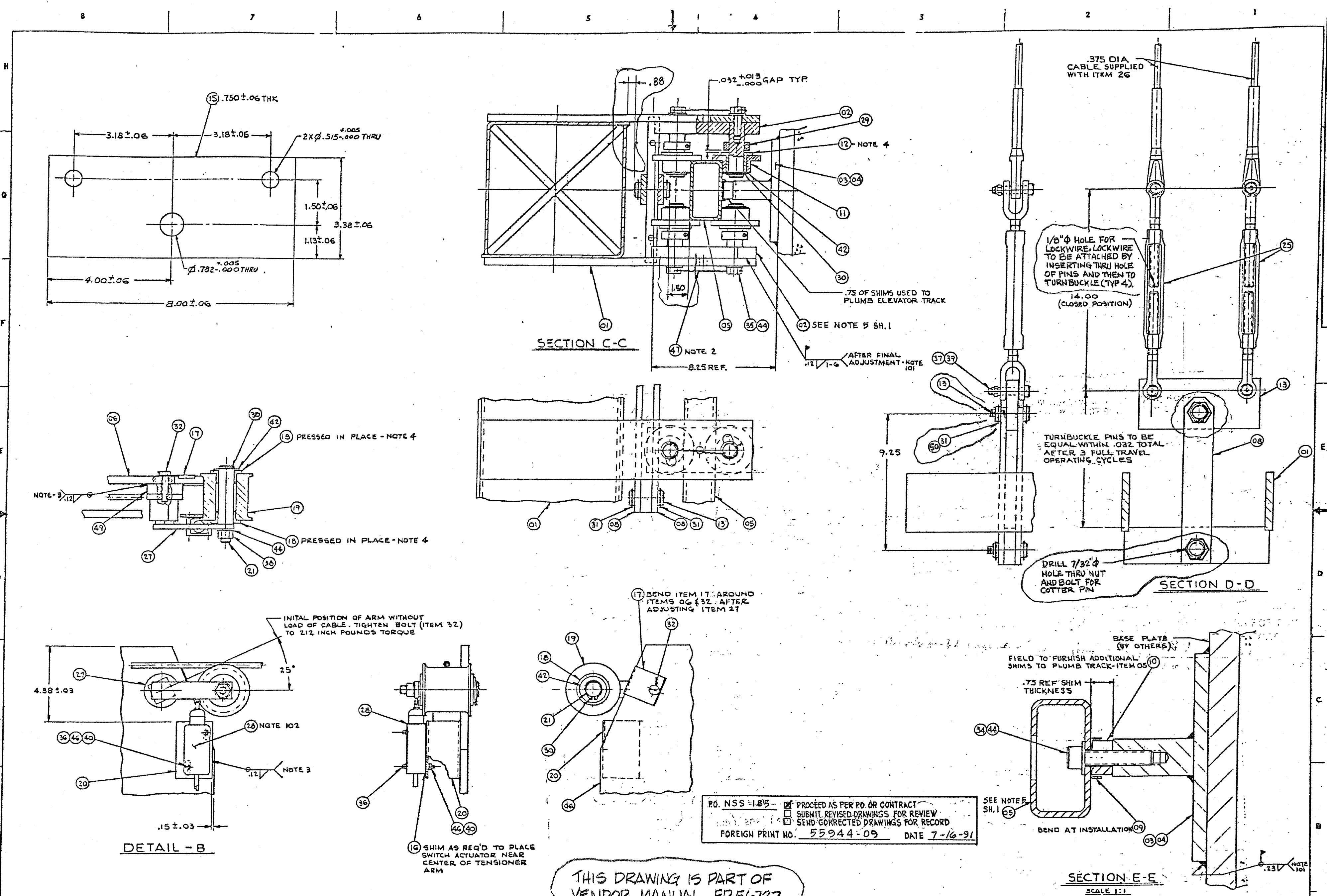
BOLT SIZE	.500	.375
TORQUE FT.-LBS	25 ± 2 FT-LB	15 ± 3 FT-LB

THIS DRAWING IS PART OF VENDOR MANUAL FP 56727



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UEBC REVISION STATUS		DOWN/ECN/DCN	REVIEW/DCR	REVIEW
ISSUE NO.	DATE	DESCRIPTION	BY	ELEC I & C POWER NHY
7	10/16/87	ADDED NOTE 5 (SH) & REE/ECA/AS TJD	TJD	
		08/11/1960B, 802627A & ECA 99/112751B		

PO. NSS-1875 - PROCEED AS PER PO. OR CONTRACT
 SUBMIT REVISED DRAWINGS FOR REVIEW
 SEND CORRECTED DRAWINGS FOR RECORD
 FOREIGN PRINT NO. 55944-09 DATE 7-16-91

THIS DRAWING IS PART OF
 VENDOR MANUAL FP56727

1	NAF-184	706689	2	CHANGE OCCUR-10
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3	ECN-2784		4	WILLIAMS 2-1-85
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84	ECN-2784		85	WILLIAMS 2-1-85
85	ECN-2784		86	WILLIAMS 2-1-85
86	ECN-2784		87	WILLIAMS 2-1-85
87	ECN-2784		88	WILLIAMS 2-1-85
88	ECN-2784		89	WILLIAMS 2-1-85
89	ECN-2784		90	WILLIAMS 2-1-85
90	ECN-2784		91	WILLIAMS 2-1-85
91	ECN-2784		92	WILLIAMS 2-1-85
92	ECN-2784		93	WILLIAMS 2-1-85
93	ECN-2784		94	WILLIAMS 2-1-85
94	ECN-2784		95	WILLIAMS 2-1-85
95	ECN-2784		96	WILLIAMS 2-1-85
96	ECN-2784		97	WILLIAMS 2-1-85
97	ECN-2784		98	WILLIAMS 2-1-85
98	ECN-2784		99	WILLIAMS 2-1-85
99	ECN-2784		100	WILLIAMS 2-1-85

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
 PLANT: SEABROOK STATION
 UNITS: 1 & 2 SPIN: PHSTPE
 STATUS: APPROVED FIELD MODIFICATION
 CERTIFICATION LTR. NO. NAF-U-3535
 AUTHORITY: D. R. GREGG
 ENGR. LTR. NO. EP/SA-50803

WESTINGHOUSE PROPRIETARY DATA

THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION OF THE WESTINGHOUSE ELECTRIC CORPORATION WATER REACTOR DIVISIONS. IT IS TRANSMITTED TO YOU IN CONFIDENCE AND TRUST, AND IS TO BE RETURNED UPON REQUEST. ITS CONTENTS MAY NOT BE DISCLOSED IN WHOLE OR IN PART TO OTHERS OR USED FOR OTHER THAN THE PURPOSE FOR WHICH TRANSMITTED WITHOUT THE PRIOR WRITTEN PERMISSION OF THE WESTINGHOUSE WATER REACTOR DIVISIONS.

SCALE 1:1
 TYP 6 PLACES

1685E22 6

PID-1-SW-B20792

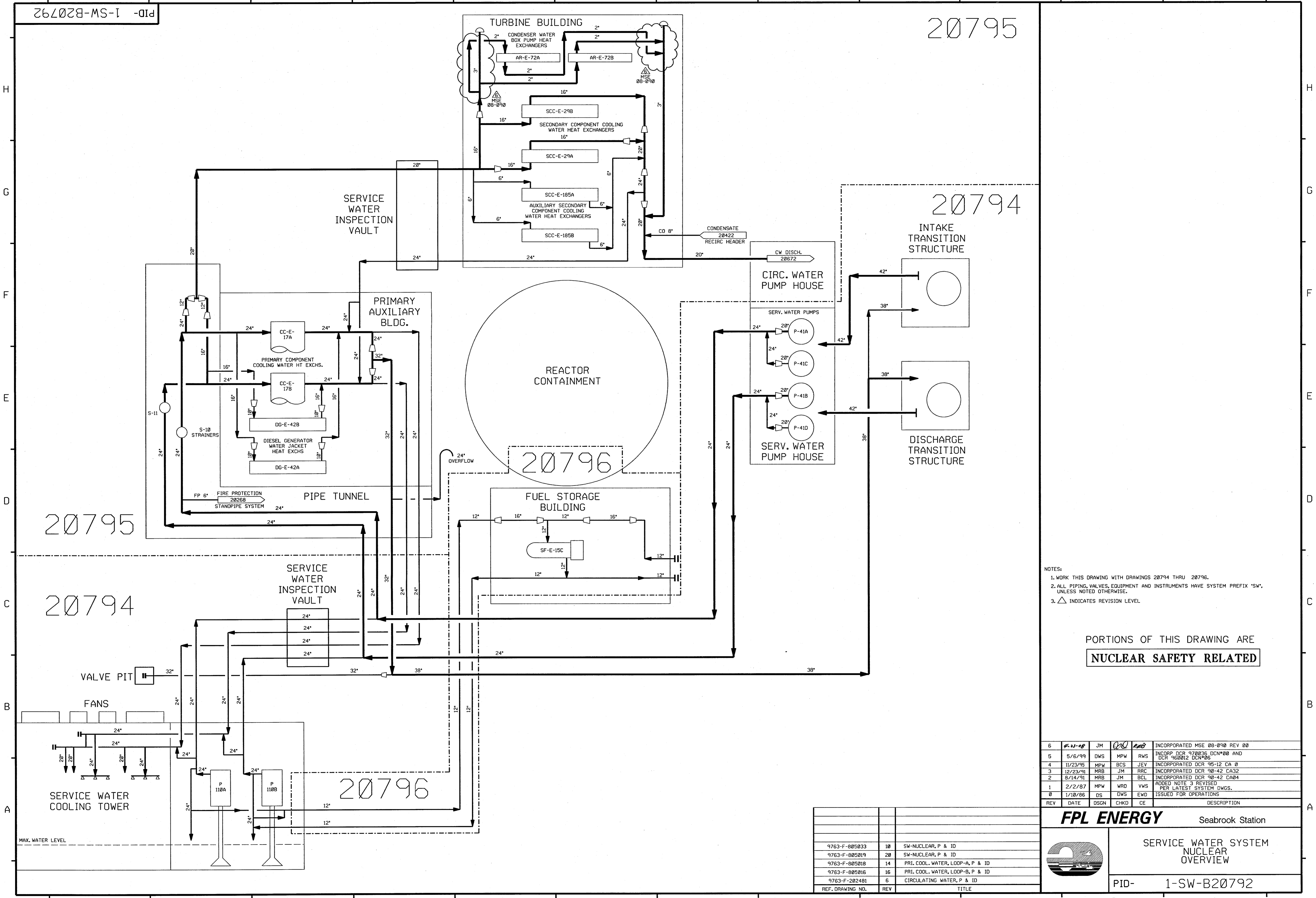
20795

20794

20796

20795

20794



- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 20794 THRU 20796.
 2. ALL PIPING, VALVES, EQUIPMENT AND INSTRUMENTS HAVE SYSTEM PREFIX 'SW', UNLESS NOTED OTHERWISE.
 3. Δ INDICATES REVISION LEVEL

PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
6	4/23/08	JM	DD	END	INCORPORATED MSE 08-090 REV 00
5	5/6/99	DWS	MPW	RWS	INCORP DCR 970036 DCN#00 AND DCR 960012 DCN#06
4	11/23/95	MPW	BCS	JEV	INCORPORATED DCR 95-12 CA 0
3	12/23/91	MRB	JM	RRC	INCORPORATED DCR 90-42 CA32
2	8/14/91	MRB	JM	BCL	INCORPORATED DCR 90-42 CA84
1	2/2/87	MPW	WRD	VWS	RODED NOTE 3 REVISED PER LATEST SYSTEM DWGS.
0	1/18/86	DS	DWS	EWD	ISSUED FOR OPERATIONS

REF. DRAWING NO.	REV	TITLE
9763-F-805033	10	SW-NUCLEAR, P & ID
9763-F-805019	20	SW-NUCLEAR, P & ID
9763-F-805018	14	PRI. COOL. WATER, LOOP-A, P & ID
9763-F-805016	16	PRI. COOL. WATER, LOOP-B, P & ID
9763-F-202481	6	CIRCULATING WATER, P & ID

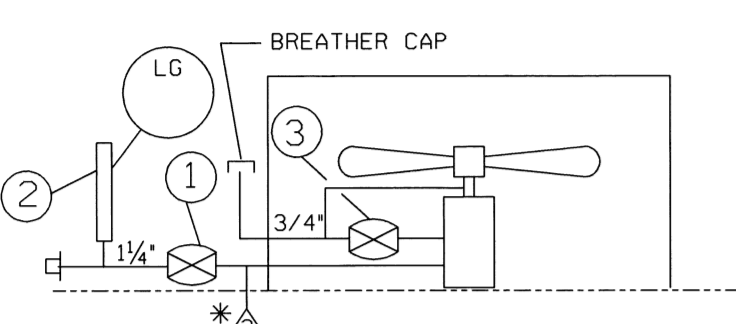
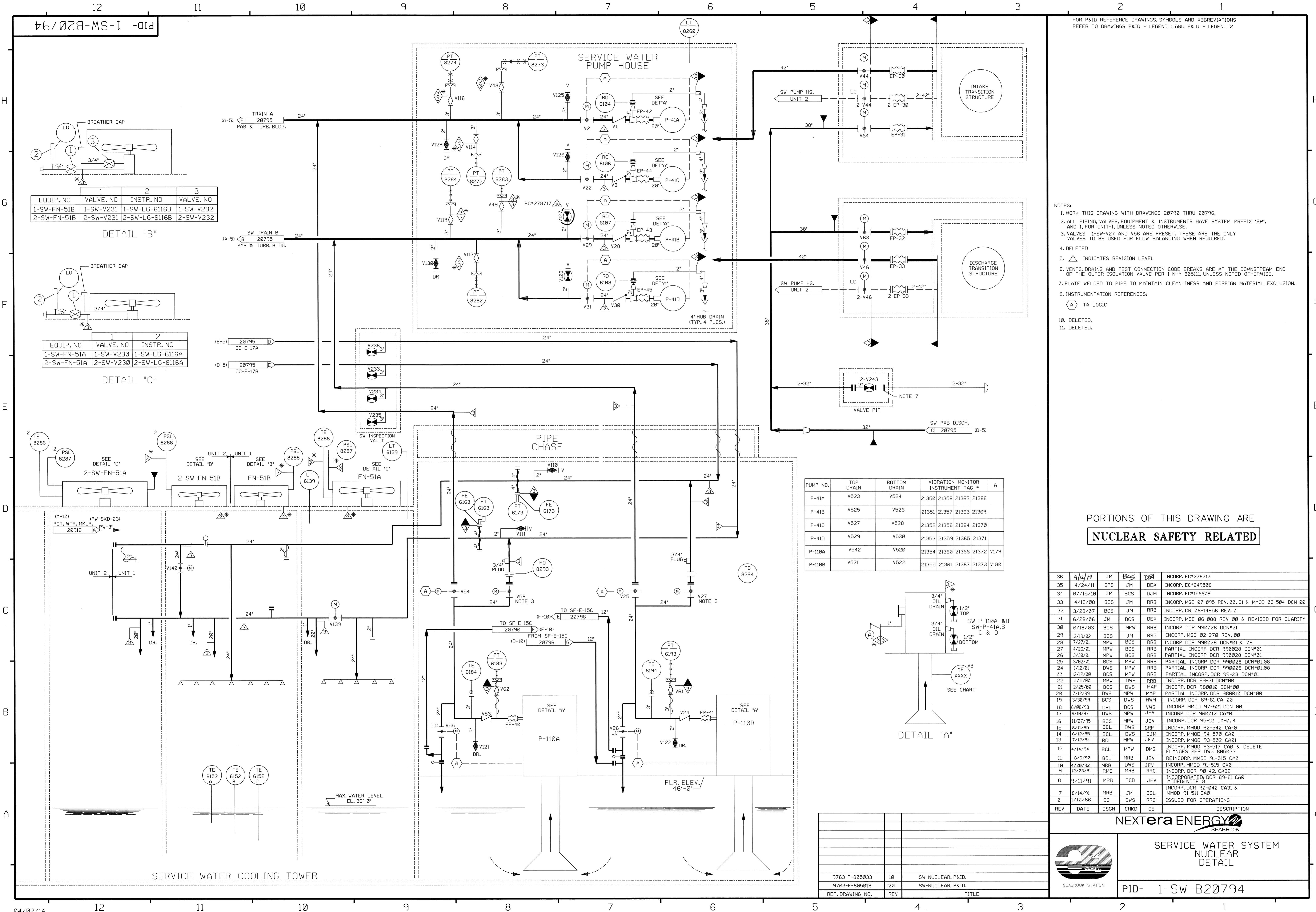
FPL ENERGY Seabrook Station

SERVICE WATER SYSTEM
 NUCLEAR
 OVERVIEW

PID- 1-SW-B20792

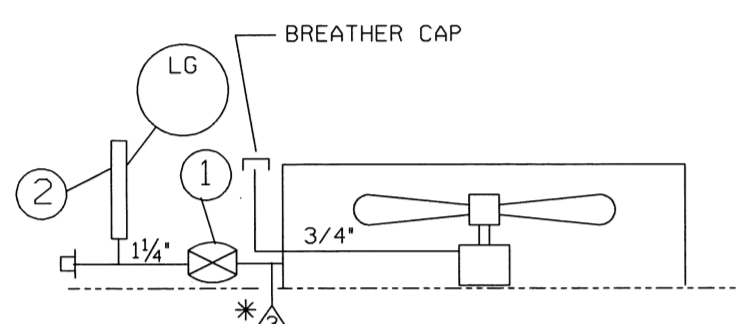
PID-1-SW-B20794

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



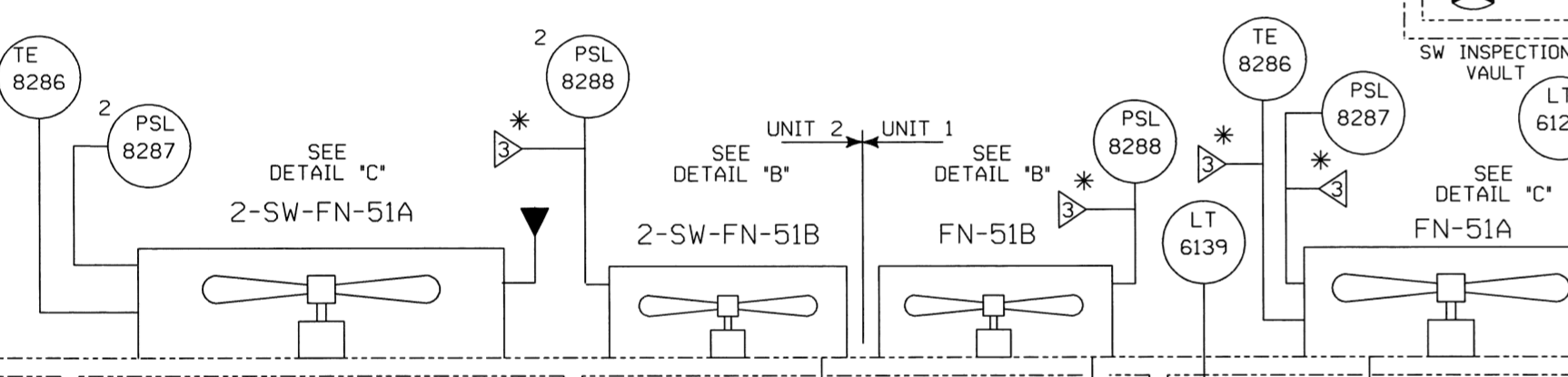
EQUIP. NO	VALVE. NO	INSTR. NO	VALVE. NO
1-SW-FN-51B	1-SW-V231	1-SW-LG-6116B	1-SW-V232
2-SW-FN-51B	2-SW-V231	2-SW-LG-6116B	2-SW-V232

DETAIL "B"

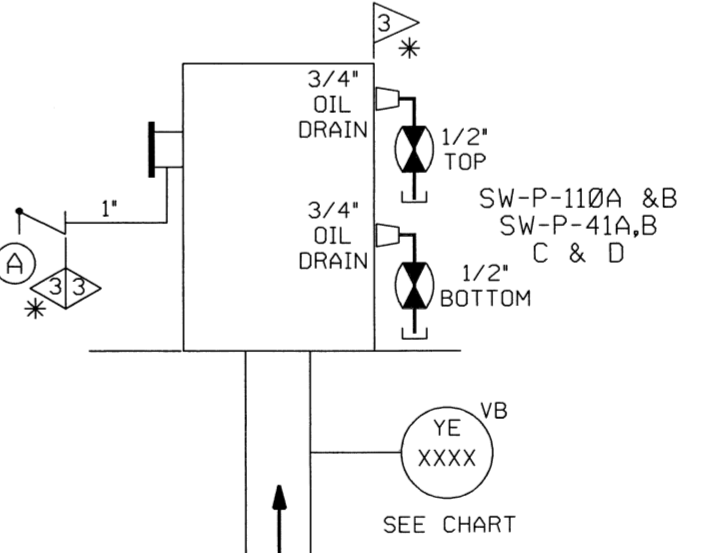


EQUIP. NO	VALVE. NO	INSTR. NO
1-SW-FN-51A	1-SW-V230	1-SW-LG-6116A
2-SW-FN-51A	2-SW-V230	2-SW-LG-6116A

DETAIL "C"



PUMP NO.	TOP DRAIN	BOTTOM DRAIN	VIBRATION MONITOR INSTRUMENT TAG #			A
P-41A	V523	V524	21350	21356	21362	21368
P-41B	V525	V526	21351	21357	21363	21369
P-41C	V527	V528	21352	21358	21364	21370
P-41D	V529	V530	21353	21359	21365	21371
P-110A	V542	V520	21354	21360	21366	21372 V179
P-110B	V521	V522	21355	21361	21367	21373 V180



DETAIL "A"

- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 20792 THRU 20796.
 2. ALL PIPING, VALVES, EQUIPMENT & INSTRUMENTS HAVE SYSTEM PREFIX "SW", AND "1" FOR UNIT-1, UNLESS NOTED OTHERWISE.
 3. VALVES 1-SW-V27 AND V56 ARE PRESET. THESE ARE THE ONLY VALVES TO BE USED FOR FLOW BALANCING WHEN REQUIRED.
 4. DELETED
 5. Δ INDICATES REVISION LEVEL
 6. VENTS, DRAINS AND TEST CONNECTION CODE BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER 1-NHY-805111, UNLESS NOTED OTHERWISE.
 7. PLATE WELDED TO PIPE TO MAINTAIN CLEANLINESS AND FOREIGN MATERIAL EXCLUSION.
 8. INSTRUMENTATION REFERENCES: Δ TA LOGIC
 10. DELETED.
 11. DELETED.

PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
36	4/2/14	JM	BSS	DBA	INCRP. EC*278717
35	4/24/11	GPS	JM	DEA	INCRP. EC*249508
34	07/15/10	JM	BCS	DJM	INCRP. EC*156608
33	4/13/08	BCS	JM	RRB	INCRP. MSE 07-095 REV. 00, 01 & MMOD 03-504 DCN-00
32	3/23/07	BCS	JM	RRB	INCRP. CR 06-14856 REV. 0
31	6/26/06	JM	BCS	DEA	INCRP. MSE 06-088 REV 00 & REVISED FOR CLARITY
30	6/18/03	BCS	JM	RRB	INCRP. DCR 990028 DCN*21
29	12/19/02	BCS	JM	RSG	INCRP. MSE 02-270 REV. 00
28	7/27/01	MPW	BCS	RRB	INCRP. DCR 990028 DCN*01 & 08
27	4/26/01	MPW	BCS	RRB	PARTIAL INCRP. DCR 990028 DCN*01
26	3/30/01	MPW	BCS	RRB	PARTIAL INCRP. DCR 990028 DCN*01
25	3/02/01	BCS	MPW	RRB	PARTIAL INCRP. DCR 990028 DCN*01,08
24	1/12/01	DWS	MPW	RRB	PARTIAL INCRP. DCR 990028 DCN*01,08
23	12/12/00	BCS	MPW	RRB	PARTIAL INCRP. DCR 99-28 DCN*01
22	11/11/00	MPW	DWS	RRB	INCRP. DCR 99-31 DCN*00
21	2/25/00	BCS	DWS	MAP	INCRP. DCR 980010 DCN*00
20	7/12/99	DWS	MPW	MAP	PARTIAL INCRP. DCR 980010 DCN*00
19	3/30/99	BCS	DWS	HWM	INCRP. DCR 89-61 CA 00
18	6/08/98	DRL	BCS	VWS	INCRP. MMOD 97-521 DCN 00
17	6/10/97	DWS	MPW	JEV	INCRP. DCR 960012 CA*0
16	11/27/95	BCS	MPW	JEV	INCRP. DCR 95-12 CA-B, 4
15	8/11/95	BCL	DWS	GRV	INCRP. MMOD 92-542 CA-0
14	6/2/95	BCL	DWS	DJM	INCRP. MMOD 94-578 CA0
13	7/12/94	BCL	MPW	JEV	INCRP. MMOD 93-502 CA01
12	4/14/94	BCL	MPW	DMQ	INCRP. MMOD 93-517 CA0 & DELETE FLANGES PER DWG 805033
11	8/6/92	BCL	MRB	JEV	REINCRP. MMOD 91-515 CA0
10	4/28/92	MRB	DWS	JEV	INCRP. MMOD 91-515 CA0
9	12/23/91	RMC	MRB	JEV	INCRP. DCR 90-42, CA32
8	9/11/91	MRB	FCB	JEV	INCORPORATED; DCR 89-01 CA0 ADDED; NOTE B
7	8/14/91	MRB	JM	BCL	INCRP. DCR 90-042 CA31 & MMOD 91-511 CA0
0	1/10/86	DS	DWS	RRC	ISSUED FOR OPERATIONS

NEXTERA ENERGY
SEABROOK

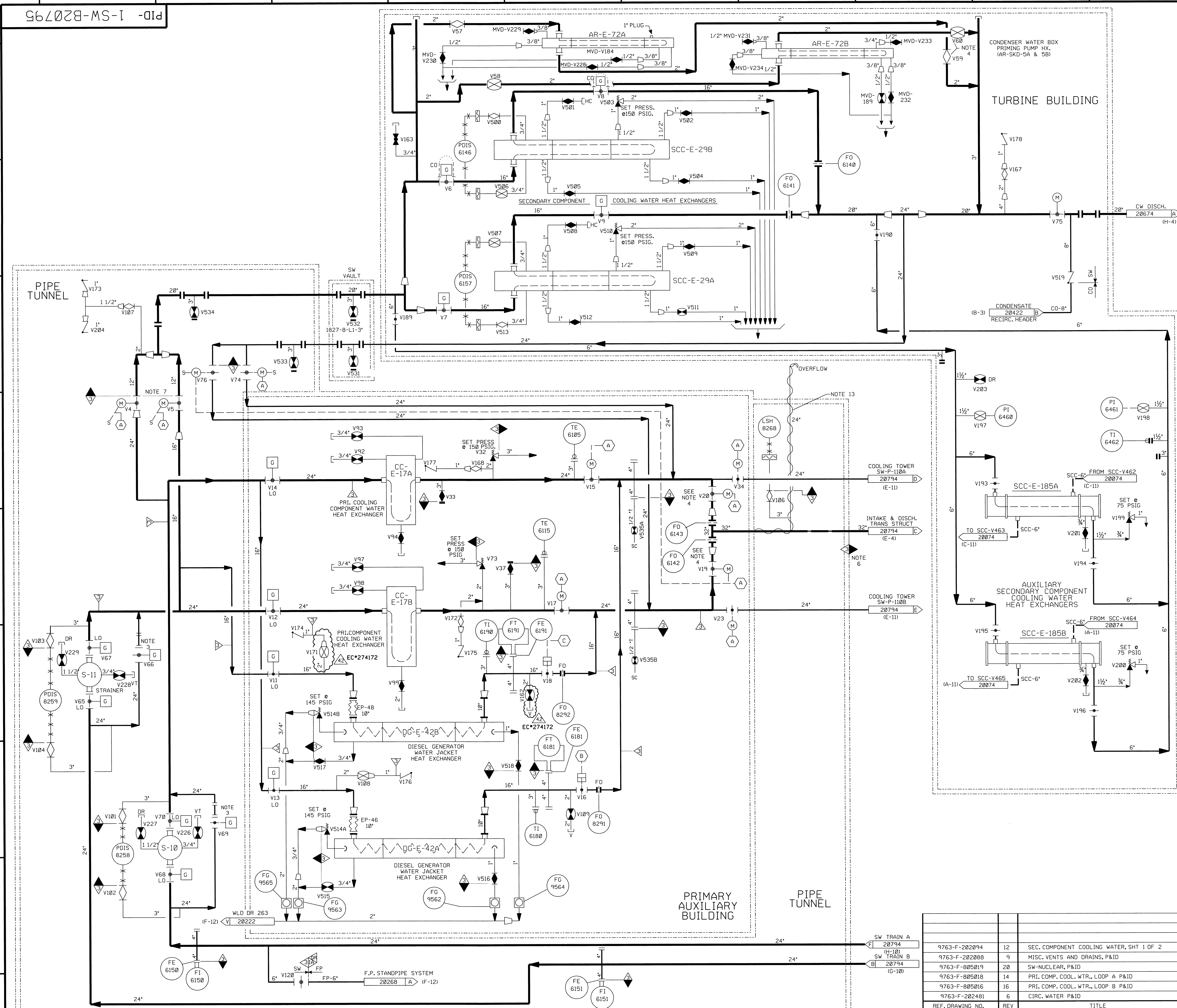
SERVICE WATER SYSTEM
NUCLEAR
DETAIL

PID- 1-SW-B20794

REF. DRAWING NO.	REV	TITLE
9763-F-805033	10	SW-NUCLEAR, P&ID.
9763-F-805019	20	SW-NUCLEAR, P&ID.

PID-1-SW-B20795

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



- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 20792 & 20794.
 2. ALL PIPING, VALVES, EQUIPMENT, & INSTRUMENTS HAVE SYSTEM PREFIX 'SW' UNLESS NOTED OTHERWISE.
 3. SPOOL PIECE NECESSARY FOR ADDITIONAL SERVICE WATER STRAINER AT LATER DATE (IF REQUIRED).
 4. VALVES 1-SW-V19, 20, 59 AND V60 ARE PRESET. THESE ARE THE ONLY VALVES TO BE USED FOR FLOW BALANCING, WHEN REQUIRED.
 5. CLASS BREAK OCCURS WHERE PIPE ENTERS EARTH.
 6. VALVES V4 & V5 TO CLOSE ON COMPLETE LOSS OF OFF SITE POWER.
 7. XX - DENOTES TITANIUM MATERIAL.
 8. DELETED
 9. △ INDICATES REVISION LEVEL
 10. INSTRUMENTATION REFERENCES
 (A) TA LOGIC
 (B) OPEN CMD FROM DG-1A
 (C) OPEN CMD FROM DG-1B
 11. VENTS, DRAINS AND TEST CONNECTION CODE BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER 1-NHY-805111, UNLESS NOTED OTHERWISE.
 12. HEAT TRACING HAS BEEN DISCONNECTED AND IS NON-FUNCTIONAL.

PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
42	4/12/14	JM	BCS	DA	INCOMP EC*274172
41	2/3/14	BCS	JM	BKD	INCOMP EC*280824
40	10/17/12	BCS	JM	DJM	PARTIAL INCOMP EC*274172
39	10/7/12	JM	MPW	RRB	INCOMP EC*1518 & EC*274172
38	4/6/11	GPS	JM	BCS	PARTIAL INCOMP EC *2565
37	04/23/08	JM	DDD	RRB	INCOMP MSE 08-090 REV 00
36	10/12/06	BCS	JM	RRB	INCOMP.MMOD 03-504 DCN-00
35	5/17/05	BCS	JM	RRB	INCOMP.CR 05-04228 REV.0
34	5/8/02	MPW	JM	RRB	INCOMP.DCR 99-031 DCN 00
33	11/16/01	BCS	MPW	DEA	INCOMP MSE 01-0041 REV. 00
32	1/26/01	MPW	BCS	ARB	INCOMP DCR 99-35 DCN*00
31	11/16/00	BCS	MPW	ARB	INCOMP MMOD 99-577 DCN 00
30	8/23/00	BCS	DWS	AJK	INCOMP MSE 00-019 REV 00
29	1/10/00	BCS	MPW	DEA	INCOMP MSE 00-012 REV 00
28	10/20/99	MPW	DWS	DEA	INCOMP MSE 99-303 REV 00
27	9/29/99	DWS	BCS	RRB	INCOMP DCR 990207 DCN*00
26	7/12/99	BCS	MPW	MAP	INCOMP DCR 980210 DCN*00, PARTIAL DCR 990207 DCN*00
25	4/30/99	DWS	RRB	DRM	INCOMP DCR 970236 DCN*00
24	2/19/99	BCS	MPW	DWS	INCOMP DCR 98-0039 DCN-00
23	2/3/98	BCS	MPW	MAP	INCOMP DCR 97-0011 DCN-0, MMOD 97-590 DCN-00
22	8/18/97	MPW	BCS	VWS	INCOMP MMOD 96-550 DCN 01
21	6/10/97	DWS	MPW	VWS	INCOMP DCR 960212 DCN*00, DCR 960216 DCN*00 & 01, MMOD 96-550 DCN*00
20	5/28/97	DWS	MPW	VWS	PARTIAL INCOMP DCR 960216 DCN*00 & 1
19	11/27/95	BCL	MPW	JEV	INCOMP MMOD 92-542 CA-0
18	6/12/95	BCL	DWS	GRM	INCOMP MMOD 94-578 CA-0
17	5/4/95	BCL	DWS	RRB	INCOMP MMOD 92-510 CA-0
16	4/14/95	BCL	MPW	RRB	INCOMP MMOD 92-510 CA-0
15	7/19/94	BCL	MPW	DMQ	INCOMP MMOD 94-530 CA-0

REF. DRAWING NO.	REV	TITLE
763-F-202094	12	SEC. COMPONENT COOLING WATER, SHT 1 OF 2
763-F-202088	9	MISC. VENTS AND DRAINS, P&ID
763-F-805019	20	SW-NUCLEAR, P&ID
763-F-805018	14	PRI. COMP. COOL. WTR., LOOP A P&ID
763-F-805016	16	PRI. COMP. COOL. WTR., LOOP B P&ID
763-F-202481	6	CIRC. WATER P&ID

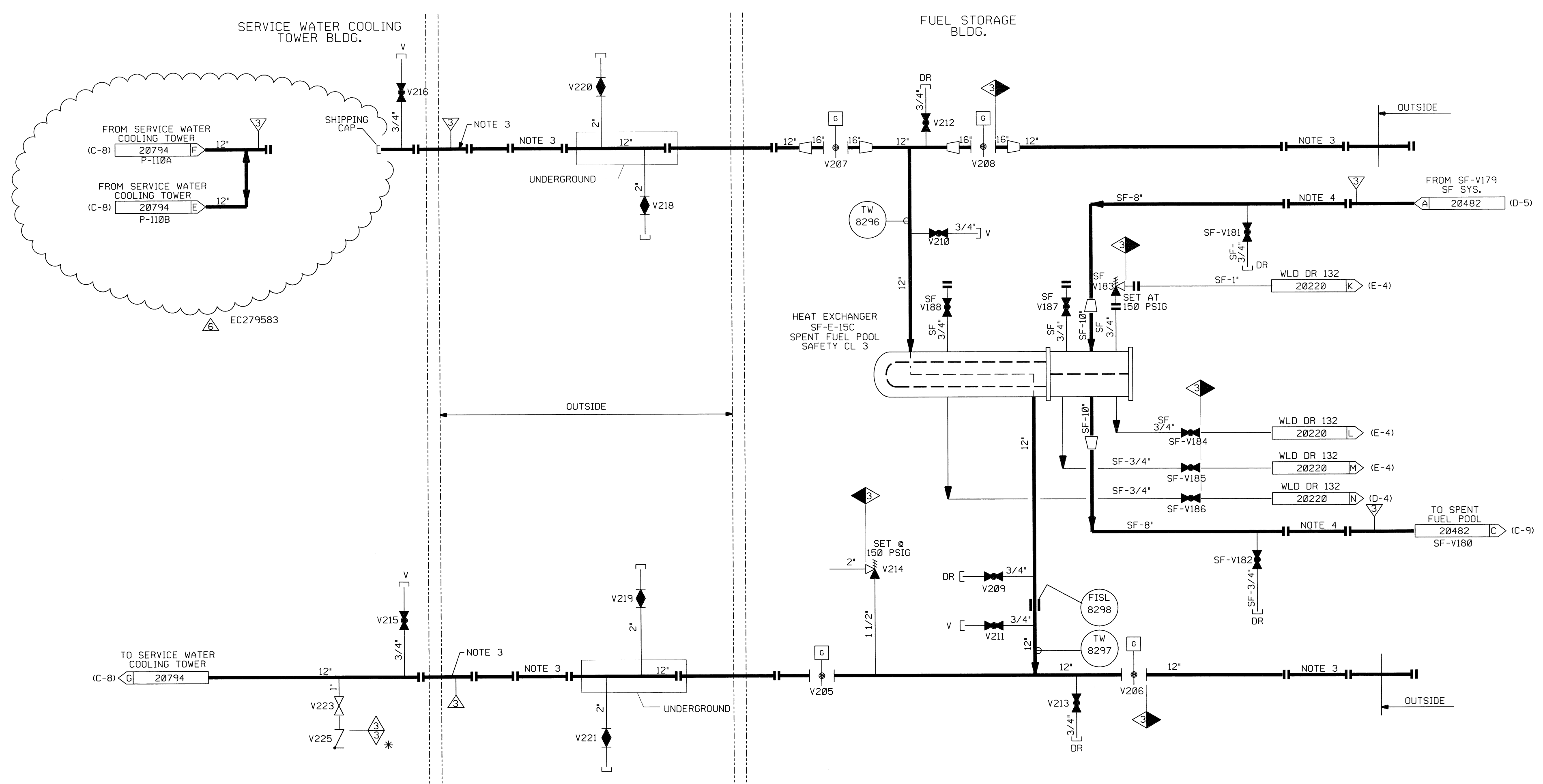
NEXTERA ENERGY
 SEABROOK

SEABROOK STATION

**SERVICE WATER SYSTEM
 NUCLEAR
 DETAIL**

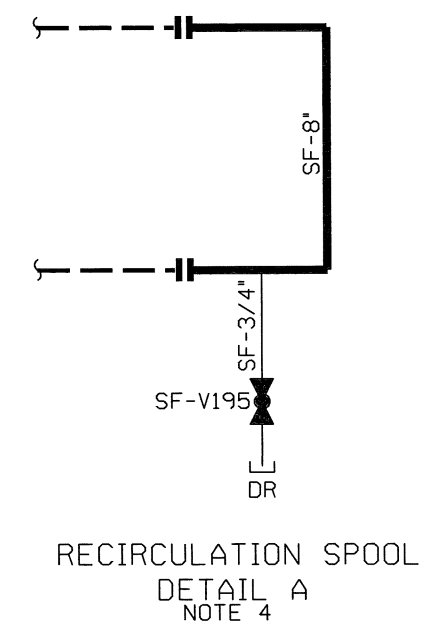
PID- 1-SW-B20795

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



- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 20792 THRU 20795.
 2. ALL PIPING, VALVES, EQUIPMENT & INSTRUMENTS HAVE SYSTEM PREFIX 'SW'. AND 1, FOR UNIT-1, UNLESS NOTED OTHERWISE.
 3. AT A MINIMUM, UPON COMPLETION OF ASFFC USE, RESTORE SW SYSTEM AS FOLLOWS:
 - REMOVE FABRICATION ENCLOSURE AND REMOVABLE PIPE SPOOL SECTIONS FROM BELOW THE FUEL STORAGE BLDG. (WEST) ROLL-UP DOOR. (REF. SKD 900042-1107)
 - REMOVE 1845 AND 1846-03-160-12" NNS PIPE SPOOLS INSIDE THE FUEL STORAGE BLDG. EAST WALL.
 - INSTALL BLANKS ON BOTH ENDS OF SPOOL SECTIONS WHICH REMAIN AT PENETRATION 3193 AND 3194.
 - REMOVE PIPING SPOOLS ON LINES 1845 AND 1846-1-160-12" WHERE THESE LINES EXIT THE GROUND (COOLING TOWER END). REMOVE PIPING SPOOLS WHICH PENETRATE THE COOLING TOWER EAST END LOUVER AND RESTORE LOUVER WITH GRATING PANEL DESCRIBED ON SKD 900042-1103, NOTE 2.
 4. UPON COMPLETION OF ASFFC USE, LINES 1764 AND 1765-01-151-8" INSIDE THE FUEL STORAGE BLDG., MAY BE REMOVED AND INSTALL BLANKS ON BOTH ENDS OF SECTIONS WHICH REMAIN DR. IF DESIRED, INSTALL RECIRCULATION SPOOL. SEE DETAIL A (C-4).
 5. Δ INDICATES REVISION LEVEL
 6. VENTS, DRAINS AND TEST CONNECTION CODE BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER 1-NHY-805111, UNLESS NOTED OTHERWISE.

PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED



REV	DATE	DSGN	CHKD	CE	DESCRIPTION
6	2-21-14	BCS	MPW	GWS	INCRP. EC279583
5	8-8-02	BCS	MPW	GWS	INCRP. MMDD 01-0569 DCN-00
4	6/12/95	BCL	DHS	DJM	INCRP. MMDD 94-570 CA-0
3	12/8/94	BCL	MRB	RRC	RE-INCRP. DCR 90-42, CA33
2	6/4/92	MRB	BCL	RRC	RE-INCRP. DCR 90-42, CA33
1	1/6/92	JM	MRB	RRC	INCRP. DCR 90-42, CA33
0	12/24/91	JM	MRB	MPW	ISSUED FOR OPERATIONS

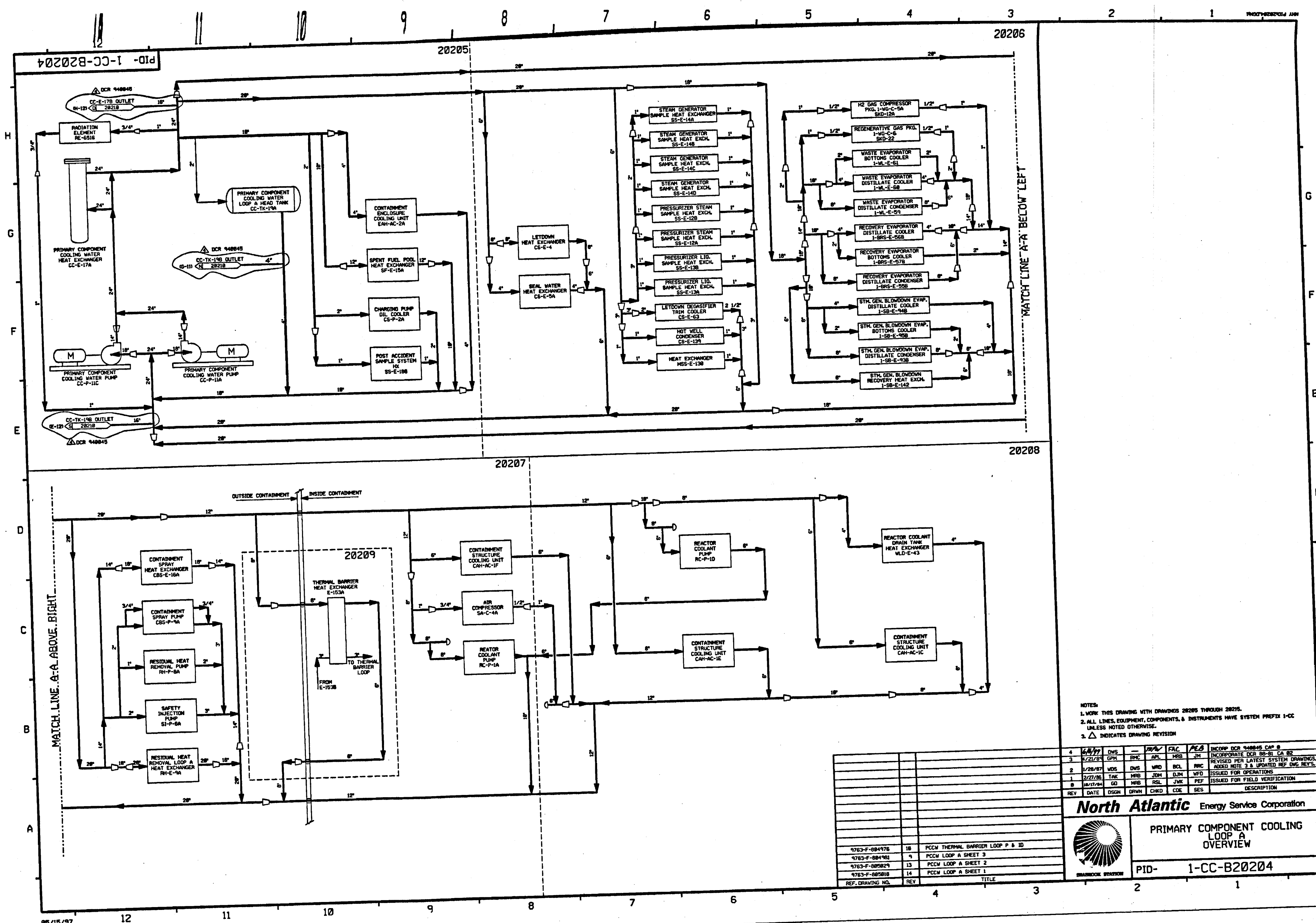
REF. DRAWING NO.	REV	TITLE
1-NHY-D20794	7	SERVICE WATER SYS. NUCLEAR DETAIL
1-NHY-D20482	4	SF POOL COOLING & CLEAN-UP SYS DET.
9763-F-805033	10	SW-NUCLEAR, P&ID.
9763-F-805019	20	SW-NUCLEAR, P&ID.

NEXTERA ENERGY
SEABROOK

SEABROOK STATION

SERVICE WATER SYSTEM
NUCLEAR
DETAIL

PID- 1-SW-B20796




- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 20205 THROUGH 20215.
 2. ALL LINES, EQUIPMENT, COMPONENTS, & INSTRUMENTS HAVE SYSTEM PREFIX 1-CC UNLESS NOTED OTHERWISE.
 3. Δ INDICATES DRAWING REVISION.

REV	DATE	DSGN	DRWN	CHKD	CDE	SES	DESCRIPTION
4	6/17/77	DWS	—	—	—	FAC	INCORP. DCR 948845 CA# 8
3	4/21/87	GPH	RNC	APL	MRB	JM	INCORPORATE DCR 89-01 CA 82 REVISED PER LATEST SYSTEM DRAWINGS, ADDED NOTE 3 & UPDATED REF. Dwg REV'S.
2	1/28/87	WDS	DWS	WRD	BCL	RWC	ISSUED FOR OPERATIONS
1	2/27/86	TAK	MRB	JDM	DJM	WFD	ISSUED FOR FIELD VERIFICATION
0	10/17/84	GD	MRB	RSL	JMK	PEF	ISSUED FOR FIELD VERIFICATION

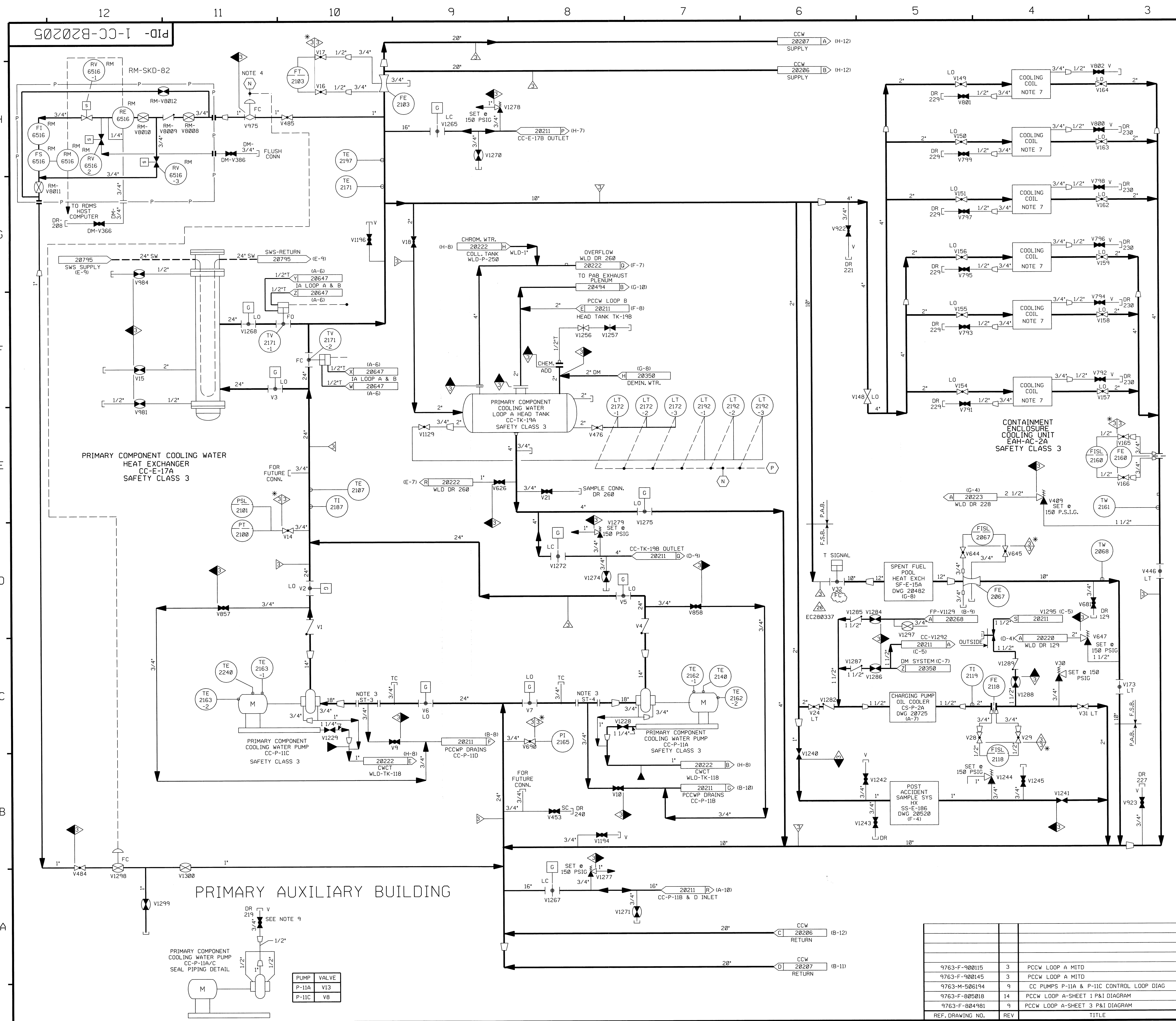
REF. DRAWING NO.	REV	TITLE
9763-F-884976	18	PCCM THERMAL BARRIER LOOP P & ID
9763-F-884981	9	PCCM LOOP A SHEET 3
9763-F-889829	13	PCCM LOOP A SHEET 2
9763-F-885818	14	PCCM LOOP A SHEET 1

North Atlantic Energy Service Corporation



PRIMARY COMPONENT COOLING LOOP A OVERVIEW

PID- 1-CC-B20204



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

- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS B2024 AND B2026 THROUGH B2025.
 2. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX '1-CC', UNLESS NOTED OTHERWISE.
 3. PERMANENT SPOOL PIECE INSTALLATION SHOWN. TEMPORARY STRAINER IS USED IN PLACE OF SPOOL PIECE DURING INITIAL FLUSHING OPERATION. STRAINER TO BE REMOVED BEFORE PLANT START-UP.
 4. (N) CLOSE ON HEAD TANK TK-198 LOW LEVEL SIGNAL. SIGNAL TO V426 & V427 ON DWG CC-20206, AND V975 & V1298 ON THIS DWG.
 5. (P) SIGNAL TO V122, V168, V121 & V57 ON DWG. CC-20207
 6. VENT & DRAIN CODE BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER 1-NHY-805111 UNLESS OTHERWISE NOTED.
 7. △ - INDICATES REVISION LEVEL.
 8. CONTAINMENT ENCLOSURE AIR HANDLING FOR AC-2A SEE DWG 1-MAH-20495 (D-6).
 9. CONNECTION TO BE USED FOR FLUSHING SEE DWG DM-20350 (F-9) & NOTE 7.
 10. QUICK DISCONNECTS MAY BE INSTALLED UPSTREAM OF PIPE CAPS AS DEEMED NECESSARY BY STATION STAFF TO FACILITATE VENT AND DRAIN OPERATIONS.

PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED

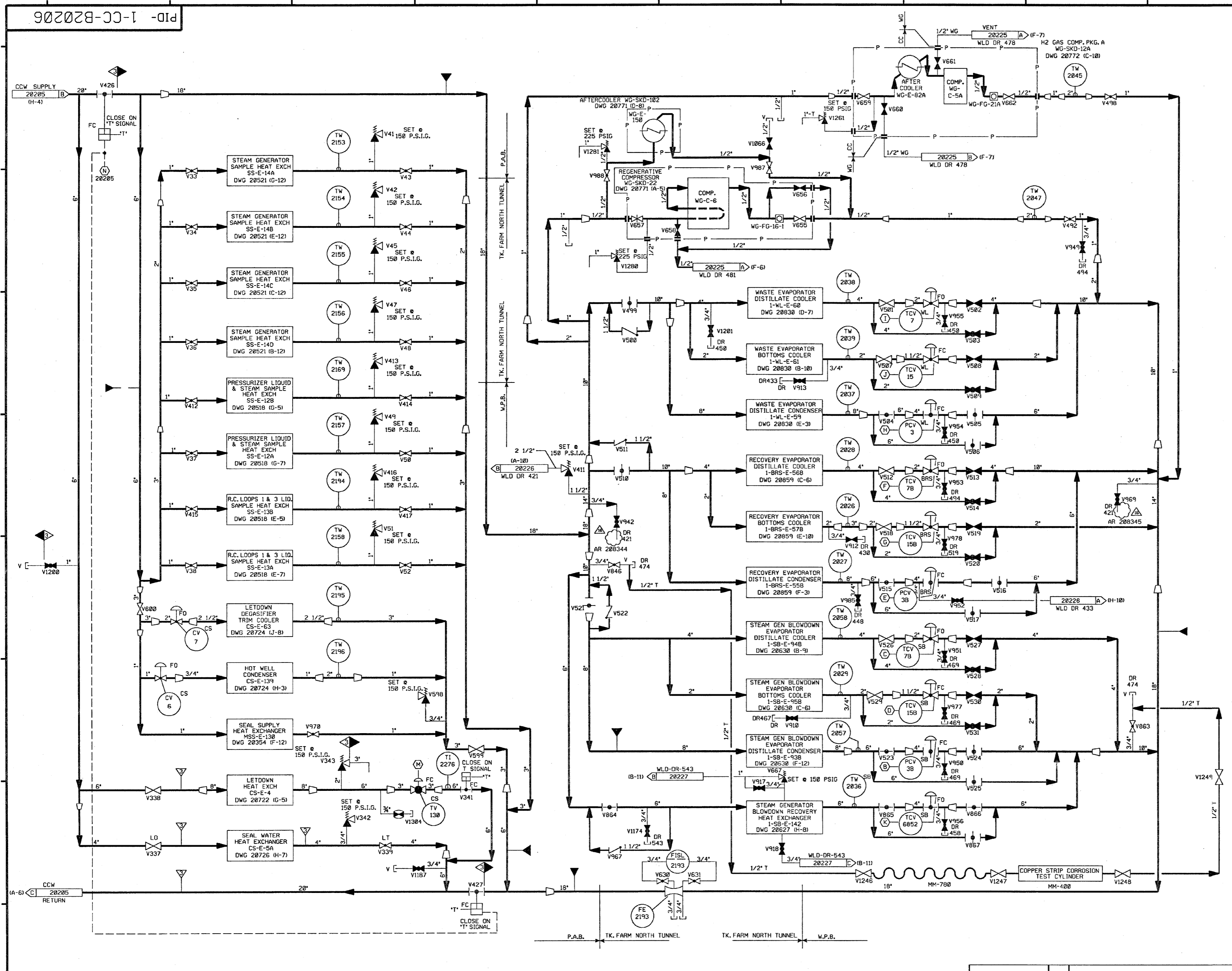
REV	DATE	DSGN	CHKD	CE	DESCRIPTION
26	12/16/13	BCS	JM	DTM	INCORP. EC280337
25	10/29/09	JM	BCS	TAS	INCORP. MM00 03-504 DCN 00
24	3/25/03	MPW	JM	BCS	INCORP. CR 02-13396
23	6/11/02	BCS	JM	MAP	INCORP. DCR 00-020 DCN-00
22	1/18/99	BCS	MPW	RRB	REINCORP. DCR 960025 DCN 02
21	1/6/99	DWS	MPW	PEB	REINCORP. DCR 940045 CA*00
20	11/4/98	MPW	BCS	MAP	INCORP. DCR 960025 DCN 02
19	5/26/98	MPW	BCS	MAP	REVISED PER FP 51349
18	5/7/98	MPW	MRB	PEB	REINCORP. DCR 960025 DCN 00
17	6/13/97	DWS	MPW	PEB	REINCORP. DCR 940045 CA*0 & 1
16	6/6/97	DWS	MPW	PEB	INCORP. DCR 940045 CA*0 & 1, I. DCR 920015 DCN*0, DCR 960016 DCN*0 & 2, DCR 960025 DCN*0 & 01 ALSO RELOCATED INSTRUMENT REFERENCE NOTES "N" & "P" FROM THE P&ID BODY TO NOTE 4.
15	11/27/95	MPW	BCS	PEB	PARTIAL INCORP. MM00 920590 CA*0.1
14	3/7/95	BCL	MPW	DMD	INCORP. MM00 920590 CA*0
13	11/29/94	DWS	MPW	MHO	INCORP. MM00 930545 CA*0
12	4/14/94	BCL	MPW	DMD	INCORP. MM00 93-517 CA0
11	4/28/92	MRB	DWS	JEV	INCORP. MM00 91-515 CA0
10	12/16/91	RMC	JM	BCL	INCORP. MM00 91-511 CA01
9	11/12/91	RMC	JM	JEV	INCORP. MM00 91-511 CA 00 AND DCR 86-447 CA 00
8	2/26/91	MRB	FCB	BCL	INCORP. MM00 90-648 CA01
7	4/21/89	GPM	APL	GRM	INCORPORATE DCR 88-81 CA 02
6	3/22/88	GPM	APL	RRC	REVISED: NOTE 4 & 5 PIPING & INSTR. REFERENCE SIGNALS ADDED: NOTE 7 & 8, CONT. DWG NO'S & COORD. DELETED: NWS-1 CLASS DESIGNATION.
5	6/16/87	MPW	PAL	PAG	VALVE V975 SHOWN OPEN.
4	11/4/86	JDM	WRD	RRC	ADDED CONT. DWG. COORD. LEGEND NOTE MISSING LINE SIZE. ADDED OPERATOR TO VALUES PER REF. DWG. REVIEW REMOVED SAFETY CLASS BREAKS FROM VENTS AND DRAINS DUE TO THE USE OF NOTE 5. REMOVED PIPE SPEC. BREAKS.
3	9/12/86	BCL	MAP	RRC	INCORP. ECA 19/808327C. REVISED PER PIPING ERECTION 150'S CC-752-02 & CC-752-06
2	6/18/86	JDM	DWS	RRC	INCORP. ECA 19/112526B, DELETE DUPLICATE VENT LINE, ADD REF. DWG., PROVIDE DETAIL FOR RM-340-82
1	02/27/86	TAK	JDM	WFO	INCORP. ECA 19/3167C, 19/808327C.
0	10/17/84	GD	RSL	PEF	& 99/806109A, ISSUED FOR OPERATIONS
					ISSUED FOR FIELD VERIFICATION

REF. DRAWING NO.	REV	TITLE
9763-F-900115	3	PCCW LOOP A MITD
9763-F-900145	3	PCCW LOOP A MITD
9763-M-506194	9	CC PUMPS P-11A & P-11C CONTROL LOOP DIAG
9763-F-805018	14	PCCW LOOP A-SHEET 1 P&I DIAGRAM
9763-F-804981	9	PCCW LOOP A-SHEET 3 P&I DIAGRAM

NEXTERA ENERGY
SEABROOK

PRIMARY COMPONENT COOLING LOOP A DETAIL

PID- 1-CC-B20205



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

- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 20204, 20205 AND 20207, THROUGH 20215.
 2. ALL LINES, EQUIPMENT, COMPONENTS & INSTRUMENTS HAVE SYSTEM PREFIX 1-CC UNLESS NOTED OTHERWISE.
 3. INSTRUMENT REFERENCES
 - (B) FROM SB-PT-3B DWG. (20630)
 - (C) FROM SB-TE-7B DWG. (20630)
 - (D) FROM SB-TE-15B DWG. (20630)
 - (E) FROM BRS-PT-3B DWG. (20859)
 - (F) FROM BRS-TE-7B DWG. (20859)
 - (G) FROM BRS-TE-15B DWG. (20859)
 - (H) FROM WL-PT-3 DWG. (20830)
 - (I) FROM WL-TE-7 DWG. (20830)
 - (J) FROM WL-TE-15 DWG. (20830)
 - (K) FROM SB-TE-6852 DWG. (20627)
 - (M) FROM TE-130 LETDOWN HEAT EXCHANGER CS-E-4 OUTLET DWG. (20722)
 - (N) CLOSE ON HEAD TANK TK-19A LOW LEVEL SIGNAL.
 4. Δ INDICATES REVISION LEVEL.
 5. DELETED
 6. VENT & DRAIN CODE BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER 1-NHT-805111 UNLESS OTHERWISE NOTED.

PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
16	1-25-10	BCS	JM	RBB	INCCORP AR 208344 & 208345
15	9/24/03	BCS	JM	RRB	INCCORP DCR 02-012 DCN-00, 01
14	2/27/03	BCS	MPW	TAS	INCCORP DCR 00-019 DCN-00
13	6/3/02	JM	MPW	RRB	INCCORP MSE 01-010 REV 00 AND PARTIAL OF MMD 99-0574 DCN 00
12	3/27/00	MPW	BCS	RRB	INCCORP MMD 93-544 CA01
11	9/28/99	BCL	MPW	RJF	INCCORP MMD 93-544 CA02
10	4/2/92	MRB	BCL	JEV	INCCORP MMD 91-515 CA02
9	9/24/90	MRB	JM	BCL	INCCORP MMD 90-516 CA00
8	5/23/88	GPM	APL	PAG	INCCORP DCR 86-409 CA04
7	3/22/88	GPM	APL	RRC	REVISED; NOTES 3 & 6, INSTR. REFERENCE SIGNAL, SKID PIPING & EQUIP. DESCRIPTION. ADDED CONT DWG NUMBERS & COORDS., VENT DESIGNATION, DELETED: NNS-1 CL DESIGNATION.
6	6/16/87	MPW	PAL	VWS	VALVES V846 & V863 SHOWN OPEN. ADDED VALVES CV-7 & CV-8. PREVIOUSLY SHOWN ON CS-20724/EQUIP. REFERENCE DWG'S DELETED; VALVE NDS (N/A I&C VALVES)
5	1/19/87	MRJ	WRD	VWS	ADDED CC PIPING PREVIOUSLY SHOWN ON SB-20527, REVISED TO FLEX HOSE HEAT TRACING, WAS IN ERROR, DELETED NOTE 5, FILLED IN NOTE 3 LATER.
4	11/6/86	JDM	PAL	RRC	ADDED CONT DWG COORDS, LEGEND NOTE, CORRECTED VALVE TYPES PER REF DWG.
3	8/22/86	BCL	WRD	PHH	REVISED TO REFLECT AS-BUILT CONDITION
2	6/19/86	JDM	DWS	RRC	REVISED VALVE NUMBER REV. WGT SKID SUPPLY, INCCORP. ECA 99/113420A & REV. CHANGE ITEM NO. 1 & 2 PER 804981 REV 9
1	2/27/86	TAK	JDM	WFD	ISSUED FOR OPERATIONS AND INCCORP. ECA 73/5424B
0	10/17/84	GD	RSL	PEF	ISSUED FOR FIELD VERIFICATION

REF. DRAWING NO.	REV	TITLE
9763-F-805612	13	RADIOACTIVE GAS WASTE SYS. SHT. 2 P & ID
9763-F-805611	13	RADIOACTIVE GAS WASTE SYS. SHT. 1 P & ID
9763-F-805018	14	PCCW LOOP A SHEET 1-P&I DIAGRAM
9763-F-804981	9	PCCW LOOP A SHEET 3-P&I DIAGRAM

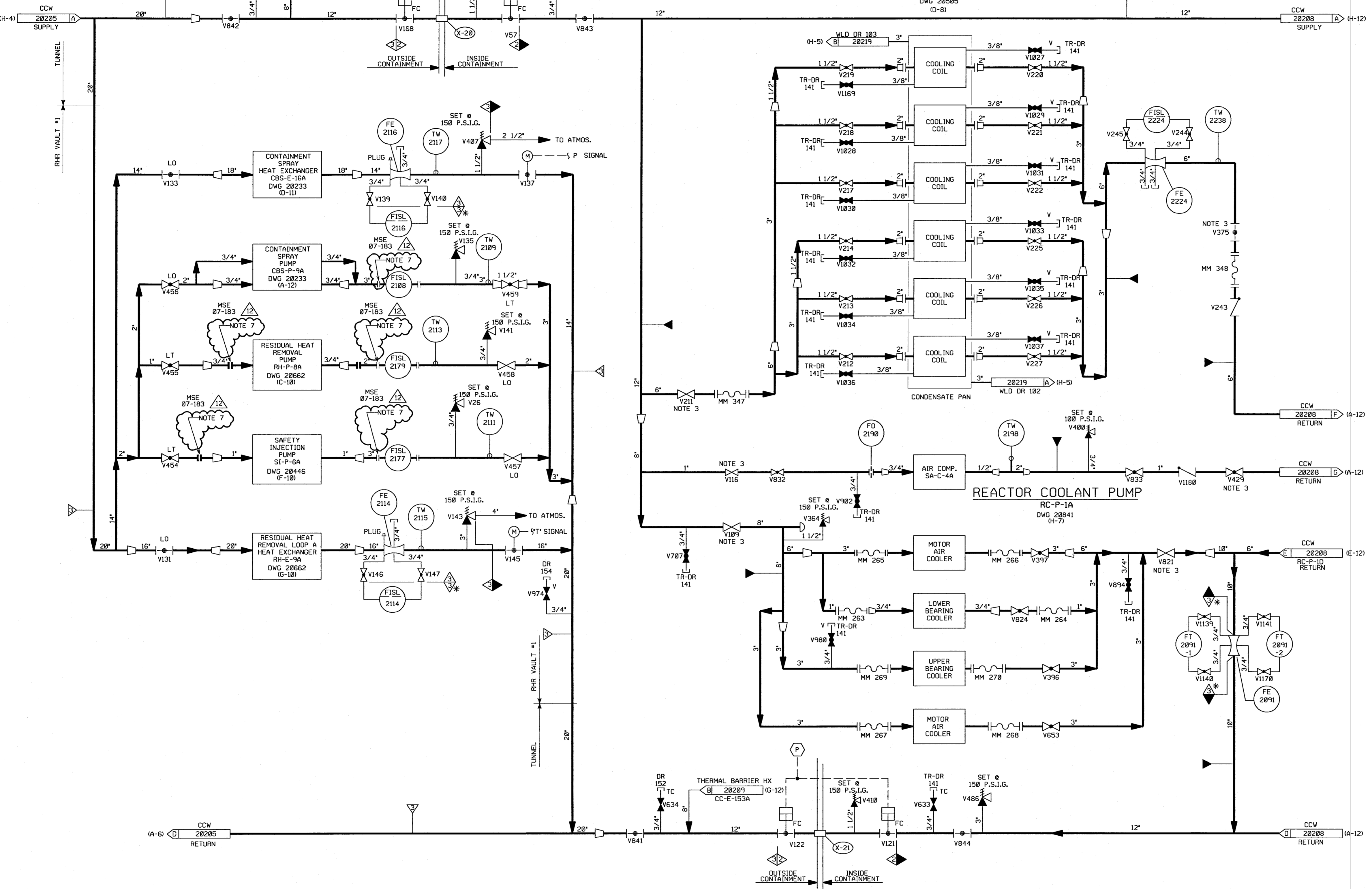
NEXTERA ENERGY
SEABROOK

PRIMARY COMPONENT COOLING LOOP A
DETAIL

PID- 1-CC-B20206

PID-1-CC-B20207

CONTAINMENT STRUCTURE COOLING UNIT CAH-AC-1F



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

- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 20204, 20205, 20206, & 20208 THROUGH 20215.
 2. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX CC UNLESS NOTED OTHERWISE.
 3. EQUIPMENT ISOLATION VALVE INSIDE CONTAINMENT ARE OPERABLE FROM THE CONTAINMENT ANNULUS.
 4. VENT, DRAIN & TEST CONNECTIONS CODE BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER I-NHY-805111 UNLESS OTHERWISE NOTED.
 5. Δ INDICATES REVISION LEVEL
 6. INSTRUMENT REFERENCES
 7. UNION OR FLANGED CONNECTION USED FOR PRE-PLANNED MAKEUP STRATEGY. SEE FFS9989.
- (P) CLOSE ON "P" SIGNAL OR HEAD TANK 19A
LOW LOW LEVEL SIGNAL DWG. 20205

PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
12	1-21-07	OPS	JM	GH	INCORP. MSE 07-183 REV. 0
11	10/03/06	JM	BCS	RRB	INCORP. MMOD 03-504 DCN 00
10	6/7/05	BCS	JM	RRB	INCORP. CR 05-05358 REV. 0
9	2/27/03	BCS	MPW	TAS	INCORP. DCR 00-019 DCN-00
8	5/3/99	BCS	RWS	GRM	REVISE P SIGNAL SYMBOL PER LOGIC DWG I-NHY-503271
7	6/11/97	MPW	DWS	DWS	INCORP. MMOD 91-559 CA-00
6	4/19/94	BCL	MPW	DMQ	INCORP. MMOD 93-517 CA-0
5	10/20/92	BCL	MRB	WFZ	INCORP. MMOD 91-559 CA-0 (PARTIAL)
4	4/22/92	MRB	DWS	JEV	INCORP. MMOD 91-515 CA-0
3	2/27/89	MRB	GPM	RRC	INCORPORATED DCR 88-0085 CA 0 REVISED; NOTE 4 AND CLARIFIED DUPLICATION OF ASSOCIATED SYSTEMS AND INTERFACES. ADDED; NOTE 6. DELETED: NNS-1 CLASS BOUNDARY AND MATERIAL SPEC. BREAKS
2	11/26/86	MRJ	WRD	RRC	ADDED CONT FLAG COORD'S & NOTE 5. ADDED CLASS FLAGS & REVISED SET PRESS PER US&G P&ID. STATUS OF INCOMPLETE ITEMS IS N/A. REVISED NOTE 4.
1	2/27/86	TAK	JDM	WFD	ISSUED FOR OPERATIONS
0	10/17/84	GD	RSL	PEF	ISSUED FOR FIELD VERIFICATION

FPL ENERGY Seabrook Station

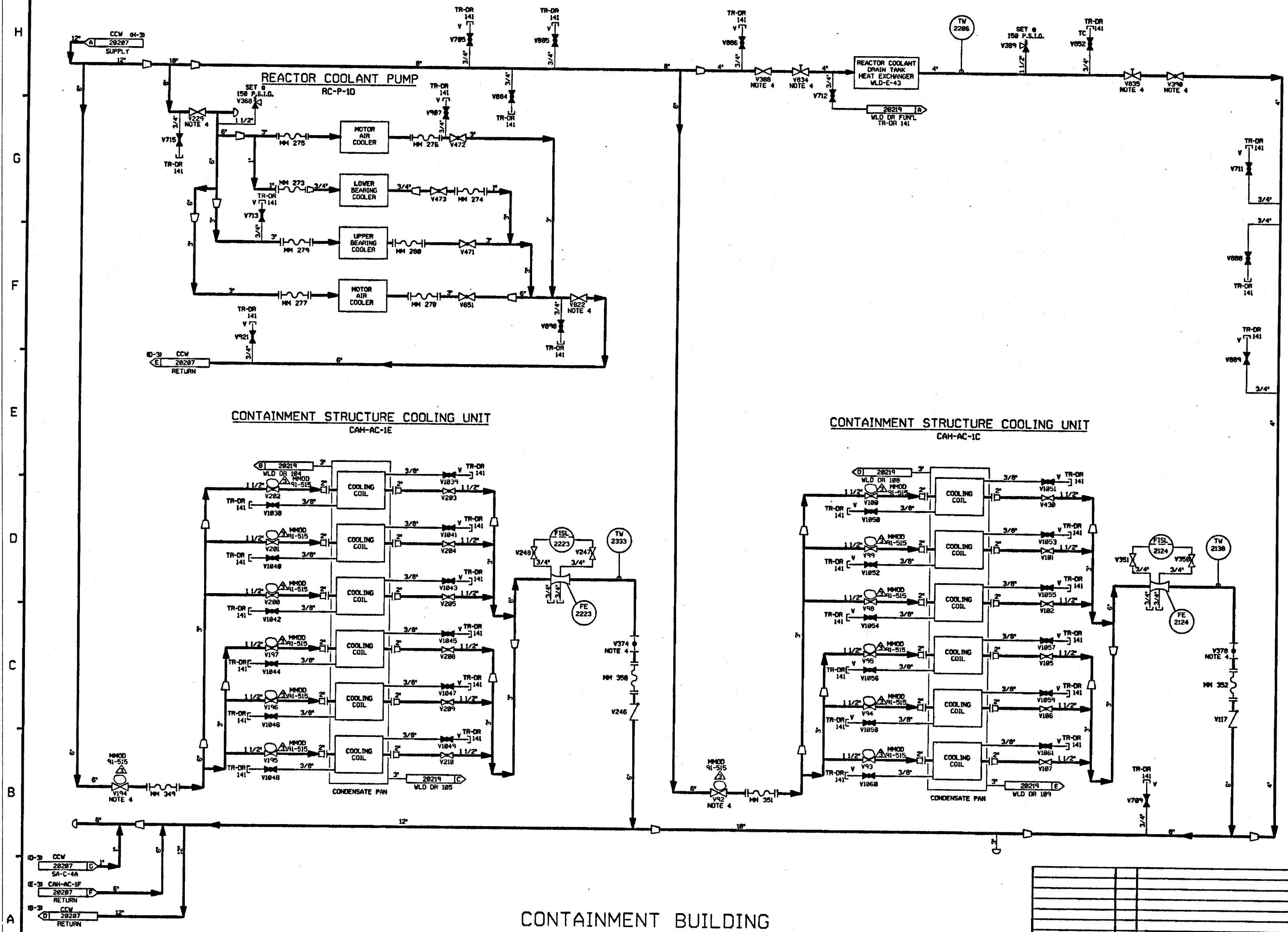
PRIMARY COMPONENT COOLING LOOP A DETAIL

PID- 1-CC-B20207

REF. DRAWING NO.	REV	TITLE
9763-F-805029	13	PCCW LOOP A SHEET 2 P&I DIAGRAM
9763-F-804981	9	PCCW LOOP A SHEET 3 P&I DIAGRAM

12 11 10 9 8 7 6 5 4 3 2 1
PID-1-CC-B20208

FOR PAID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS
REFER TO DRAWINGS PA10 - LEGEND 1 AND PA10 - LEGEND 2

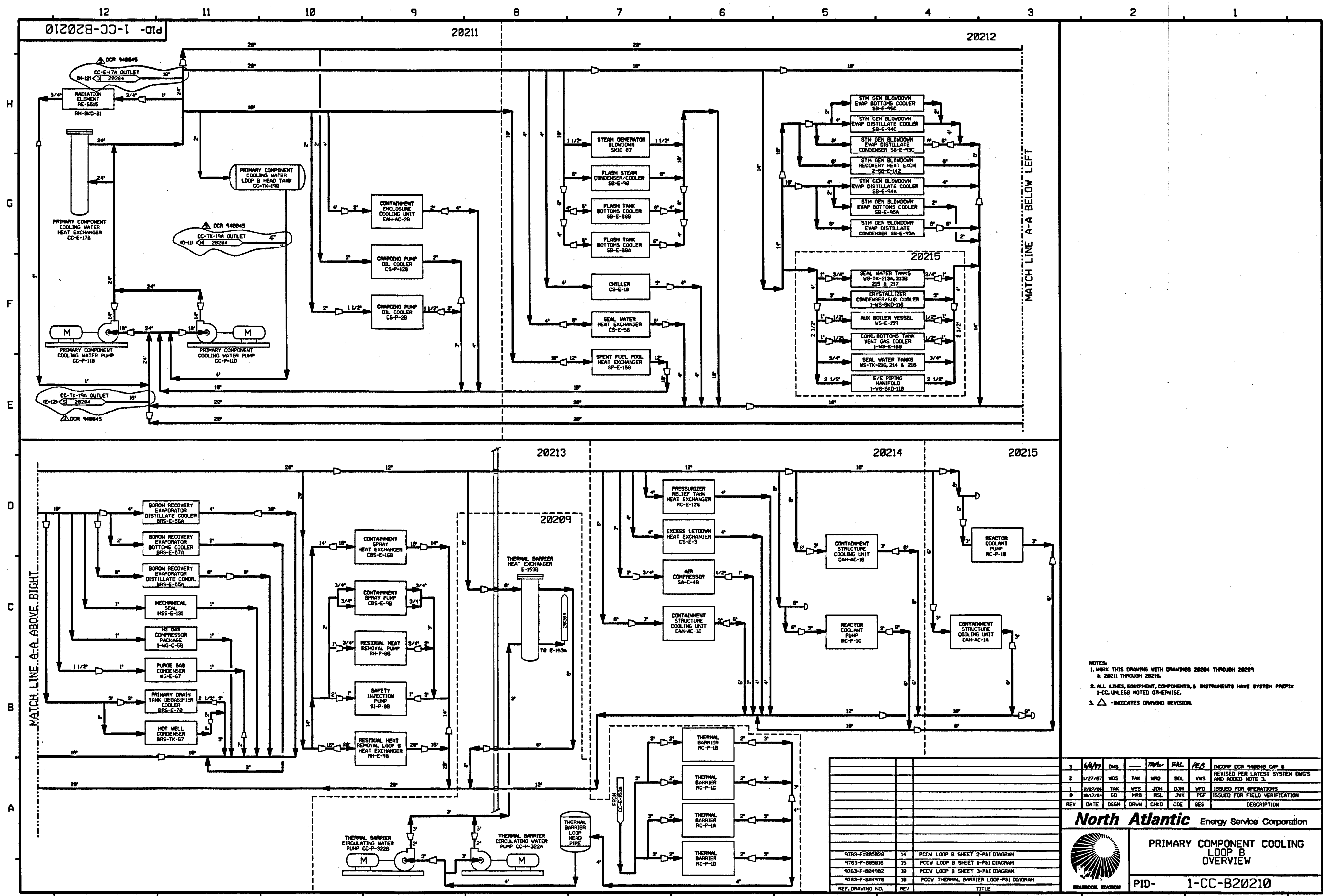


- NOTES:
- 1. WORK THIS DRAWING WITH DRAWINGS 20204, 20205, 20206, 20207, & 20209 THROUGH 20215.
 - 2. ALL LINES, EQUIPMENT, COMPONENTS & INSTRUMENTS HAVE SYSTEM PREFIX 1-CC UNLESS NOTED OTHERWISE.
 - 3. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS ARE SAFETY SAFETY CLASS 1A UNLESS NOTED OTHERWISE.
 - 4. EQUIPMENT ISOLATION VALVES LOCATED INSIDE CONTAINMENT ARE OPERABLE FROM THE CONTAINMENT ANNULUS.
 - 5. VENT & DRAIN CODE BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVES PER DESIGN STANDARD H-901 UNLESS OTHERWISE NOTED.
 - 6. Δ INDICATES REVISION LEVEL.

REV	DATE	DSGN	DRWN	CHKD	CE	LDE	DESCRIPTION
3	11/4/91	MRB		DWS	BCL	JEB	INCOMP. MMOD 91-515 CAB 2.
2	11/26/88	MRJ	OPD	WRD	BCL	RRC	REMOVED SPEC BREAKS ADDED CONT. FLAG COORD'S & NOTE 6.
1	2/27/86	TAK	WES	JDM	DJM	WFD	ISSUED FOR OPERATIONS
0	10/17/84	GD	MRB	RSL	JVK	PEF	ISSUED FOR FIELD VERIFICATION

3	11/4/91	MRB		DWS	BCL	JEB	INCOMP. MMOD 91-515 CAB 2.
2	11/26/88	MRJ	OPD	WRD	BCL	RRC	REMOVED SPEC BREAKS ADDED CONT. FLAG COORD'S & NOTE 6.
1	2/27/86	TAK	WES	JDM	DJM	WFD	ISSUED FOR OPERATIONS
0	10/17/84	GD	MRB	RSL	JVK	PEF	ISSUED FOR FIELD VERIFICATION
REV	DATE	DSGN	DRWN	CHKD	CE	LDE	DESCRIPTION
PSNH PUBLIC SERVICE OF NEW HAMPSHIRE							
PRIMARY COMPONENT COOLING LOOP A DETAIL							
SEABROOK STATION PID- 1-CC-B20208							

CONTAINMENT BUILDING



- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 28284 THROUGH 28289 & 28211 THROUGH 28216.
 2. ALL LINES, EQUIPMENT, COMPONENTS, & INSTRUMENTS HAVE SYSTEM PREFIX 1-CC, UNLESS NOTED OTHERWISE.
 3. Δ - INDICATES DRAWING REVISION.

REV	DATE	DSGN	DRWN	CHKD	CDE	SES	DESCRIPTION
3	4/4/77	DWS					INCOMP DCR 948845 CAP 8
2	1/27/87	WDS	TAK	WRD	BCL	YWS	REVISED PER LATEST SYSTEM DWGS AND REVISION NOTE 3.
1	3/22/85	TAK	WES	JOH	DJH	WFD	ISSUED FOR OPERATIONS
0	10/17/84	GO	HRB	RSL	JWK	PGF	ISSUED FOR FIELD VERIFICATION

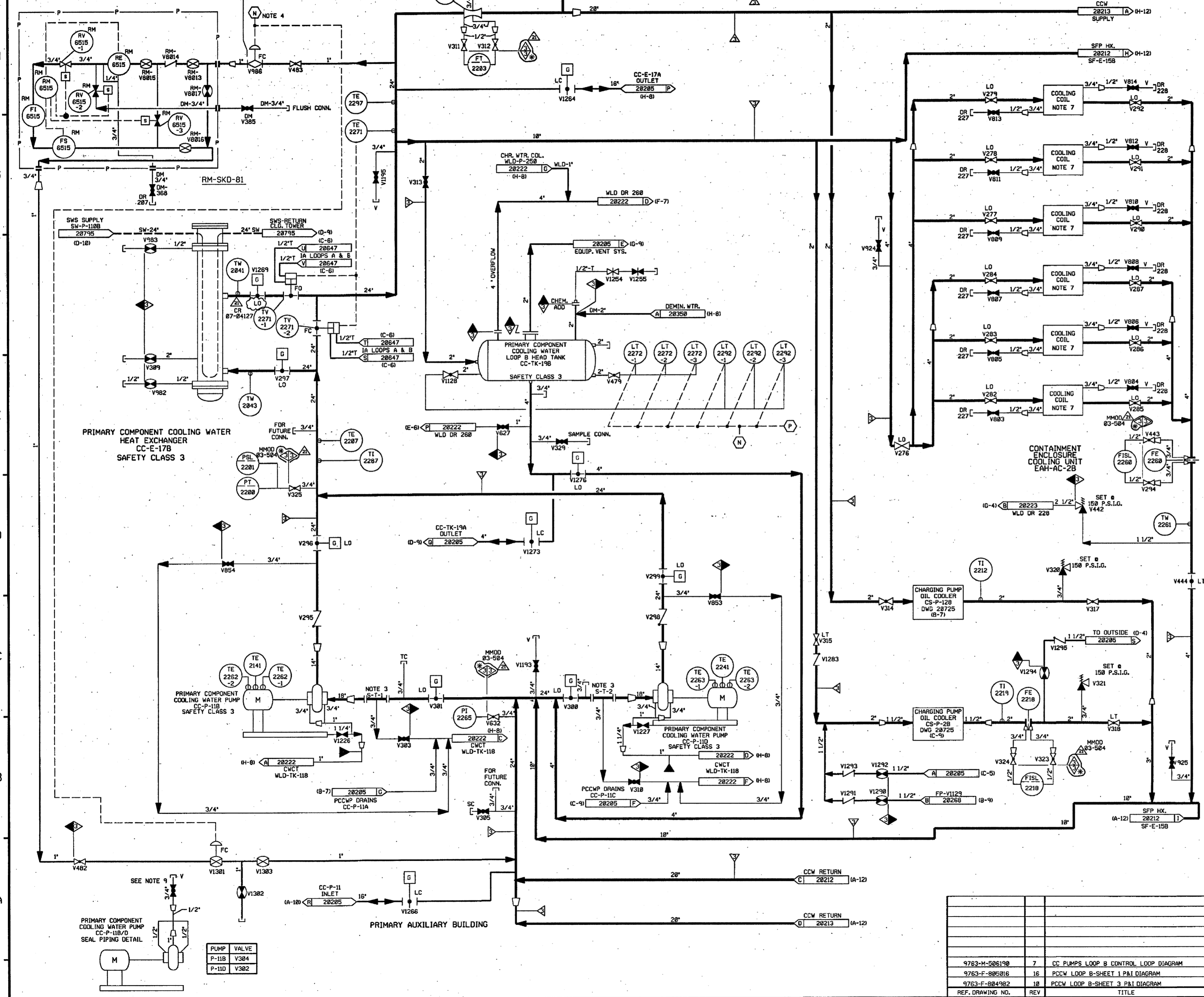
North Atlantic Energy Service Corporation

PRIMARY COMPONENT COOLING LOOP B OVERVIEW

PID- 1-CC-B20210

PID-1-CC-B20211

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



- NOTES:
- WORK THIS DRAWING WITH DRAWINGS 20204 THROUGH 20215.
 - ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX "1-CC" UNLESS NOTED OTHERWISE.
 - PERMANENT SPOOL PIECE INSTALLATION SHOWN. TEMPORARY STRAINER IS USED IN PLACE OF SPOOL PIECE DURING INITIAL FLUSHING OPERATION STRAINER TO BE REMOVED BEFORE PLANT START-UP.
 - CLOSE ON HEAD TANK TK-19B LOW LEVEL SIGNAL. SIGNAL TO CC-V447 AND CC-V448 ON DWG CC-20212, AND CC-V986, V1301 ON THIS DWG (H-11).
 - SIGNAL TO CC-V175, CC-V176, CC-V256 & CC-V257 ON DWG. CC-20213
 - VENT & DRAIN CODE BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER 1-NHY-805111 UNLESS OTHERWISE NOTED.
 - INDICATES REVISION LEVEL.
 - CONTAINMENT ENCLOSURE AIR HANDLING FOR AC-28 SEE DWG 1-MAH-20495 (B-5).
 - CONNECTION TO BE USED FOR FLUSHING SEE DWG DM-20350 (E-11) & NOTE 6.
 - QUICK DISCONNECTS MAY BE INSTALLED UPSTREAM OF PIPE CAPS AS DEEMED NECESSARY BY STATION STAFF TO FACILITATE VENT AND DRAIN OPERATIONS.

PORTIONS OF THIS DRAWING ARE NUCLEAR SAFETY RELATED

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
21	3-22-07	JM	BS	BS	INCRP MMOD 03-504 DCN 00, CR 07-04127 REV. 0
20	7/29/02	JM	MPW	BCS	INCRP CR 00-10577-01
19	6/24/02	BCS	JM	PEB	INCRP DCR 00-0020 DCN-00
18	10/25/01	BCS	MPW	TAS	REINCRP DCR 940045 CA#00
17	1/6/99	DWS	MPW	PEB	REINCRP DCR 940045 CA#00
16	11/4/98	BCS	MPW	MAP	INCRP DCR 960025 DCN# 02
15	5/26/98	MPW	BCS	MAP	REVISED PER FP 51349
14	5/28/97	DWS	MPW	VNS	INCRP DCR 960025 DCN# 0 & 960016 CA#0 & 1, ALSO RELOCATED INSTRUMENT REFERENCE NOTES "N" & "P" FROM THE BODY OF THE P&ID TO NOTE 4.
13	11-27-95	MPW	BCS	PEB	INCRP DCR 94-45 CA#2 & 1
12	7/7/95	BCL	MPW	DMD	INCRP MMOD 92-530 CA#0
11	11/29/94	DWS	MPW	MHD	INCRP MMOD 930545 CA#0
10	4/14/94	BCL	MPW	DMD	INCRP MMOD 93-517, CA-0
9	4/13/92	MRB	BCL	JEV	INCRP MMOD 91-515, CA-0
8	12/16/91	RMC	FCB	BCL	INCRP MMOD 91-511, CA#1
7	11/12/91	RMC	JM	JEV	INCRP DCR 88-447 CA#0
6	2/26/91	MRB	FCB	BCL	INCRP ECA 94/0805/98 & INCRP MMOD 98-648 CA#1
5	3/22/88	GPM	BCL	RRC	REVISED PIPING, NOTES 4 & 5 & INSTR. REFERENCE SIGNAL, ADDED NOTES 7 & 8, VENT & DRAIN DESIGNATION & CONT. DWG. NO.'S ACCORD'S, DELETED NNS-ICL BOUNDARY.
4	6/16/87	MRW	PAL	VNS	VALVES V1226 & V1227 SHOWN OPEN PER USA&I PAID. ADDED WORD OVERFLOW TO 4" LINE CODE BREAKS PUT BACK, REVISED CONT. REF. LETTERS.
3	10/3/86	BCL	MAP	RRC	INCRP ECA 19/31870 & 19/808327A, MODIFIED SKID-BL PER FP-71130, ADDED CONTINUATION REF'S & 05A, 05B, 05C, 05D, 05E, 05F, 05G, 05H, 05I, 05J, 05K, 05L, 05M, 05N, 05O, 05P, 05Q, 05R, 05S, 05T, 05U, 05V, 05W, 05X, 05Y, 05Z, 05AA, 05AB, 05AC, 05AD, 05AE, 05AF, 05AG, 05AH, 05AI, 05AJ, 05AK, 05AL, 05AM, 05AN, 05AO, 05AP, 05AQ, 05AR, 05AS, 05AT, 05AU, 05AV, 05AW, 05AX, 05AY, 05AZ, 05BA, 05BB, 05BC, 05BD, 05BE, 05BF, 05BG, 05BH, 05BI, 05BJ, 05BK, 05BL, 05BM, 05BN, 05BO, 05BP, 05BQ, 05BR, 05BS, 05BT, 05BU, 05BV, 05BW, 05BX, 05BY, 05BZ, 05CA, 05CB, 05CC, 05CD, 05CE, 05CF, 05CG, 05CH, 05CI, 05CJ, 05CK, 05CL, 05CM, 05CN, 05CO, 05CP, 05CQ, 05CR, 05CS, 05CT, 05CU, 05CV, 05CW, 05CX, 05CY, 05CZ, 05DA, 05DB, 05DC, 05DD, 05DE, 05DF, 05DG, 05DH, 05DI, 05DJ, 05DK, 05DL, 05DM, 05DN, 05DO, 05DP, 05DQ, 05DR, 05DS, 05DT, 05DU, 05DV, 05DW, 05DX, 05DY, 05DZ, 05EA, 05EB, 05EC, 05ED, 05EE, 05EF, 05EG, 05EH, 05EI, 05EJ, 05EK, 05EL, 05EM, 05EN, 05EO, 05EP, 05EQ, 05ER, 05ES, 05ET, 05EU, 05EV, 05EW, 05EX, 05EY, 05EZ, 05FA, 05FB, 05FC, 05FD, 05FE, 05FF, 05FG, 05FH, 05FI, 05FJ, 05FK, 05FL, 05FM, 05FN, 05FO, 05FP, 05FQ, 05FR, 05FS, 05FT, 05FU, 05FV, 05FW, 05FX, 05FY, 05FZ, 05GA, 05GB, 05GC, 05GD, 05GE, 05GF, 05GG, 05GH, 05GI, 05GJ, 05GK, 05GL, 05GM, 05GN, 05GO, 05GP, 05GQ, 05GR, 05GS, 05GT, 05GU, 05GV, 05GW, 05GX, 05GY, 05GZ, 05HA, 05HB, 05HC, 05HD, 05HE, 05HF, 05HG, 05HH, 05HI, 05HJ, 05HK, 05HL, 05HM, 05HN, 05HO, 05HP, 05HQ, 05HR, 05HS, 05HT, 05HU, 05HV, 05HW, 05HX, 05HY, 05HZ, 05IA, 05IB, 05IC, 05ID, 05IE, 05IF, 05IG, 05IH, 05II, 05IJ, 05IK, 05IL, 05IM, 05IN, 05IO, 05IP, 05IQ, 05IR, 05IS, 05IT, 05IU, 05IV, 05IW, 05IX, 05IY, 05IZ, 05JA, 05JB, 05JC, 05JD, 05JE, 05JF, 05JG, 05JH, 05JI, 05JJ, 05JK, 05JL, 05JM, 05JN, 05JO, 05JP, 05JQ, 05JR, 05JS, 05JT, 05JU, 05JV, 05JW, 05JX, 05JY, 05JZ, 05KA, 05KB, 05KC, 05KD, 05KE, 05KF, 05KG, 05KH, 05KI, 05KJ, 05KK, 05KL, 05KM, 05KN, 05KO, 05KP, 05KQ, 05KR, 05KS, 05KT, 05KU, 05KV, 05KW, 05KX, 05KY, 05KZ, 05LA, 05LB, 05LC, 05LD, 05LE, 05LF, 05LG, 05LH, 05LI, 05LJ, 05LK, 05LL, 05LM, 05LN, 05LO, 05LP, 05LQ, 05LR, 05LS, 05LT, 05LU, 05LV, 05LW, 05LX, 05LY, 05LZ, 05MA, 05MB, 05MC, 05MD, 05ME, 05MF, 05MG, 05MH, 05MI, 05MJ, 05MK, 05ML, 05MN, 05MO, 05MP, 05MQ, 05MR, 05MS, 05MT, 05MU, 05MV, 05MW, 05MX, 05MY, 05MZ, 05NA, 05NB, 05NC, 05ND, 05NE, 05NF, 05NG, 05NH, 05NI, 05NJ, 05NK, 05NL, 05NM, 05NO, 05NP, 05NQ, 05NR, 05NS, 05NT, 05NU, 05NV, 05NW, 05NX, 05NY, 05NZ, 05OA, 05OB, 05OC, 05OD, 05OE, 05OF, 05OG, 05OH, 05OI, 05OJ, 05OK, 05OL, 05OM, 05ON, 05OO, 05OP, 05OQ, 05OR, 05OS, 05OT, 05OU, 05OV, 05OW, 05OX, 05OY, 05OZ, 05PA, 05PB, 05PC, 05PD, 05PE, 05PF, 05PG, 05PH, 05PI, 05PJ, 05PK, 05PL, 05PM, 05PN, 05PO, 05PP, 05PQ, 05PR, 05PS, 05PT, 05PU, 05PV, 05PW, 05PX, 05PY, 05PZ, 05QA, 05QB, 05QC, 05QD, 05QE, 05QF, 05QG, 05QH, 05QI, 05QJ, 05QK, 05QL, 05QM, 05QN, 05QO, 05QP, 05QQ, 05QR, 05QS, 05QT, 05QU, 05QV, 05QW, 05QX, 05QY, 05QZ, 05RA, 05RB, 05RC, 05RD, 05RE, 05RF, 05RG, 05RH, 05RI, 05RJ, 05RK, 05RL, 05RM, 05RN, 05RO, 05RP, 05RQ, 05RR, 05RS, 05RT, 05RU, 05RV, 05RW, 05RX, 05RY, 05RZ, 05SA, 05SB, 05SC, 05SD, 05SE, 05SF, 05SG, 05SH, 05SI, 05SJ, 05SK, 05SL, 05SM, 05SN, 05SO, 05SP, 05SQ, 05SR, 05SS, 05ST, 05SU, 05SV, 05SW, 05SX, 05SY, 05SZ, 05TA, 05TB, 05TC, 05TD, 05TE, 05TF, 05TG, 05TH, 05TI, 05TJ, 05TK, 05TL, 05TM, 05TN, 05TO, 05TP, 05TQ, 05TR, 05TS, 05TT, 05TU, 05TV, 05TV, 05TW, 05TX, 05TY, 05TZ, 05UA, 05UB, 05UC, 05UD, 05UE, 05UF, 05UG, 05UH, 05UI, 05UJ, 05UK, 05UL, 05UM, 05UN, 05UO, 05UP, 05UQ, 05UR, 05US, 05UT, 05UU, 05UV, 05UV, 05UW, 05UX, 05UY, 05UZ, 05VA, 05VB, 05VC, 05VD, 05VE, 05VF, 05VG, 05VH, 05VI, 05VJ, 05VK, 05VL, 05VM, 05VN, 05VO, 05VP, 05VQ, 05VR, 05VS, 05VT, 05VU, 05VV, 05VW, 05VX, 05VY, 05VZ, 05WA, 05WB, 05WC, 05WD, 05WE, 05WF, 05WG, 05WH, 05WI, 05WJ, 05WK, 05WL, 05WM, 05WN, 05WO, 05WP, 05WQ, 05WR, 05WS, 05WT, 05WU, 05WV, 05WW, 05WX, 05WY, 05WZ, 05XA, 05XB, 05XC, 05XD, 05XE, 05XF, 05XG, 05XH, 05XI, 05XJ, 05XK, 05XL, 05XM, 05XN, 05XO, 05XP, 05XQ, 05XR, 05XS, 05XT, 05XU, 05XV, 05XW, 05XW, 05XX, 05XY, 05XZ, 05YA, 05YB, 05YC, 05YD, 05YE, 05YF, 05YG, 05YH, 05YI, 05YJ, 05YK, 05YL, 05YM, 05YN, 05YO, 05YP, 05YQ, 05YR, 05YS, 05YT, 05YU, 05YV, 05YV, 05YW, 05YX, 05YY, 05YZ, 05ZA, 05ZB, 05ZC, 05ZD, 05ZE, 05ZF, 05ZG, 05ZH, 05ZI, 05ZJ, 05ZK, 05ZL, 05ZM, 05ZN, 05ZO, 05ZP, 05ZQ, 05ZR, 05ZS, 05ZT, 05ZU, 05ZV, 05ZV, 05ZW, 05ZX, 05ZY, 05ZZ

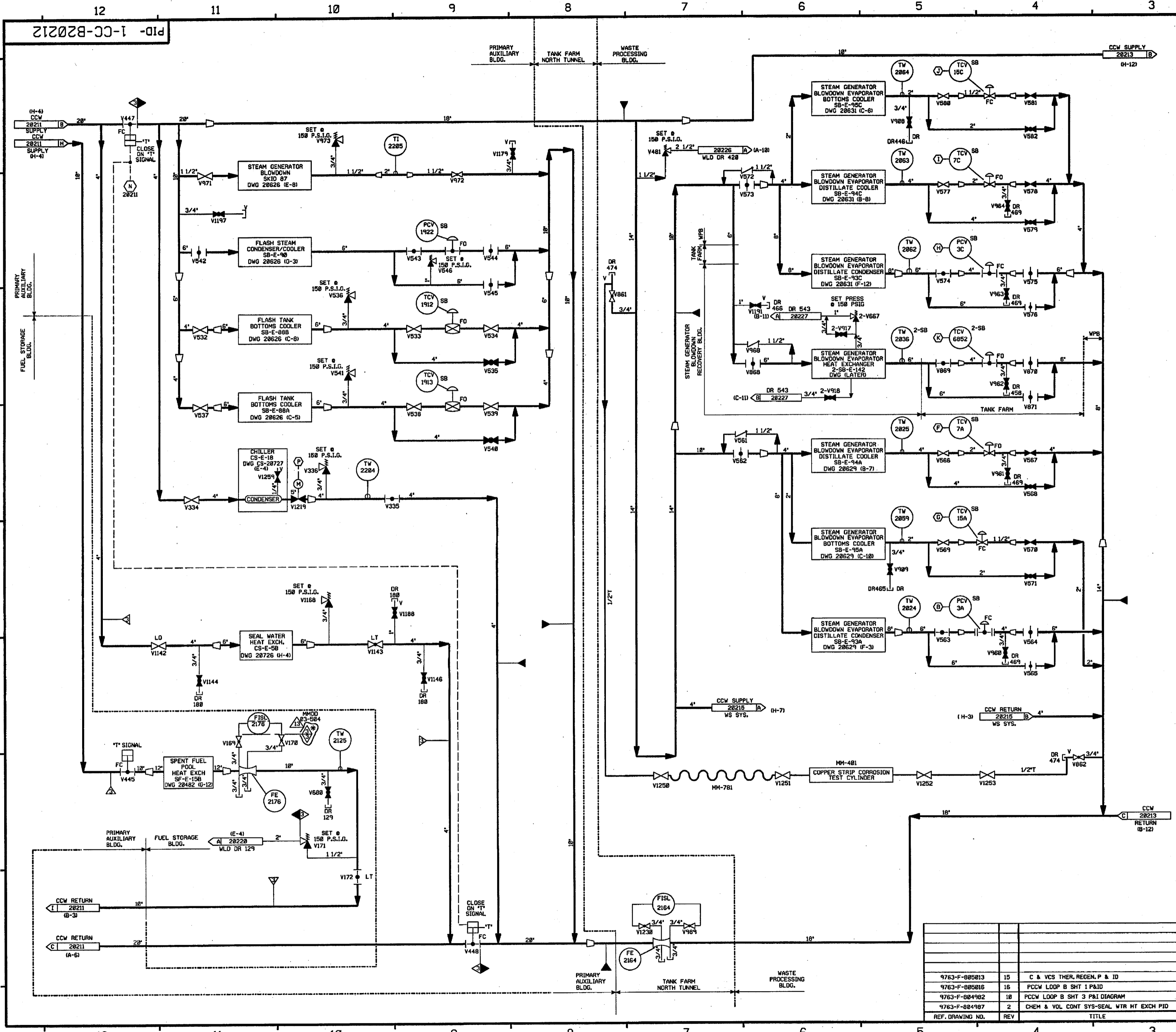
FPL ENERGY Seabrook Station

PRIMARY COMPONENT COOLING LOOP "B" DETAIL

PID-1-CC-B20211

REF. DRAWING NO.	REV	TITLE
9763-M-506190	7	CC PUMPS LOOP B CONTROL LOOP DIAGRAM
9763-F-805016	16	PCW LOOP B-SHEET 1 P&I DIAGRAM
9763-F-804982	10	PCW LOOP B-SHEET 3 P&I DIAGRAM

PID-1-CC-B20212



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

- NOTES:
- WORK THIS DRAWING WITH DRAWINGS 20224 THRU 20215.
 - ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS HAVE SYSTEM PREFIX 1-CC UNLESS NOTED OTHERWISE.
 - INSTRUMENT REFERENCES:
 - (B) FROM SB-PT-3A DWG. 1-SB-20629
 - (C) FROM SB-TE-7A DWG. 1-SB-20629
 - (D) FROM SB-TE-15A DWG. 1-SB-20629
 - (E) FROM SB-PT-3C DWG. 1-SB-20631
 - (F) FROM SB-TE-7C DWG. 1-SB-20631
 - (G) FROM SB-TE-15C DWG. 1-SB-20631
 - (H) FROM SB-TE-6052 DWG. 1-SB-20627
 - (I) CLOSE ON HEAD TANK TK-198 LOW LEVEL SIGNAL.
 - (J) TO CS-PS-374A DWG. 1-CS-20727
 - VENT & DRAIN CODE BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER 1-NHY-085111 UNLESS OTHERWISE NOTED.
 - OPERATING BANDS OF THESE CONTROL VALVES ARE ADJUSTED SUCH THAT THESE VALVES ARE CONTROLLED BETWEEN 5 TO 100% OPEN POSITION.
 - △ INDICATES REVISION LEVEL.
 - DELETED.

PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
13	10-3-06	JM	MB	MB	INCRP MMOD 03-504 DCN 00
12	6/4/03	BCS	JM	TAS	INCRP DCR 00-019 DCN-01
11	10/30/03	BCS	JM	TAS	INCRP DCR 00-019 DCN-00
10	10/16/02	JM	BCS	MPW	INCRP CR # 01-8376 REV 0
9	4/23/92	MRB	BCL	RRB	INCRP MMOD'S 91-511 CAB, 91-515 CAB & 91-622 CAB
8	10/29/90	MRB	JM	BCL	INCRP MMOD 90-601 CA 0
7	9/24/90	MRB	JM	BCL	INCRP MMOD 90-516 CA 0
6	3/22/88	GPM	BCL	RRR	REVISED NOTES 3 & 4, INST. REFERENCE SIGNAL, VALVE NUMBER, ADDED CONT DWG NUMBERS & COND'S, DELETED INS-1 CL DESIGNATION.
5	9/15/87	MPW	BCL	RRR	ADDED UNIT 2 PIPING & VALVES PER INSTALLED CONDITIONS & UE&C PAID 885637
4	8/16/87	MPW	PAL	VWS	INCRP ECA 99/1149648; ADDED FLEX HOSE VALVES V851 & V852 SHOWN OPEN AND DELETED V8001 & V8002 (N/A I&C VALVES)
3	10/3/86	PAL	MAD	RRR	ADDED 8000 VALVE NO'S & CONT. DWG REFS REVISED BUILDING BOUNDARY IDENTIFICATION, REVISED PER ERECTION ISO CC-882-06, DELETED NOTE 7.
REV	DATE	DSGN	CHKD	CE	DESCRIPTION

FPL ENERGY

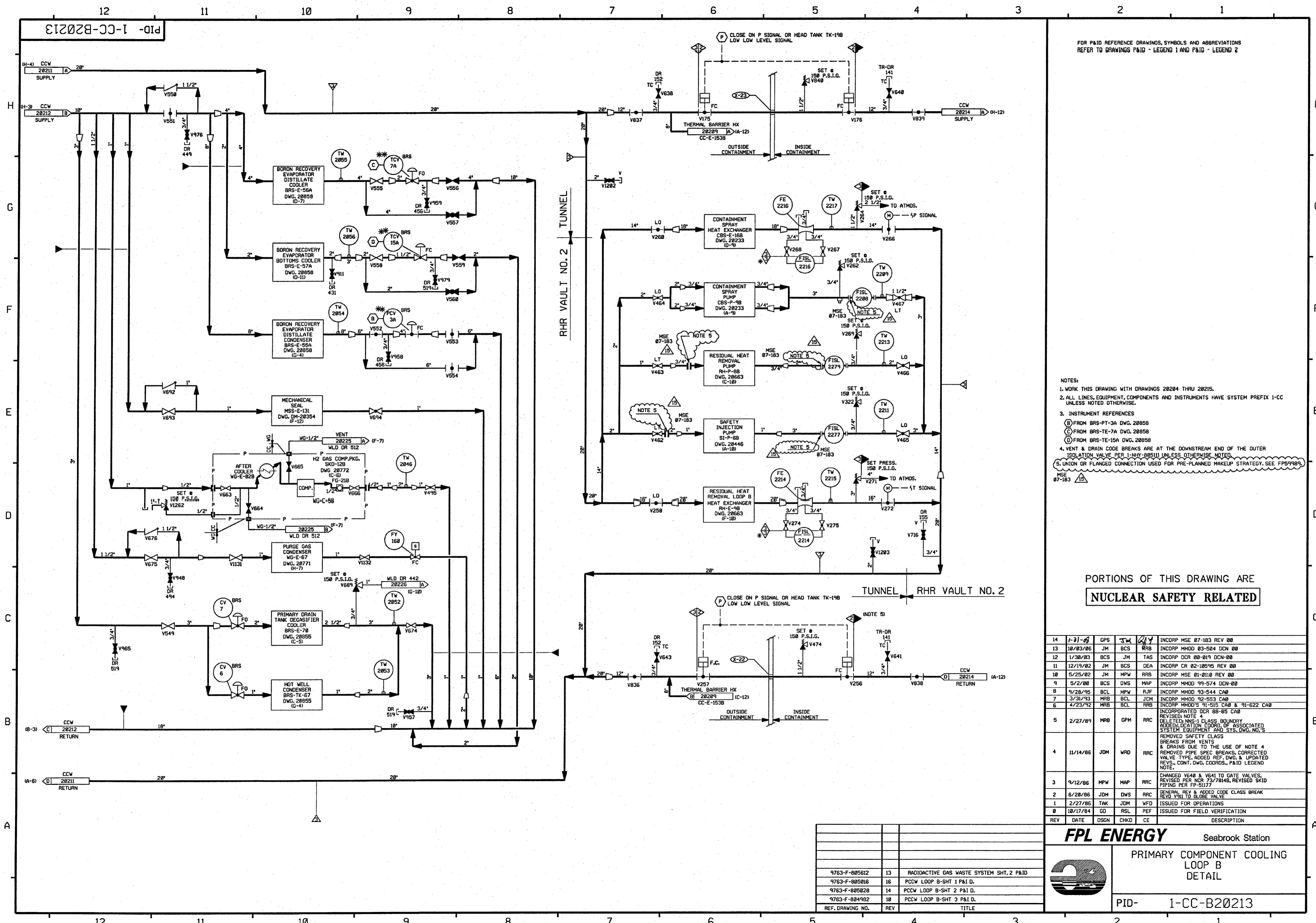
Seabrook Station

PRIMARY COMPONENT COOLING LOOP B DETAIL

PID- 1-CC-B20212

REF. DRAWING NO.	REV	TITLE
9763-F-805013	15	C & VCS THER. REGEN. P & ID
9763-F-805016	16	PCCW LOOP B SHT 1 P&ID
9763-F-804982	10	PCCW LOOP B SHT 3 P&I DIAGRAM
9763-F-804987	2	CHEM & VOL CONT SYS-SEAL WTR HT EXCH PID

PID-1-CC-B20213



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

- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 20204 THRU 20215.
 2. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX I-CC UNLESS NOTED OTHERWISE.
 3. INSTRUMENT REFERENCES:
 - (B) FROM BRS-PT-3A DWG. 20858
 - (C) FROM BRS-TE-7A DWG. 20858
 - (D) FROM BRS-TE-15A DWG. 20858
 4. VENT & DRAIN CODE BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER 1-NHY-88511 UNLESS OTHERWISE NOTED.
 5. UNION OR FLANGED CONNECTION USED FOR PRE-PLANNED MAKEUP STRATEGY. SEE FFS9989.

PORTIONS OF THIS DRAWING ARE NUCLEAR SAFETY RELATED

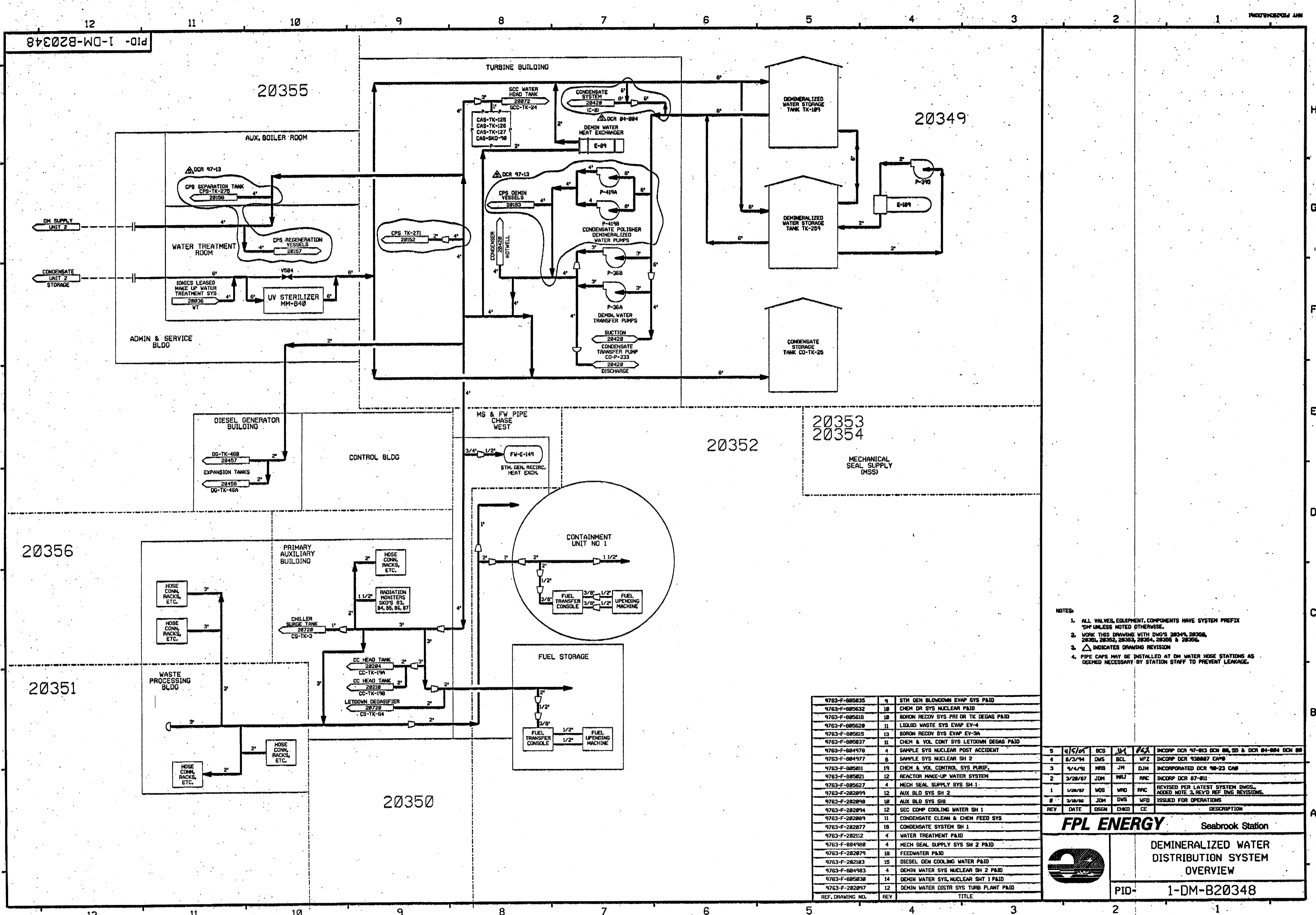
REV	DATE	DSN	CHKD	CE	DESCRIPTION
14	1-31-03	GPS	JM	JM	INCORP MSE 07-183 REV 00
13	10/03/06	JM	BCS	RRB	INCORP MMOD 03-504 DCN 00
12	1/30/03	BCS	JM	TAS	INCORP DCR 00-019 DCN-00
11	12/19/02	JM	BCS	DEA	INCORP CR 02-10595 REV 00
10	5/25/02	JM	MPW	RRB	INCORP MSE 01-0110 REV 00
9	5/2/00	BCS	DWS	MAP	INCORP MMOD 99-574 DCN-00
8	9/28/95	BCL	MPW	RJF	INCORP MMOD 93-544 CA0
7	3/31/93	MRB	BCL	JCM	INCORP MMOD 92-533 CA0
6	4/23/92	MRB	BCL	RRB	INCORP MMOD'S 91-515 CA0 & 91-622 CA0
5	2/27/89	MRB	GPM	RRB	INCORPORATED DCR 88-85 CA0 REVISED NOTE 4 DELETED NNS-1 CLASS BOUNDARY ADDED LOCATION CPORD, OF ASSOCIATED SYSTEM EQUIPMENT, AND SYS. DWG. NO.'S REMOVED SAFETY CLASS BREAKS FROM VENTS & DRAINS DUE TO THE USE OF NOTE 4 REMOVED PIPE SPEC BREAKS, CORRECTED VALVE TYPE, ADDED REF. DWG. & UPDATED REVS., CONT. DWG. COORDS., P&ID LEGEND NOTE.
4	11/14/86	JDM	WRD	RRB	CHANGED V648 & V641 TO GATE VALVES, REVISED PER NCR 73/78148, REVISED SKID PIPING PER FP-5177
3	9/12/86	MPW	MAP	RRB	GENERAL REV & ADDED CODE CLASS BREAK REV'D V911 TO GLOBE VALVE
2	8/28/86	JDM	DWS	RRB	ISSUED FOR OPERATIONS
1	2/27/86	TAK	JDM	WFD	ISSUED FOR FIELD VERIFICATION
0	10/17/84	GD	RSL	PEF	

FPL ENERGY Seabrook Station

PRIMARY COMPONENT COOLING LOOP B DETAIL

PID- 1-CC-B20213

REF. DRAWING NO.	REV	TITLE
9763-F-805612	13	RADIOACTIVE GAS WASTE SYSTEM SHT.2 P&ID
9763-F-805016	16	PCCW LOOP B-SHT 1 P&I D.
9763-F-805028	14	PCCW LOOP B-SHT 2 P&I D.
9763-F-804982	10	PCCW LOOP B-SHT 3 P&I D.



PID-1-DM-B20348

20355

20349

20352

20353
20354

20356

20351

20350

- NOTES:
1. ALL VALVES, EQUIPMENT, COMPONENTS HAVE SYSTEM PREFIX 'DM' UNLESS NOTED OTHERWISE.
 2. WORK THIS DRAWING WITH DWG'S 20344, 20306, 20301, 20305, 20303, 20304, 20308 & 20306.
 3. Δ INDICATES DRAWING REVISION
 4. PIPE CAPS MAY BE INSTALLED AT DM WATER HOSE STATIONS AS DEEMED NECESSARY BY STATION STAFF TO PREVENT LEAKAGE.

9763-F-805835	9	STM GEN BLOWDOWN EVAP SYS PAID
9763-F-805632	10	CHEM DR SYS NUCLEAR PAID
9763-F-805618	10	BORON RECOV SYS PRI DR TK DEGAS PAID
9763-F-805620	11	LIQUID WASTE SYS EVAP EV-4
9763-F-805615	13	BORON RECOV SYS EVAP EV-3A
9763-F-805837	11	CHEM & VOL CONT SYS LETDOWN DEGAS PAID
9763-F-804970	4	SAMPLE SYS NUCLEAR POST ACCIDENT
9763-F-804977	6	SAMPLE SYS NUCLEAR SH 2
9763-F-805811	19	CHEM & VOL CONTROL SYS PURIF.
9763-F-805821	12	REACTOR MAKE-UP WATER SYSTEM
9763-F-805627	4	MECH SEAL SUPPLY SYS SH 1
9763-F-282899	12	AUX BLD SYS SH 2
9763-F-282898	10	AUX BLD SYS SH
9763-F-282894	12	SEC COMP COOLING WATER SH 1
9763-F-282869	11	CONDENSATE CLEAN & CHEM FEED SYS
9763-F-282877	18	CONDENSATE SYSTEM SH 1
9763-F-282112	4	WATER TREATMENT PAID
9763-F-804988	4	MECH SEAL SUPPLY SYS SH 2 PAID
9763-F-282879	18	FEEDWATER PAID
9763-F-282103	15	DIESEL GEN COOLING WATER PAID
9763-F-804983	4	DEMIN WATER SYS NUCLEAR SH 2 PAID
9763-F-805830	14	DEMIN WATER SYS NUCLEAR SH 1 PAID
9763-F-282897	12	DEMIN WATER DISTR SYS TURB PLANT PAID
REF. DRAWING NO.	REV	TITLE

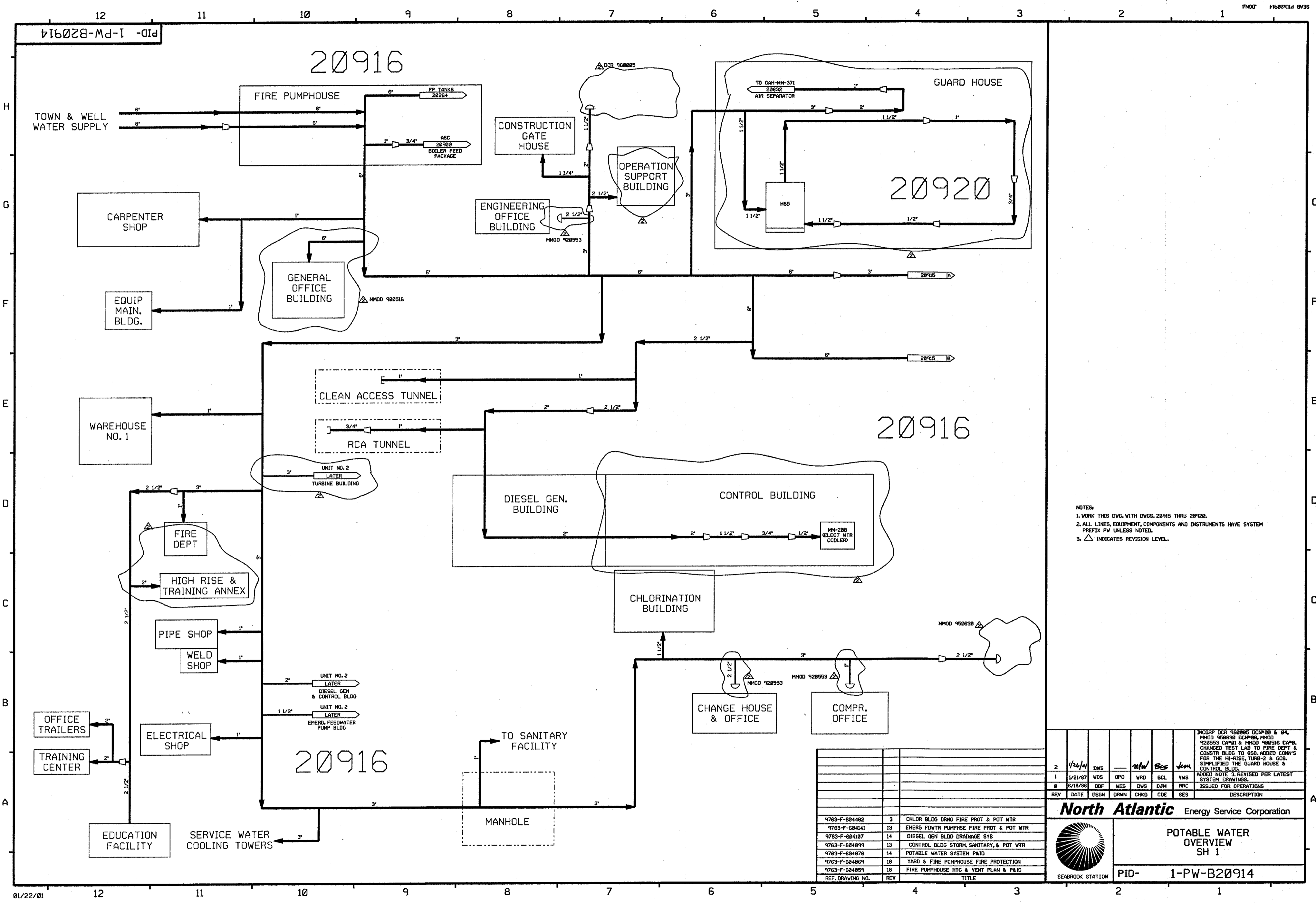
5	4/5/05	BCS	JM	06A	INCRP DCR 97-813 DCM 00, 05 & DCR 04-804 DCM 00
4	6/3/94	DWS	BCL	WFZ	INCRP DCR 93B087 CAPS
3	9/4/91	WRB	JH	DJH	INCRP DCR 90-23 CAS
2	3/28/87	JDM	WRJ	RRC	INCRP DCR 87-011
1	1/28/87	WOS	WRD	RRC	REVISED PER LATEST SYSTEM DWGS. ADDED NOTE 3, REV'D REF DWG REVISIONS.
0	3/18/86	JDM	DWS	WFD	ISSUED FOR OPERATIONS
REV	DATE	DSGN	CHKD	CE	DESCRIPTION

FPL ENERGY Seabrook Station



DEMINERALIZED WATER DISTRIBUTION SYSTEM OVERVIEW

PID-1-DM-B20348



NOTES:
 1. WORK THIS DWG. WITH DWGS. 20915 THRU 20920.
 2. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX PW UNLESS NOTED.
 3. Δ INDICATES REVISION LEVEL.

REV	DATE	DSGN	DRWN	CHKD	CDE	SES	DESCRIPTION
2	1/24/01	DWS		MLW	BES	JEM	INCORP DCR 950805 DCN#00 & 04, MM00 950630 DCN#00, MM00 920553 CAP#1 & MM00 950516 CAP#1 CHANGED TEST LAB TO FIRE DEPT & CONSTR BLDG TO USE ADDED CONNS FOR THE HI-RISE TURB-2 & GOS. SIMPLIFIED THE GUARD HOUSE & CONTROL BLDG.
1	1/21/97	MDS	OPO	VRD	BCL	VMS	ADDED NOTE 3 REVISED PER LATEST SYSTEM DRAWINGS.
0	6/18/86	DBF	WES	DWS	DJM	RRC	ISSUED FOR OPERATIONS

North Atlantic Energy Service Corporation



POTABLE WATER OVERVIEW SH 1

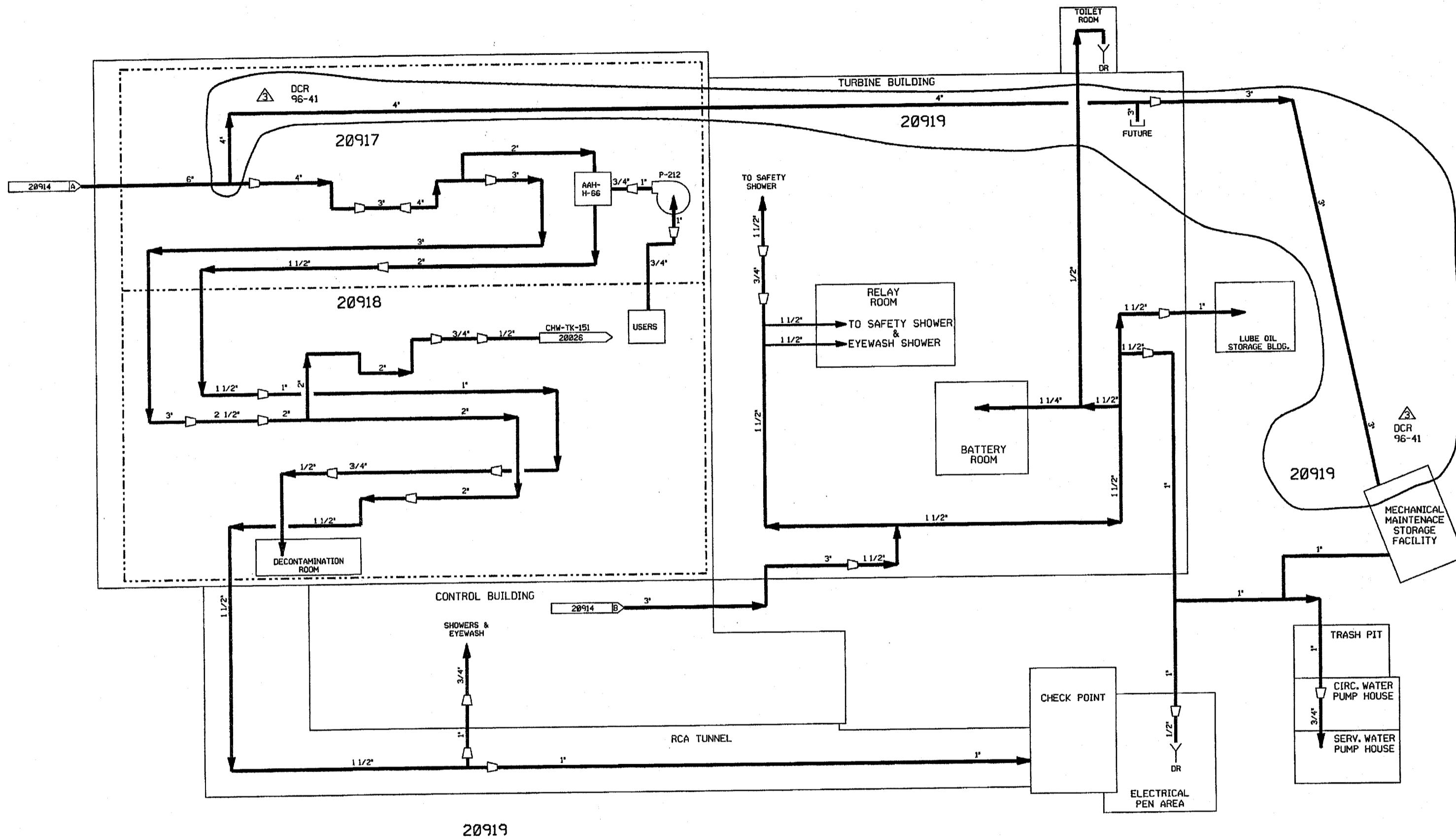
SEABROOK STATION PID- 1-PW-B20914

REF. DRAWING NO.	REV	TITLE
9763-F-004462	3	CHLOR BLDG DRNG FIRE PROT & POT WTR
9763-F-004141	13	EMERG FDWTR PUMPHSE FIRE PROT & POT WTR
9763-F-004107	14	DIESEL GEN BLDG DRAINAGE SYS
9763-F-004099	13	CONTROL BLDG STORM, SANITARY, & POT WTR
9763-F-004076	14	POTABLE WATER SYSTEM PAID
9763-F-004069	18	YARD & FIRE PUMPHOUSE FIRE PROTECTION
9763-F-004059	18	FIRE PUMPHOUSE HTG & VENT PLAN & PAID

PID-1-PW-B20915

H
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F
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D
C
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A

G
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D
C
B
A



NOTES:
 1. WORK THIS DRAWING WITH DRAWINGS 20914, 20916 THRU 20920.
 2. ALL LINES, EQUIPMENT, COMPONENT AND INSTRUMENTATION HAVE SYSTEM PREFIX PW, UNLESS NOTED OTHERWISE.
 3. Δ INDICATES REVISION LEVEL.

REV	DATE	DSGN	DRWN	CHKD	DES	DESCRIPTION	
3	1/17/89	MPW	---	---	---	INCRP DCR 96-41 DCN 00	
2	10/22/91	DWS	---	---	---	INCRP HMOO 950585 CA*6	
1	1/24/89	WDS	OPD	WRD	BCL	VMS	ADDED NOTE 3, REVISED PER LATEST SYSTEM DWGS.
0	6/18/86	DBF	HRB	DWS	DJM	RRR	ISSUED FOR OPERATIONS
REF.							
14							CON. BLDG STRM, SANITARY & POT WTR PIPING
6							ADMIN & SERV BLDG, PLUMBING SPECIAL WASTE
14							CHLOR BLDG DRAIN, FIRE PROT, POT WTR SECT DETAILS
4							ADMIN & SERV BLDG PLUMB POT WTR FLOW DIA
14							EMERG FDWTR PUMP BLDG HTR & VENT SYS PLANS
7							ELEC TUNNELS & UP & LOWER LEVELS, DRAINAGE FIRE PROT.
11							SERV. & CIRC PUMP HOUSE DRAINAGE SYS.
18							POTABLE WATERSYSTEM PIPING DIAGRAM
REF. DRAWING NO.							TITLE

North Atlantic Energy Service Corporation

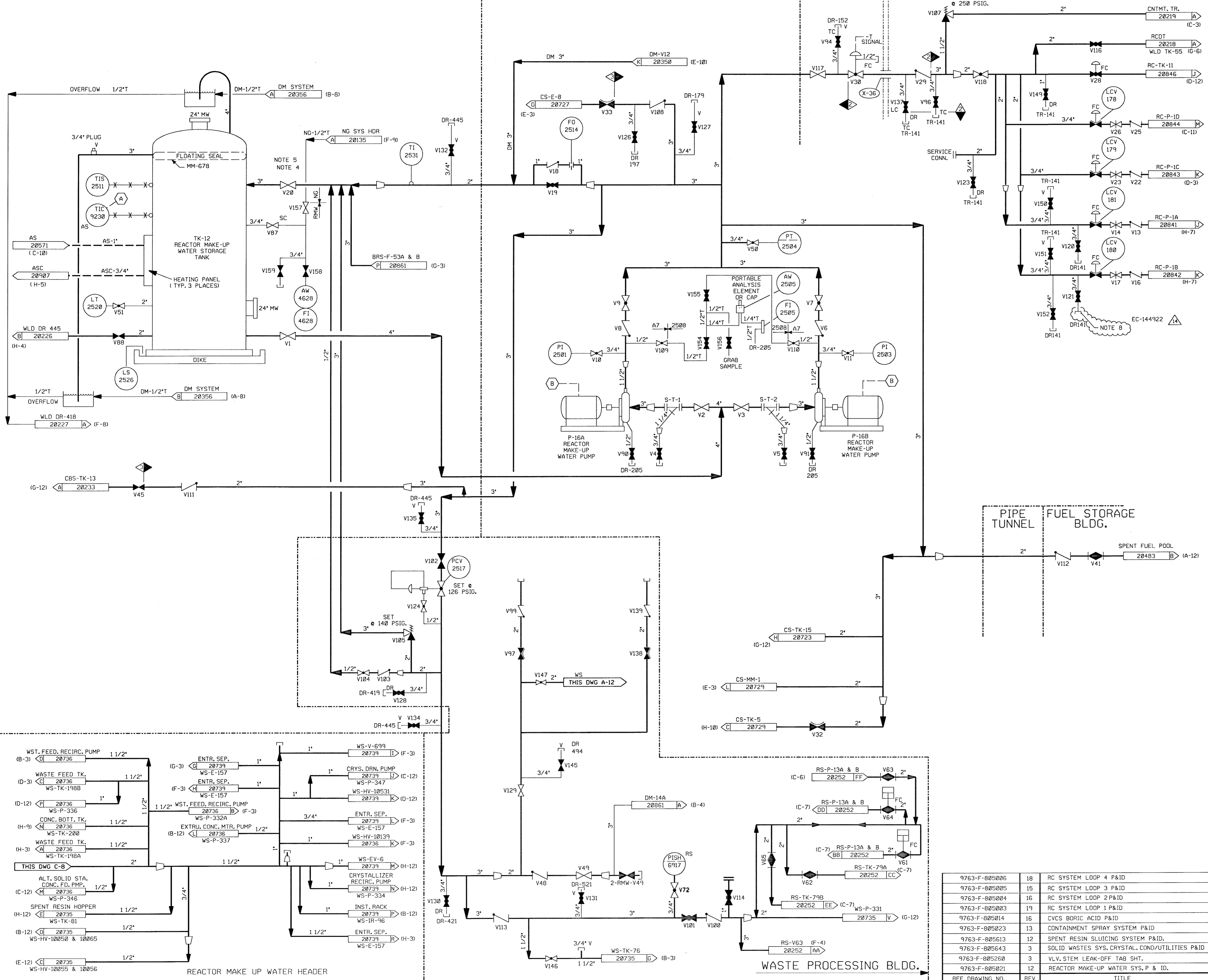


POTABLE WATER
 OVERVIEW
 SH 2
 PID- 1-PW-B20915

09C0Z8-MW-1-ID -PID

TANK FARM PRIMARY AUXILIARY BLDG. PENETRATION TUNNEL CONTAINMENT

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



- NOTES:
1. RMW IS A ONE DRAWING SYSTEM, AN OVERVIEW IS NOT REQUIRED.
 2. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX RMW, UNLESS NOTED OTHERWISE.
 3. INSTRUMENTATION REFERENCE SYMBOLS:
 - (A) TO AS-TV-9230 ON DWG. 20571.
 - (B) FROM REACTOR COOLANT MAKE-UP CONTROL.
 4. V20 INTERNALS HAVE BEEN REMOVED SO THAT V105 CANNOT BE ISOLATED.
 5. VALVE V20 IS LOCATED OUTSIDE DIKE.
 6. △ - INDICATES REVISION LEVEL.
 7. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS ARE SAFETY CLASS NNS, UNLESS NOTED OTHERWISE.
 8. ALTERNATE FILL PATH FOR THERMAL BARRIER HEAD TANK 1-CC-TK-196 FROM RMW SYSTEM. THIS FILL PATH UTILIZES A REMOVABLE HOSE ASSEMBLY THAT IS INSTALLED, PLACED IN SERVICE AND REMOVED IN ACCORDANCE WITH APPROVED STATION PROCEDURE.

PORTIONS OF THIS DRAWING ARE NUCLEAR SAFETY RELATED

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
14	12/07/10	GPS	JWL	MJP	INCORP. EC- 144922
13	01/15/01	BCS	MPW	JCM	INCORP. DCR 00-0030 DCN-00
12	5/7/99	DWS	BCS	HWM	INCORP. MM0D 970618 DCN#00
11	12/9/94	MPW	BCL	MHO	INCORP. MM0D 93-545 CA00
10	4/14/92	MRB	BCL	JEV	INCORP. MM0D'S '91-515 CA00 & '91-622 CA00
9	8/21/91	MRB	JM	PEB	INCORP. DCR 90-7 CA03
8	1/18/90	MRB	GP	IW	INCORP. DCR 89-83 CA05

7	5/17/89	GPM	MRB	RRC	INCORPORATED MM0D 89-532 CA 01 REVISED PIPING TO CLARIFY DUPLICATION OF ASSOCIATED SYSTEMS & INTERFACES. NOTE 2 ADDED. NOTE 7 DELETED. SAFETY CLASS DESIGNATION PER NOTE 7.
6	4/7/87	MRJ	GPM	VMS	ADDED V49 AND PIPING PER ERECTION ISO'S. REMOVED DUPLICATED PIPING AND EQUIP.
5	10/31/86	JDM	WRD	RRC	ADDED CONTINUATION DRAWING COORD., LEGEND NOTE & REFERENCE DRAWINGS.
4	9/12/86	MPW	MAP	RRC	REVISED PER ERECTION PIPING ISO'S RMW-1135-01, F-87015, F-87015.3. ADDED CONTINUATIONS & NOTES 5, INCORP. ECA 19/3700A.
3	6/27/86	JDM	BCL	RRC	UPDATE PER NEW REF. DWG. REV. INCORP. ECA 19/4127A, ECA 19/116077A INCORP. ECA 05/106520A ADD DWG. REFERENCES
2	5/6/86	DBF	TAK	WFD	REVISED CONTINUATIONS
1	2/5/86	WAL	JDM	WFD	INCORPORATE ECA 99/12679A ISSUE FOR OPERATIONS
0	04/25/85	DSN	JDM	WFD	ISSUED FOR FIELD VERIFICATION

9763-F-005006	18	RC SYSTEM LOOP 4 P&ID
9763-F-005005	15	RC SYSTEM LOOP 3 P&ID
9763-F-005004	16	RC SYSTEM LOOP 2 P&ID
9763-F-005003	19	RC SYSTEM LOOP 1 P&ID
9763-F-005014	16	CVCS BORIC ACID P&ID
9763-F-005023	13	CONTAINMENT SPRAY SYSTEM P&ID
9763-F-005613	12	SPENT RESIN SLUICING SYSTEM P&ID.
9763-F-005643	3	SOLID WASTES SYS. CRYSTAL. COND/UTILITIES P&ID
9763-F-005200	3	VLV. STEM LEAK-OFF TAB SHT.
9763-F-005021	12	REACTOR MAKE-UP WATER SYS. P & ID.

NEXTERA ENERGY
SEABROOK

REACTOR MAKE-UP WATER SYSTEM

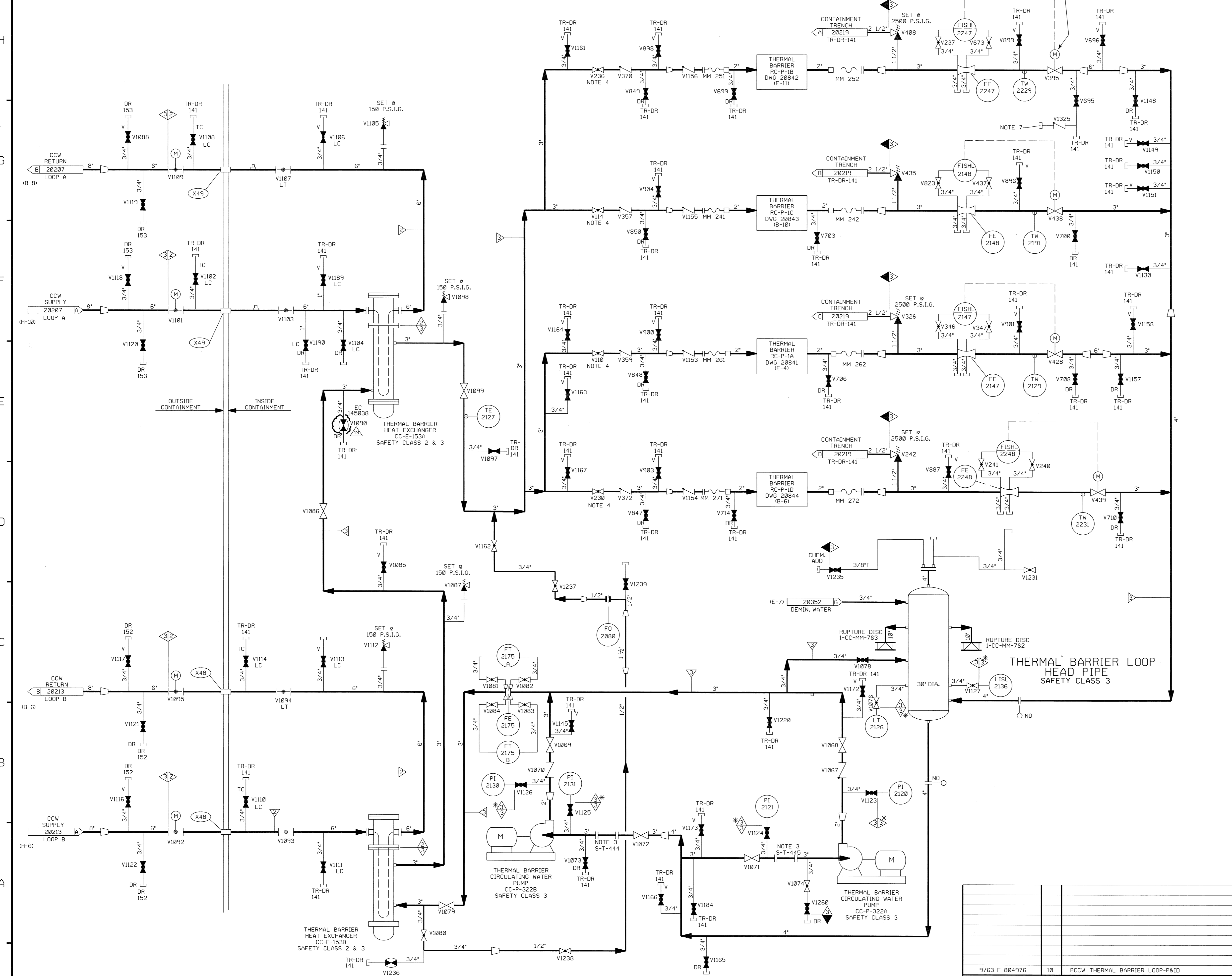
PID- 1-RMW-B20360

SECURITY-RELATED INFORMATION - WITHHELD UNDER 5 USC SECTION 552(b)(4) AND 5 USC SECTION 552(b)(7)(F)

PID-1-CC-B20209

CONTAINMENT BUILDING

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



- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 20204 THRU 20208 & 20210 THRU 20215.
 2. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX '1-CC' UNLESS NOTED OTHERWISE.
 3. PERMANENT SPOOL PIECE INSTALLATION SHOWN. TEMPORARY STRAINER IS USED IN PLACE OF SPOOL PIECE DURING INITIAL FLUSHING OPERATION. STRAINER TO BE REMOVED BEFORE PLANT START-UP.
 4. EQUIPMENT ISOLATION VALVES INSIDE CONTAINMENT ARE OPERABLE FROM THE CONTAINMENT ANNULUS.
 5. VENT, DRAIN AND TEST CONN. CODE BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER I-NHY-005111 UNLESS OTHERWISE NOTED.
 6. △ - INDICATES REVISION LEVEL.
 7. ALTERNATE FILL PATH FOR THERMAL BARRIER HEAT TANK 1-CC-TK-196 FROM RMW SYSTEM. THIS FILL PATH UTILIZES A REMOVABLE HOSE ASSEMBLY THAT IS INSTALLED, PLACED IN SERVICE AND REMOVED IN ACCORDANCE WITH APPROVED STATION PROCEDURE.

PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED

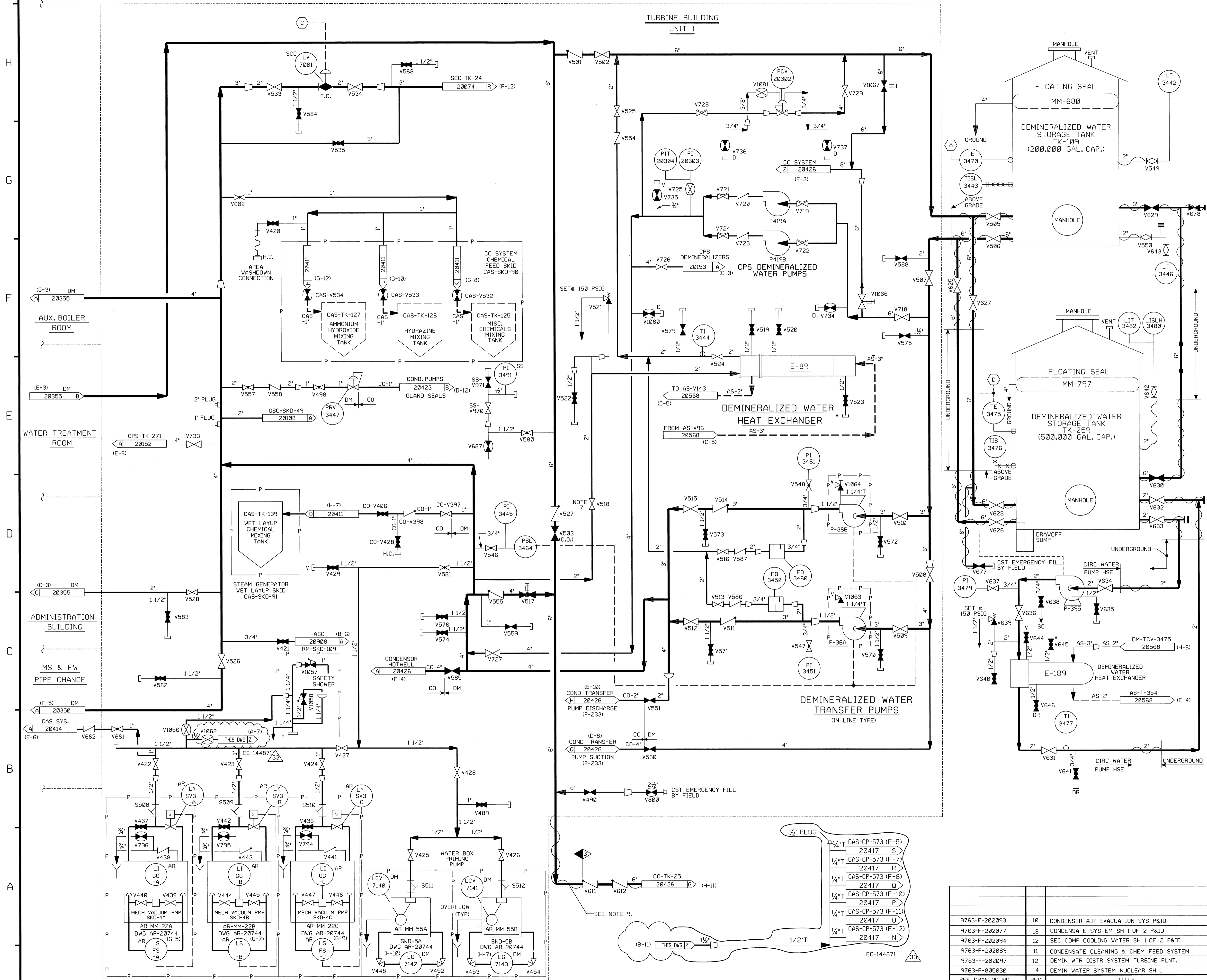
REV	DATE	DSGN	CHKD	CE	DESCRIPTION
13	10/12/12	BCS	JM	CIT	INCORP. EC-145038
12	4/19/11	GPS	JM	DD	PARTIAL INCORP. EC-145038
11	12/09/10	GPS	JM	MAP	INCORP. EC-144922
10	10/03/08	JM	BCS	RRB	INCORP. MMOD 03-504 DCN 00
9	2/14/02	BCS	MPW	DJM	REINCORP DCR 87-240 CA-07
8	4/22/94	DWS	BCL	DMO	INCORP MMOD 920533 CA*0
7	4/23/92	MRB	BCL	JEV	INCORP. MMOD 91-515 CA0
6	10/29/90	MRB	JM	BCL	ADDED: V395 LABEL INCORP. MMOD 90-106 CA0
5	12/6/88	MRB	GPM	RRC	ADDED: RC PUMP CROSS REF. DWG. NO. DELETED: NNS 1 CLASS BOUNDARY, BREAK FLANGES INCORP. DCR'S 87-82 CA5 AND 87-240 CA7 REVISOR: NOTE 5
4	6/16/87	MPW	PAL	VMS	ADDED P&ID REF NOTE; DELETED CODE BREAKS PER NOTE 5, PIPING SPEC'S & SCREEN REF.
3	8/22/86	MPW	DWS	PHH	REINCORP ECA 19/10147A DELETED CODE & SPEC BREAK SYMBOLS PER NOTE 5, DELETED NOTE 7, AND VALVE DM-V362, SHOWN ON DM P&ID, REVISED NOTE 5, REV PER UEAC P&ID, ADDED DWG LOC COORD.

NEXTERA ENERGY
SEABROOK

PRIMARY COMPONENT COOLING
THERMAL BARRIER LOOP
DETAIL

PID- 1-CC-B20209

REF. DRAWING NO.	REV	TITLE
9763-F-804976	10	PCCW THERMAL BARRIER LOOP-P&ID



- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 20348 & 20350 THROUGH 20356.
 2. ALL LINES, EQUIPMENT, COMPONENTS & INSTR. ARE SYSTEM PREFIX "DM" UNLESS OTHERWISE NOTED.
 3. ALL LINES, EQUIPMENT, COMPONENTS & INSTR. ARE SAFETY CLASS "NNS" UNLESS NOTED OTHERWISE.
 4. Δ DENOTES REVISION LEVEL.
 5. DELETED
 6. INSTRUMENT REFERENCES
 - (A) TO AS-TCV-3470 ON DWG. 20568.
 - (C) TO SCC-LC-7001 ON DWG. 20074.
 - (D) TO DM-TCV-3475 ON DWG. 20568
 7. CAUTION TO BE EXERCISED WHEN THROTTLING THIS VALVE TO REDUCE THE CONTINUOUS RECIRC FLOW IF STEAM IS AVAILABLE FOR HEAT EXCHANGER E-89. THERMAL CONDITIONS TO BE MONITORED TO ASSURE NO ADVERSE CONDITIONS EXIST.
 8. PIPE CAPS MAY BE INSTALLED AT DEMIN WATER HOSE STATIONS AS DEEMED NECESSARY BY STATION STAFF TO PREVENT LEAKAGE.
 9. THIS HEAT TRACING IS NONFUNCTIONAL.

PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
33	2/19/13	BCS	JM	JWB	INCORP EC-14487 144871 Bus 21913
32	4/12/12	BCS	JM	DJM	INCORP EC-250264
31	3/19/07	BCS	JM	RRB	INCORP MSE 06-132 REV. 00
30	4/27/06	JM	BCS	DMO	INCORP MMOD 01-501 DCN 00
29	4/20/05	BCS	JM	PAL	INCORP DCR 97-13 DCN 00, 55, 144, 180 & 201
28	1/24/05	JM	BCS	RRB	INCORP DCR 04-004 DCN 00 & 06
27	11/18/04	JM	BCS	DJM	INCORP CR 05-00453 REV. 00
26	10/28/04	BCS	JM	RRB	PARTIAL INCORP DCR 04-004 DCN 00
25	2/28/03	BCS	JM	MRB	INCORP CR 04-09047 REV. 00
24	10/1/02	JM	BCS	MPW	INCORP MSE 01-0306 REV. 00
23	3/14/02	JM	MPW	BCS	INCORP CR 01-04634 REV 00 & ECA 99/117432A
22	11/2/01	BCS	JLS	MPW	REINCORP MMOD 00-0534 DCN 00 AND CR 02-02972 REV. 01
21	10/23/01	BCS	MPW	GRM	INCORP MSE 01-0271 REV. 00
20	9/22/98	BCS	MPW	RSO	INCORP MMOD 00-534 DCN-00
19	6/9/98	BCS	MPW	RSO	INCORP MMOD 96-636 DCN-00
18	5/22/98	BCS	DWS	RSO	INCORP MMOD 96-636 DCN 00-PARTIAL
17	5/20/98	DRL	BCS	RSO	INCORP MMOD 96-636 DCN 00
16	7/30/97	MPW	BCS	DWS	INCORP MMOD 96-550 DCN 01
15	11/20/96	MPW	BCS	DJM	INCORP DCR 95-038 DCN 0, 02 & 04
14	10/23/95	MPW	DWS	MPW	INCORP MMOD 95-625 CA0
13	10/23/95	BCL	MPW	GRM	INCORP DCR 94-027 CA0
12	8/3/94	DWS	BCL	WFZ	INCORP DCR 930007 CA1
11	5/9/94	BCL	JWB	HWM	INCORP MMOD 94-519 CA0
10	3/31/93	MRB	BCL	JCM	INCORP MMOD 92-553 CA0

REF. DRAWING NO.	REV	TITLE
9763-F-202093	10	CONDENSER AIR EVACUATION SYS P&ID
9763-F-202077	18	CONDENSATE SYSTEM SH 1 OF 2 P&ID
9763-F-202094	12	SEC COMP COOLING WATER SH 1 OF 2 P&ID
9763-F-202089	11	CONDENSATE CLEANING & CHEM FEED SYSTEM
9763-F-202097	12	DEMIN WTR DISTR SYSTEM TURBINE PLNT.
9763-F-805030	14	DEMIN WATER SYSTEM NUCLEAR SH 1

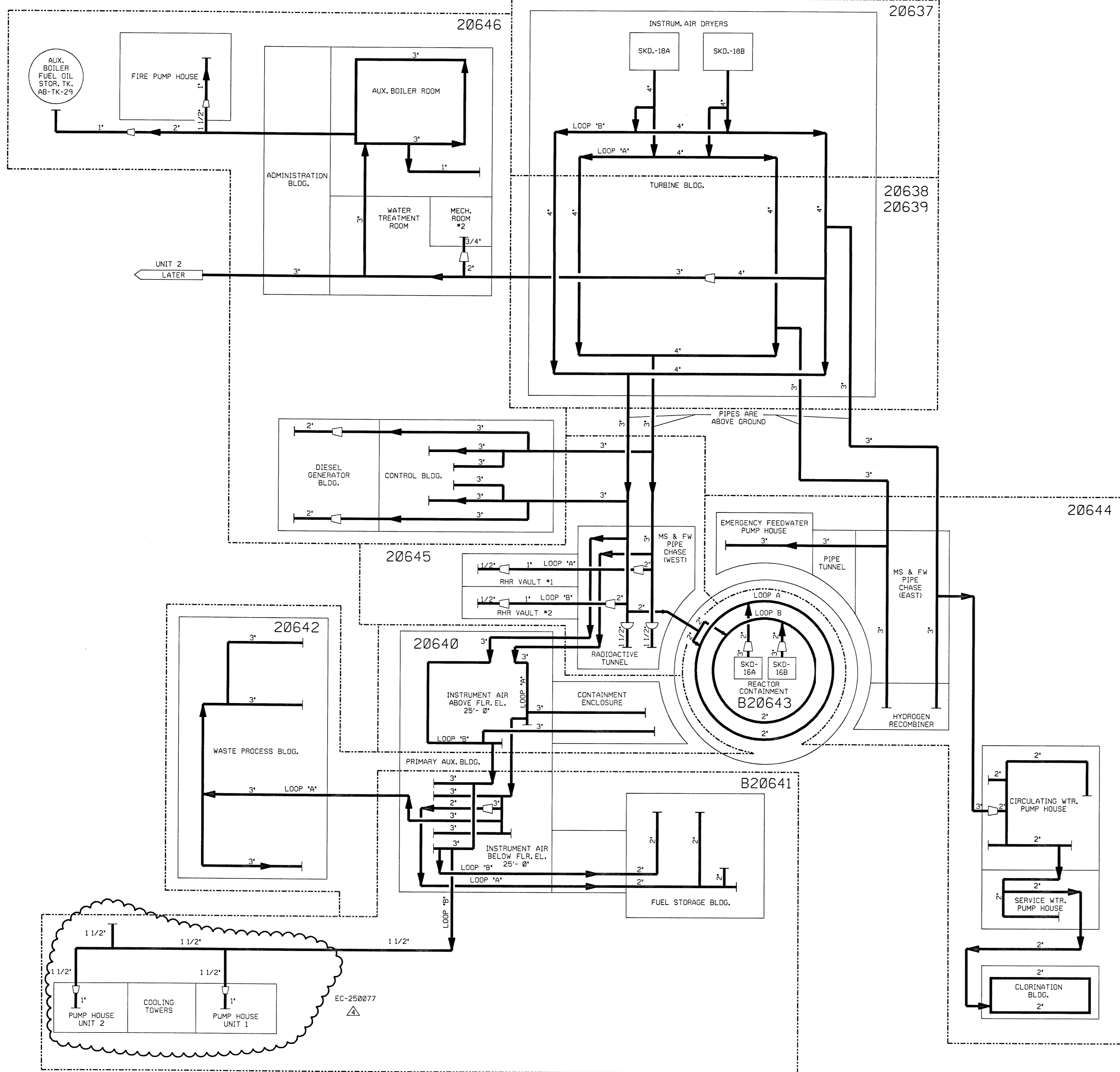
NEXTERA ENERGY
SEABROOK

DEMINERALIZED WATER DISTRIBUTION SYSTEM TURBINE BLDG

PID- 1-DM-B20349

PID-1-IA-B20636

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



- NOTES:
1. ALL LINES, EQUIPMENT COMPONENTS, AND INSTRUMENTS HAVE SYSTEM PREFIX IA, UNLESS NOTED OTHERWISE.
 2. WORK THIS DRAWING WITH DRAWINGS 20637 THRU 20646
 3. ALL PIPING RUNNING BETWEEN BUILDINGS IS UNDERGROUND EXCEPT AS NOTED.
 4. Δ INDICATES REVISION LEVEL.

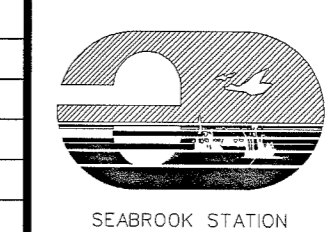
REV	DATE	DSCN	CHKD	CE	DESCRIPTION
4	11/10/10	GPS	BJS	JML	INCRP EC-250077
3	10/27/03	JM	MPW	RRB	INCRP DCR 90-004 CA 00 PER CR 03-00510 REV00
2	1/18/90	MRB	GPM	GRM	INCORPORATED DCR 86-320 CA REVISED NOTE 1, DRAWING ENHANCEMENTS ADDED; REF DWG. NOTE
1	1/21/87	MPW	WRD	VWS	REVISED PER LATEST SYSTEM DRAWINGS & ADDED NOTE 4.
0	4/25/86	DBF	JDM	WFD	ISSUED FOR OPERATIONS

REF. DRAWING NO.	REV	TITLE
9763-F-202109	9	MISC BLDGS COMP AIR HDRS P&ID
9763-F-202107	12	TURB BLDG COMP AIR HDRS P&ID
9763-F-202106	11	COMPRESSED AIR SYS. P & ID
9763-F-202108	15	MISC. BLDGS. COMP. AIR HEADER SH. 1 OF 2
9763-F-202105	11	COMPRESSER AIR SYSTEM KEY PLAN

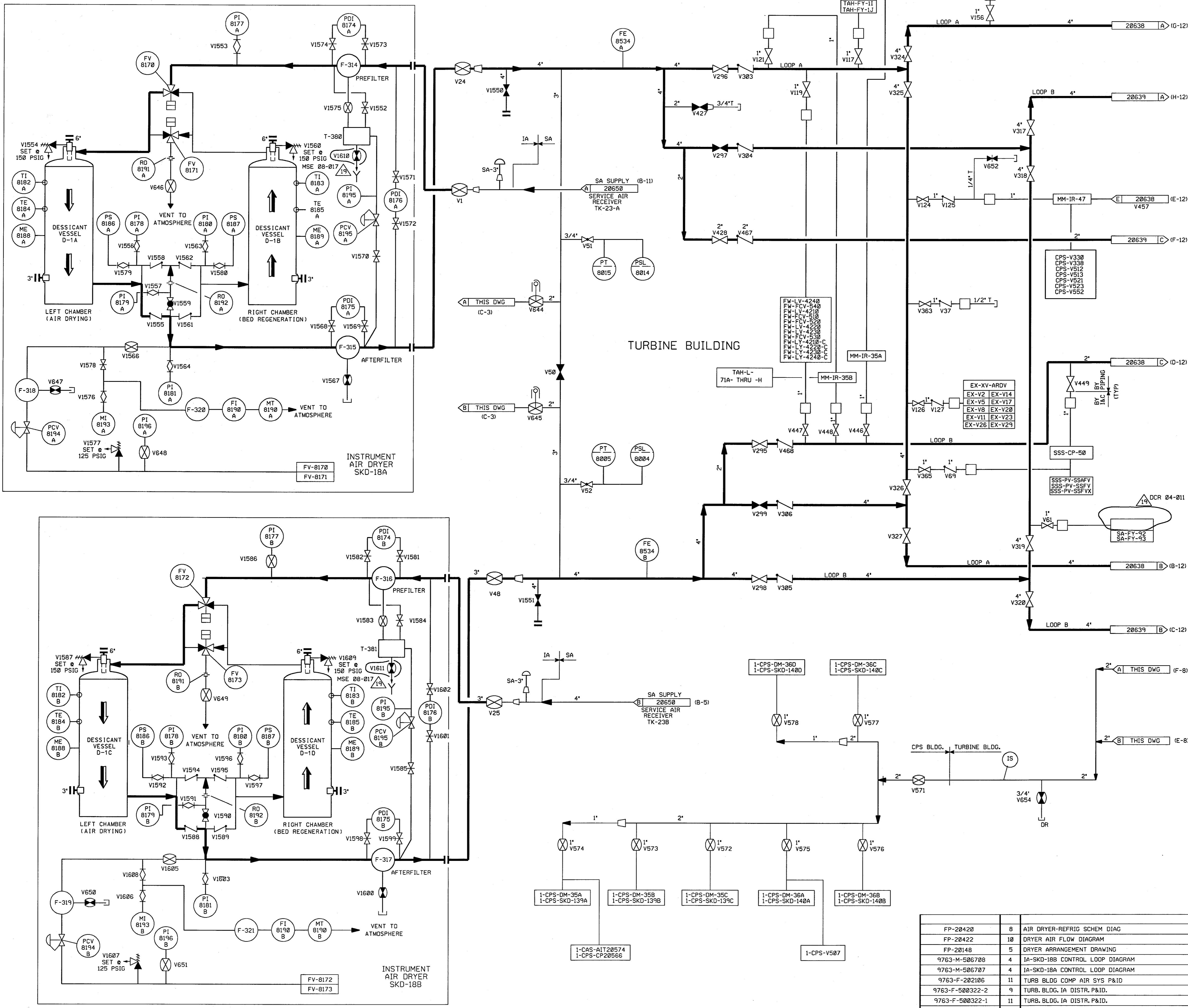
NEXTERA ENERGY
SEABROOK

INSTRUMENT AIR OVERVIEW

PID- 1-IA-B20636



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



- NOTES:
1. ALL LINES, VALVES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX IA, UNLESS NOTED OTHERWISE.
 2. WORK THIS DRAWING WITH DRAWINGS 20636 AND 20638 THRU 20646.
 3. □ DENOTES DUAL AIR FILTER.
 4. ALL LINES, VALVES, EQUIPMENT, COMPONENTS AND INSTRUMENTS ARE SAFETY CLASS NNS.
 5. P&ID SHOWN FOR INSTR. AIR DRYERS 18A & B DEPICTS AIR SIDE ONLY. FOR REFRIGERATION SIDE OF DRYERS REFER TO FP20420.
 6. INSTRUMENTATION ON THIS DWG DOWNSTREAM OF THE PIPING ROOT VALVE CONNECTIONS HAS NOT BEEN FIELD VERIFIED; EXCEPT V447, V448, V446, V117, V156, V121, V119, & SUPPLY TO IA-MM-759.
 7. △ INDICATES REVISION LEVEL
 8. VALVE SYMBOL MAY NOT BE REPRESENTATIVE OF INSTALLED COMPONENT TYPE; REFER TO VALVE LIST.

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
19	6/5/08	JM	APS	USA	INCCORP DCR 04-011 DCN 00 & MSE 08-017 REV 00
18	11/30/05	JM	BCS	DEA	INCCORP CR 05-09387 REV 00, REINCCORP DCR 92-004 CA00
17	4/19/05	BCS	JM	PAL	INCCORP DCR 97-13 DCN 58, 55, 174
16	12/17/02	BCS	JM	MKC	INCCORP DCR 00-0014 DCN-00, 01, 02, 07
15	10/31/02	BCS	MPW	MKC	INCCORP DCR 00-0014, DCN-11
14	10/04/02	BCS	MPW	MKC	PARTIAL INCCORP DCR 00-0014, DCN-00
13	9/30/02	BCS	MPW	MKC	PARTIAL INCCORP DCR 00-0014, DCN-00
12	8/21/02	BCS	MPW	MKC	PARTIAL INCCORP DCR 00-0014, DCN-00
11	5/22/01	BCS	MPW	MKC	INCCORP ECA 99/1172678
10	6/15/00	BCS	MPW	JCM	INCCORP DCR 98-41 DCN-00
9	6/16/97	MPW	DWS	DJM	REINCCORP DCR 930016 CA*1
8	1/31/96	BCS	MPW	RSG	INCCORP MMOD 95-570 CA-0
7	3/24/94	DWS	BCL	WFZ	INCCORP DCR 930016 CA*1
6	11/10/92	MRB	DWS	IW	INCCORP DCR 92-004 CA0
5	10/29/90	MRB	DSB	BCL	INCCORP MMOD 90-601 CA00
4	8/11/88	GPM	APL	RRC	INCCORP DCR 86-341CA4; REVISED NOTE 6 ADDED DISCIPLINE BOUNDARY
3	12/28/87	MPW	BCL	DJM	INCCORPORATE DCR 87-371
2	10/28/87	MAP	BCL	RRC	INCCORP ECA 99/117378C, PROVIDED LINE SIZES FOR SKID PIPING; ADDED COUPLINGS, FLANGES & MISC. ITEMS PER F.P. ADDED CONTINUATION FLAG COORDINATES; ADDED NOTES 5, 6 & 7.
1	6/27/86	JDM	WRD	RRC	FLANGES ADDED, V449 RELOCATED PER NHY WALKDOWN; ADDED LINE SIZES TO SKID PIPING; ADDED REF. DWGS.
0	4/25/86	DBF	VNK	WFD	ISSUED FOR OPERATIONS

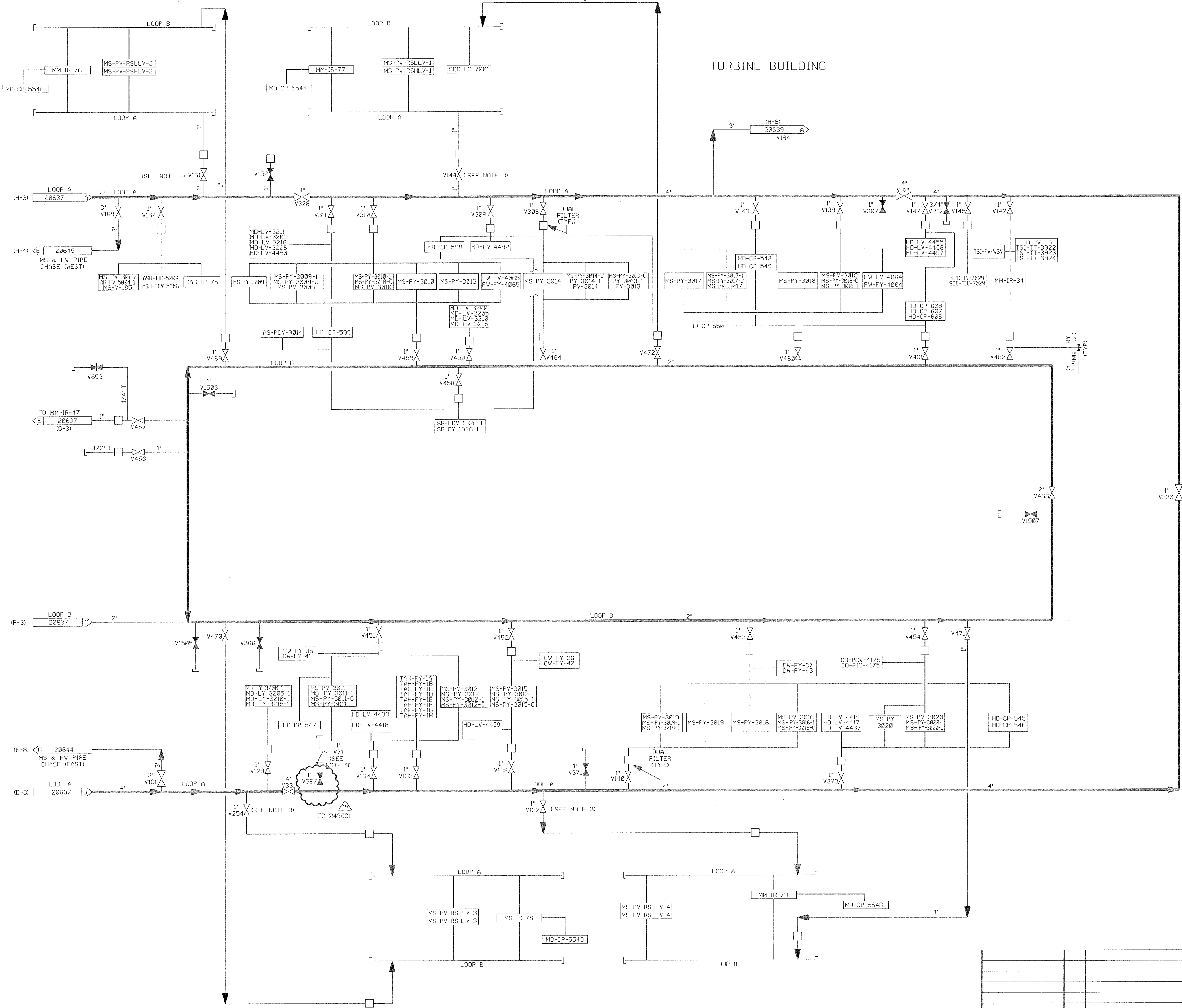
REF. DRAWING NO.	REV	TITLE
FP-20420	8	AIR DRYER-REFRIG SCHEM DIAG
FP-20422	10	DRYER AIR FLOW DIAGRAM
FP-20148	5	DRYER ARRANGEMENT DRAWING
9763-M-506708	4	IA-SKD-18B CONTROL LOOP DIAGRAM
9763-M-506707	4	IA-SKD-18A CONTROL LOOP DIAGRAM
9763-F-282106	11	TURB BLDG COMP AIR SYS P&ID
9763-F-500322-2	9	TURB. BLDG. IA DISTR. P&ID.
9763-F-500322-1	11	TURB. BLDG. IA DISTR. P&ID.
9763-F-202107	12	TURB. BLDG. COMP. AIR HDRS. P&ID.

FPL ENERGY Seabrook Station

INSTRUMENT AIR
TURBINE BUILDING
DETAIL

PID- 1-1A-B20637

1-IA-B20638



TURBINE BUILDING

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

- NOTES:
- ALL LINES, VALVES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX IA, UNLESS NOTED OTHERWISE.
 - WORK THIS DRAWING WITH DRAWINGS 20636, 20637 & 20639 THRU 20646.
 - THE FOLLOWING VALVES ARE FOR SERVICING THE OPERATING FLOOR, V-254, V-132, V-144 & V-151.
 - DENOTES DUAL AIR FILTER
 - ALL LINES, VALVES, EQUIPMENT, COMPONENTS AND INSTRUMENTS ARE SAFETY CLASS NNS, UNLESS NOTED OTHERWISE.
 - INSTRUMENTATION ON THIS DWG, DOWNSTREAM OF THE PIPING ROOT VALVE CONNECTION HAS NOT BEEN FIELD VERIFIED; EXCEPT SUPPLY TO IA-MM-760.
 - SYSTEM DESCRIPTION IS SD-4.
 - VALVE SYMBOL MAY NOT BE REPRESENTATIVE OF INSTALLED COMPONENT TYPE, REFER TO VALVE LIST.
 - INTERVALS OF IA-V71 HAVE BEEN REMOVED AND VALVE IS NON-FUNCTIONAL.

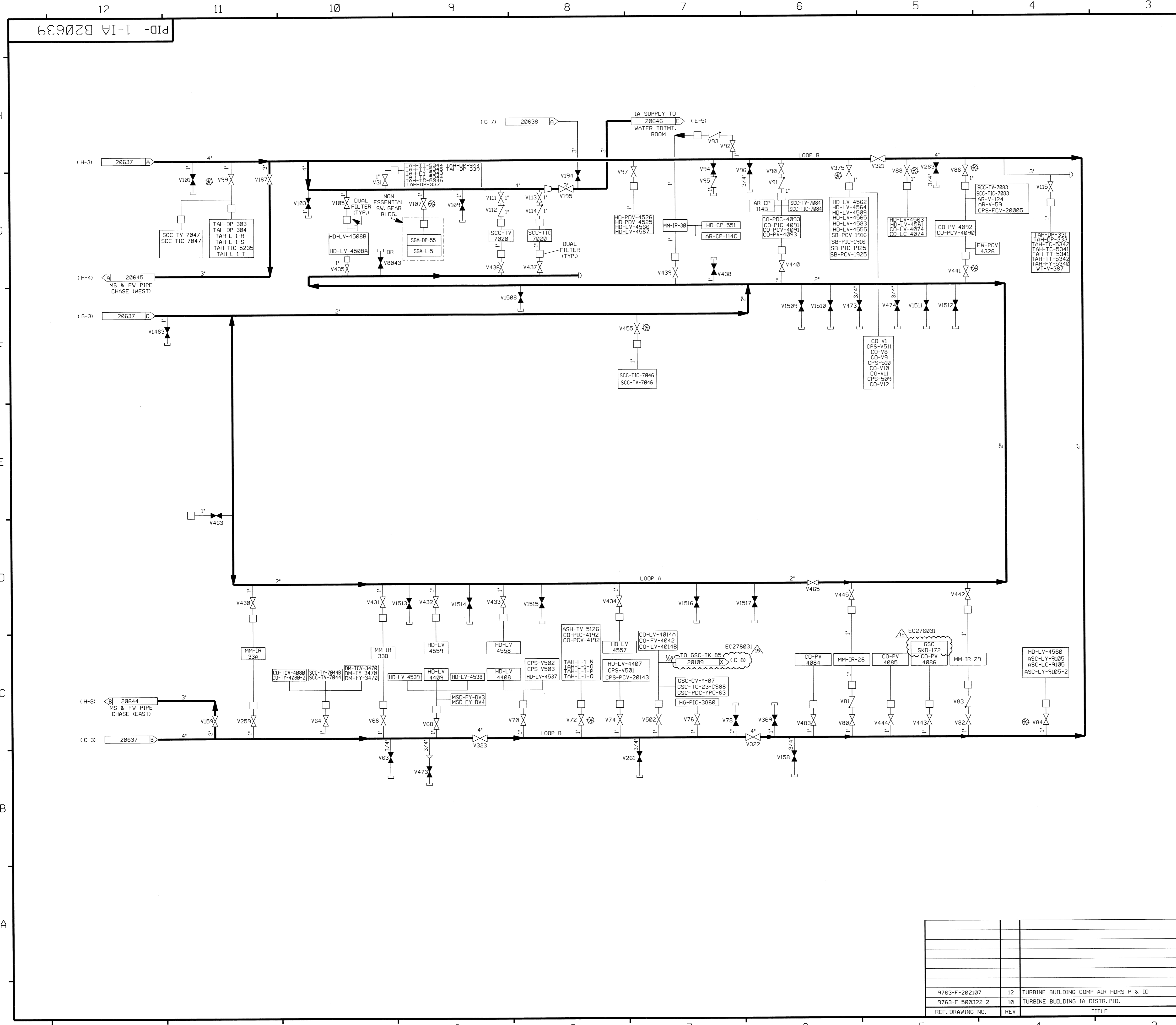
REV	DATE	DSGN	CHKD	CE	DESCRIPTION
15	10/21/08	GPS	JW	BS	INCCORP. EC 249601
14	11/30/05	JM	BCS	DEA	INCCORP. CR 05-09307 REV. 00 & DWG 202294 REV 5 AND MSE 03-208 REV 00; REINCCORP. DCR 92-004 CA02
13	2/18/05	BCS	JM	RRB	INCCORP. CR 03-06014 REV. 00
12	12/17/02	BCS	JM	MKC	INCCORP. DCR 00-014 DCN-02
11	6/19/97	MPW	DWS	RSG	INCCORP. DCR 94-03 DCN 07
10	6/18/97	MPW	DWS	GRM	INCCORP. DCR 95-39 CA 29 & 46
9	1/31/97	BCS	DWS	RSG	INCCORP. MMOD 95-570 CA-0
8	12/2/95	BCL	MPW	RJF	REINCCORP. DCR 91-12 CA0 & 95-39 CA 0
7	11/10/92	MRB	DWS	IW	INCCORP. DCR 92-4 CA0
6	9/9/92	MRB	DWS	IW	INCCORP. DCR 91-6 CA0
5	4/28/92	DWS	BCL	RSG	INCCORP. MMOD 900616 CA0
4	10/10/91	MRB	JM	IW	PARTIAL INCCORP. OF DCR 91-6 CA0
3	8/24/89	MRB	BCL	IW	INCCORP. DCR 89-31 CA 0
2	8/11/88	GPM	APL	RRC	INCCORP. DCR 86-341CA4 & DR 02-189A REVISED; NOTE 5 & 6, ADDED DISCIPLINE BOUNDARY
1	10/24/86	MRJ	WRD	PHH	REVISED REF. DDC'S, & DRAFTING ERRORS ADDED; NOTES 6 & 7
0	4/29/86	DBF	JDM	WFD	ISSUED FOR OPERATIONS

NEXTERA ENERGY
SEABROOK

INSTRUMENT AIR
TURBINE BUILDING
DETAIL

PID- 1-IA-B20638

REF. DRAWING NO.	REV	TITLE
9763-F-202107	12	TURB BLDG COMP AIR HORS P&ID
9763-F-500322-1	13	TURB BLDG IA DISTRIB. P&ID
9763-F-500322-2	10	TURB. BLDG. IA DISTR. PID



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

- NOTES:
1. ALL PIPING, VALVES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS HAVE SYSTEM PREFIX IA, UNLESS NOTED OTHERWISE.
 2. WORK THIS DRAWING WITH DRAWINGS 20636 THRU 20638, & 20640 THRU 20646.
 3. DENOTES DUAL AIR FILTER.
 4. ALL PIPING, VALVES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS ARE SAFETY CLASS NNS, UNLESS NOTED OTHERWISE.
 5. DELETED
 6. INDICATES REVISION LEVEL
 7. VALVE SYMBOL MAY NOT BE REPRESENTATIVE OF INSTALLED COMPONENT TYPE, REFER TO VALVE LIST.
 8. INDICATES INSTRUMENTATION DOWNSTREAM OF PIPING ROOT VALVE HAS BEEN VERIFIED. SEE INSTRUMENT AIR DETAIL DRAWING I-NHY-550007.

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
15	10/13/12	JM	RLS	DA	INCORP. EC276031
14	10/17/06	BCS	JM	DOD	INCORP. DCR 05-004 DCN-01
13	4/22/05	BCS	GPS	PAL	INCORP. DCR 97-13 DCN-00, 50, DCR 02-016 DCN-12, DCR 02-015 DCN-00
12	2/18/05	BCS	JM	RRB	INCORP. CR 03-00747, 03-00749, 03-06014, 03-04137, 03-06016, 05-01992
11	2/7/05	BCS	JM	PAL	INCORP. DCR 97-13, DCN-124
10	11/11/00	MPW	DWS	STB	INCORP. MM0D 99-511 DCN 00 7 06
9	6/18/97	MPW	DWS	GRM	INCORP. MM0D 96-550 DCN 01, DCR'S 92-59 CA 0, 95-39 CA 29 & DCN
8	1/31/96	BCS	MPW	RSB	INCORP. MM0D 95-570 CA0
7	11/6/92	MRB	BCL	RSB	INCORP. DCR 92-20, CA-06 AND DCR 91-40 CA0,1
6	11/21/90	WDS	RRC	BEB	INCORP. DCR 90-027 CA02
5	10/12/90	MRB	FCB	ES	INCORP. DCR 87-138 CA0
4	3/31/90	MRB	HP	RRC	INCORP. DCR 90-9 CA0 DELETED; NOTE 5
3	12/29/89	MRB	HP	WFD	INCORP. MM0D 89-546 CA02 REVISED NOTE 4
2	11/26/86	WDS	WRD	RRC	REMOVED CHANGE ITEM 1 PER ASBUILT CONDITION, REMOVED CHG ITEM 2-DETAIL WAS FOR UNIT 2 ONLY. REVISED DRAFTING ERRORS, REINSTATED V-455 PER DR 82/189A, ADD'D CONT DWG REF COORD. & NOTE 5 & 6.
1	6/23/86	CB	VNK	RRC	REVISED PER DR 82/189A
0	4/25/86	CB	JDM	WFD	ISSUED FOR OPERATIONS

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
9763-F-202107	12	TURBINE BUILDING COMP AIR HORS P & ID			
9763-F-500322-2	10	TURBINE BUILDING IA DISTR. PID.			
REV	DATE	DSGN	CHKD	CE	DESCRIPTION



INSTRUMENT AIR TURBINE BUILDING DETAIL

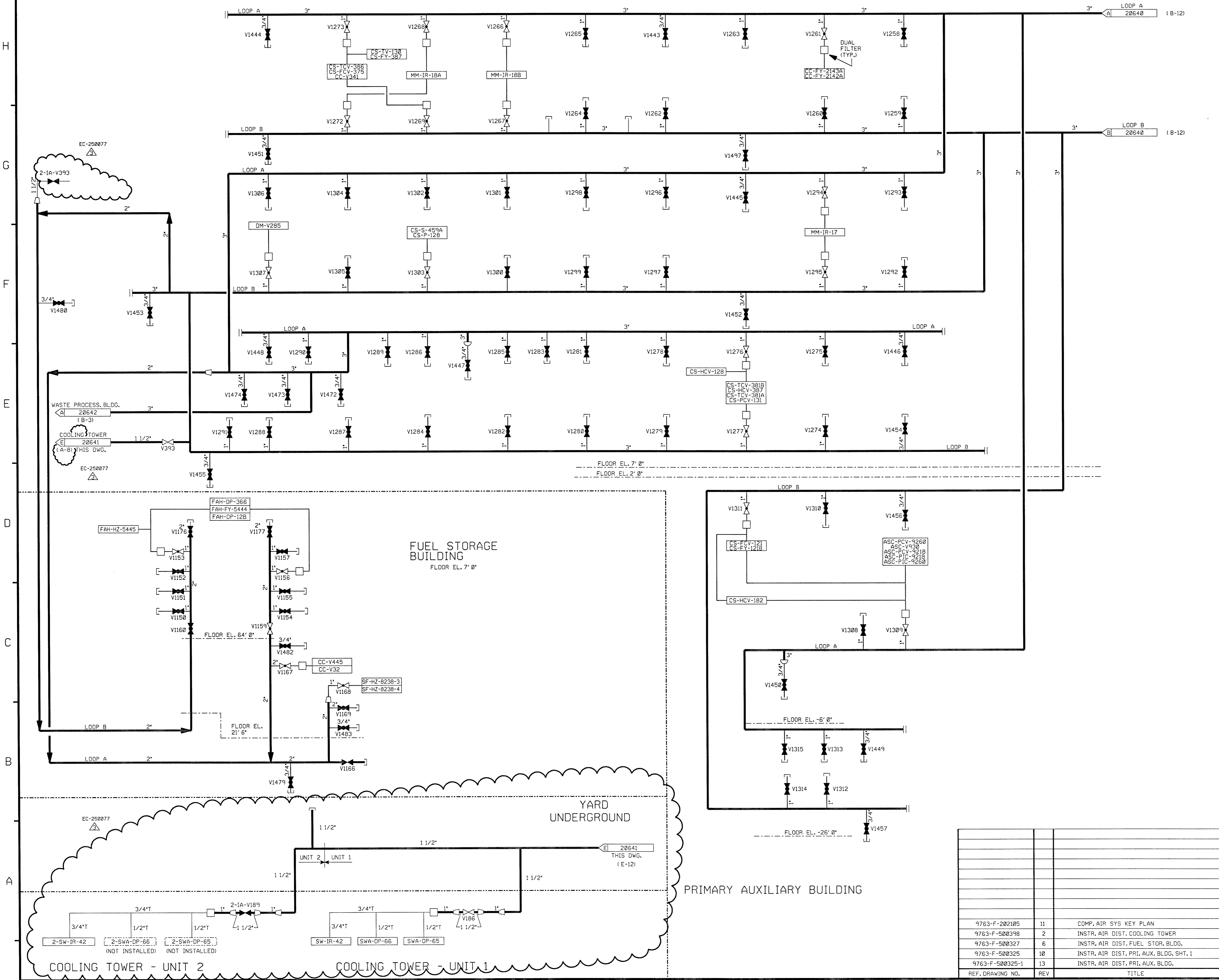


PID- 1-IA-B20639

PID-1-IA-B20641

PRIMARY AUXILIARY BUILDING

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



- NOTE:
1. WORK THIS DRAWING WITH DRAWINGS 20636 THRU 20640, & 20642 THRU 20646.
 2. ALL PIPES, VALVES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS HAVE SYSTEM PREFIX IA, UNLESS NOTED OTHERWISE.
 3. □ DENOTES DUAL AIR FILTER.
 4. ALL PIPES, VALVES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS ARE SAFETY CLASS N, UNLESS NOTED OTHERWISE.
 5. INSTRUMENTATION ON THIS DWG. DOWNSTREAM OF PIPING ROOT VALVE CONNECTIONS HAS NOT BEEN VERIFIED.
 6. △ INDICATES REVISION LEVEL
 7. DELETED
 8. VALVE SYMBOL MAY NOT BE REPRESENTATIVE OF INSTALLED COMPONENT TYPE, REFER TO VALVE LIST.

3	11/10/10	GPS	MPW	JM	INSTR. AIR DIST. COOLING TOWER
2	1/31/96	BCS	MPW	RSG	INSTR. AIR DIST. FUEL STOR. BLDG.
1	11/6/86	MRJ	WRD	RRC	ISSUED FOR OPERATIONS
0	4/25/86	DBF	JDM	WFD	ADDED NIPPLES AND CAPS PER AS-BLT. COND., REVISED PIPING AND DRAIN ARROT. PER USE&C DWG. F-500328, ADDED DUAL FLTR. IN CLG. TWR. PMP. HOUSE PER USE&C DWG. F-500328, ADDED CONT. FLAG COORD AND NOTES 5, 6 & 7.
REV	DATE	DSGN	CHKD	CE	DESCRIPTION

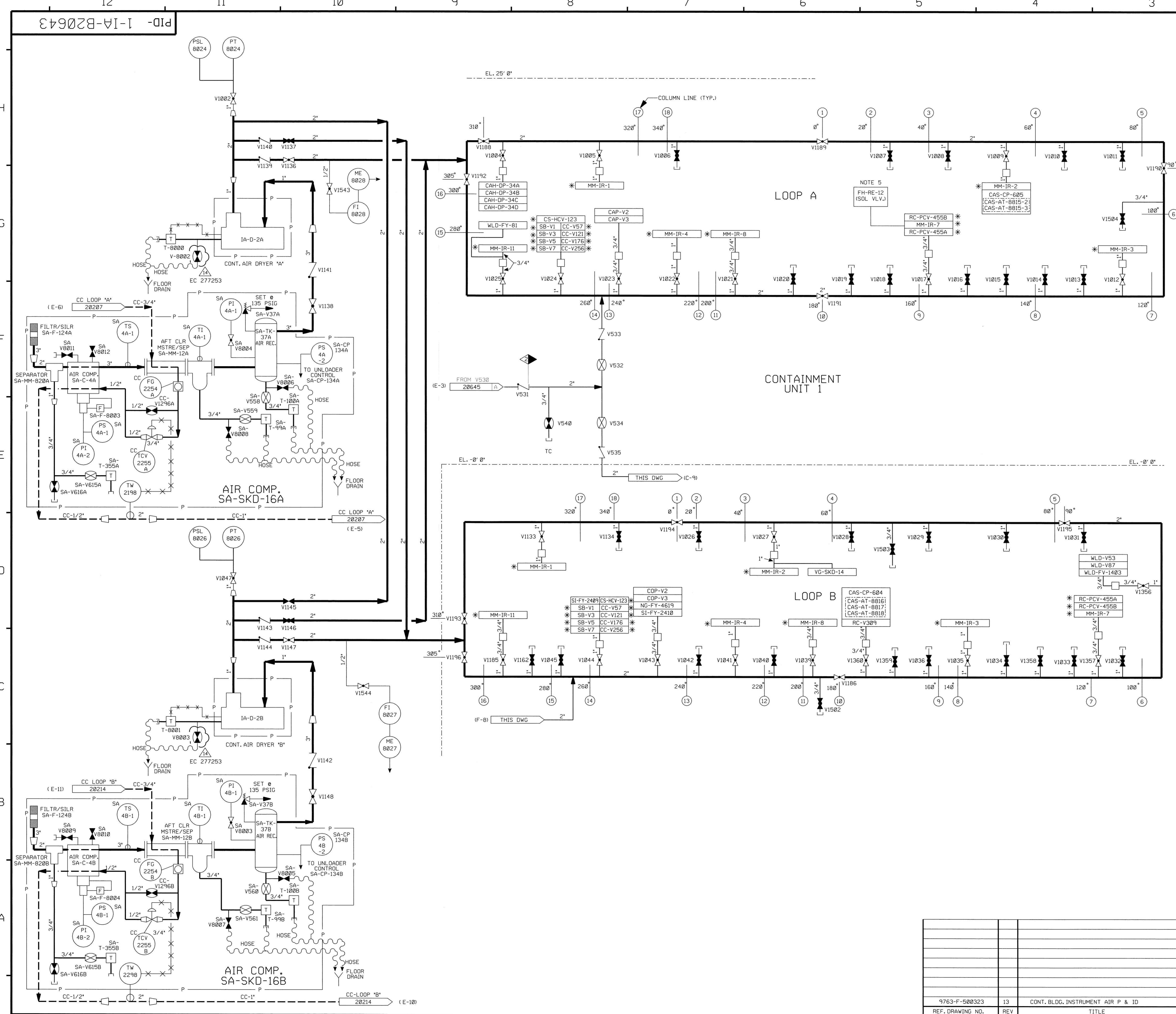
9763-F-202105	11	COMP. AIR SYS KEY PLAN
9763-F-500398	2	INSTR. AIR DIST. COOLING TOWER
9763-F-500327	6	INSTR. AIR DIST. FUEL STOR. BLDG.
9763-F-500325	10	INSTR. AIR DIST. PRI. AUX. BLDG. SHT. 1
9763-F-500325-1	13	INSTR. AIR DIST. PRI. AUX. BLDG.
REF. DRAWING NO.	REV	TITLE

NEXTERA ENERGY
SEABROOK

**INSTRUMENT AIR
PRIMARY AUX. BUILDING
COOLING TOWER & FUEL STORAGE
DETAIL**

PID- 1-IA-B20641

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



- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 20636 THRU 20642 & 20645 THRU 20646.
 2. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX IA, UNLESS NOTED OTHERWISE.
 3. ASTERISK (*) DENOTES DUAL AIR SUPPLY LOOP A & LOOP B.
 4. □ DENOTES DUPLEX AIR FILTER.
 5. USE SPARE INSTRUMENT AIR VALVE IN MM-IR-7 TO ACTUATE SOLENOID VALVE DURING REFUELING.
 6. INSTRUMENTATION ON THIS DWG. DOWNSTREAM OF THE PIPING ROOT VALVE CONNECTIONS HAS NOT BEEN FIELD VERIFIED.
 7. △ - INDICATES REVISION LEVEL.
 8. DELETED
 9. VALVE SYMBOL MAY NOT BE REPRESENTATIVE OF INSTALLED COMPONENT TYPE, REFER TO VALVE LIST.

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
14	9/30/13	JM	BCS	RRB	INCRP. EC 277253
13	5/17/07	JM	BCS	RRB	INCRP. CR 07-05242 REV 00
12	5/19/03	JM	MPW	BCS	INCRP. CR 03-02736 REV 00
11	6/9/97	MPW	DWS	JPS	INCRP. MMOD 91-559 CA-0, DCN 04 & 05 DCR 96-13 DCN 00
10	1/31/96	BCS	MPW	RSG	INCRP. MMOD-95-570 CA-0
9	12/9/94	MPW	BCL	MHO	INCRP. MMOD-93-545 CA-0
8	6/28/94	MPW	DWS	BAW	INCRP. DCR 91-050 CA-0
7	12/3/92	BCL	MRB	GRM	REINCRP. DCR 90-004 CA-0
6	10/21/92	BCL	MRB	IW	INCRP. DCR 90-004 CA-0
5	7/18/92	MRB	JM	GRM	INCRP. MMOD 90-582, CA0
4	1/18/90	MRB	GPM	GRM	INCRP. DCR 86-320 CA10 RE-INCRP. ECA 99/114614A REVISED NOTE 2 DELETED NOTE 3 ADDED: F-8003 & F-8004 PER FP-20430
3	11/6/86	MRJ	WRD	RRC	INCRP. NCR 86/111A REVISED RELIEF VLV. TAG NO. AND ADDED MM-IR-6 PER UE&C P&ID, REMOVED SKD DRN PIPING CONTINUATION FLAG REF'S PER ECA 19/108566A, REVISED SKD PIPING PER FOREIGN PRINT 20430. ADDED CONTINUATION FLAG, COORDS, AND NOTES 6, 7 & 8. ADDED NIPPLE AND CAPS TO SPARE INSTR. VLV'S. PER AS-BUILT CONDITION.
2	6/27/86	JDM	VNK	RRC	INCRP. ECA 99/114596A
1	4/25/86	JDM	DWS	WFD	RENUMBERED SA V8003-V8008 INCRP. ECA 99/114614A
0	3/4/86	CB	JDM	WFD	ISSUED FOR OPERATIONS

NEXTERA ENERGY
SEABROOK

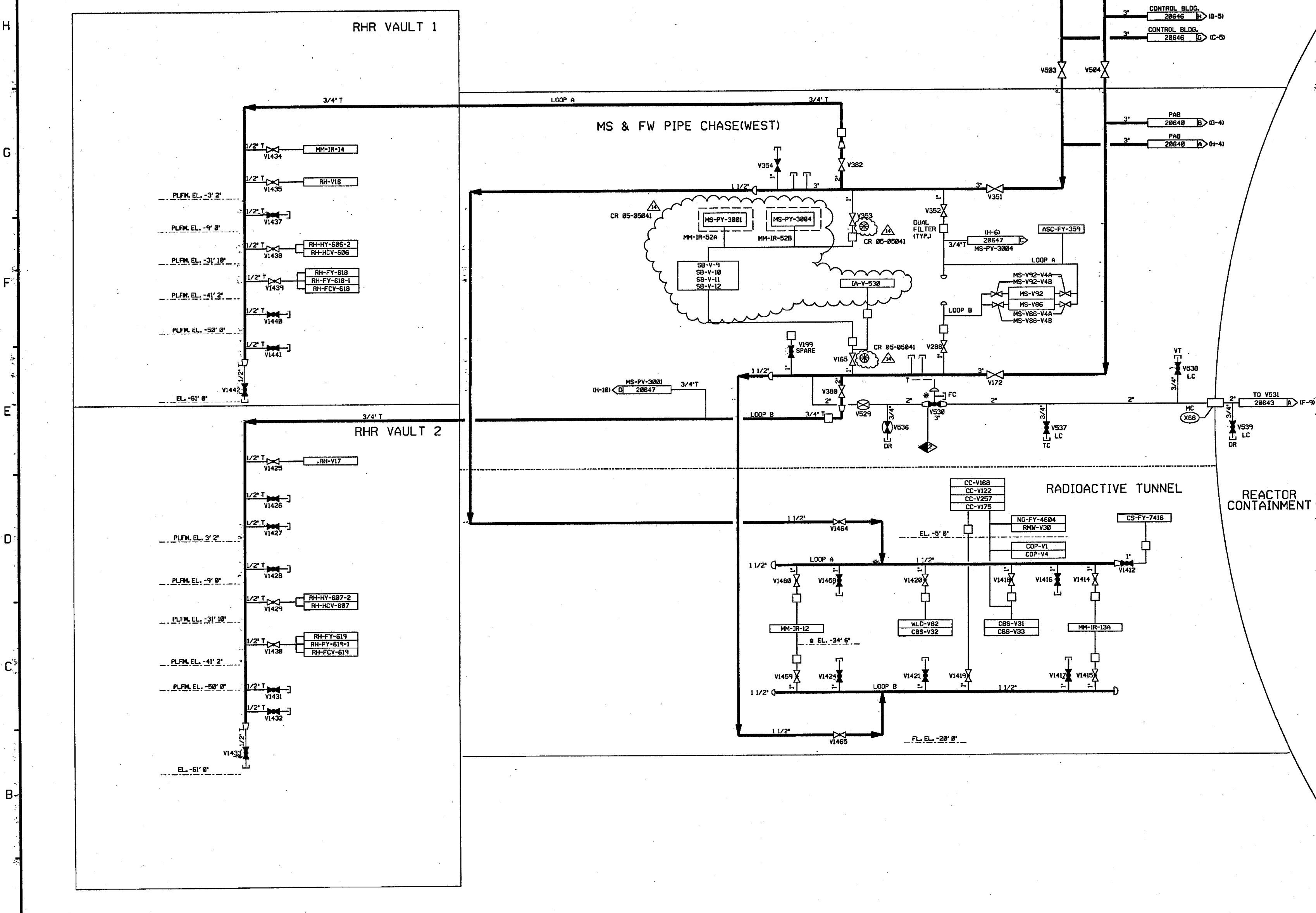
INSTRUMENT AIR
CONTAINMENT BUILDING
DETAIL

PID- 1-IA-B20643

REF. DRAWING NO.	REV	TITLE
9763-F-500323	13	CONT. BLDG. INSTRUMENT AIR P & IO

PID-1-IA-B20645

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



- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 28636 THRU 28644, 28646 & 28647.
 2. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX IA, UNLESS NOTED OTHERWISE.
 3. □ DENOTES DUAL AIR FILTER.
 4. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS ARE SAFETY CLASS NNS, UNLESS NOTED OTHERWISE.
 5. INSTRUMENTATION ON THIS DRAWING DOWNSTREAM OF PIPING ROOT VALVE CONNECTIONS HAS NOT BEEN VERIFIED UNLESS NOTED BY Ⓢ. REFER TO DWG 1-NHY-550013 FOR VERIFIED INSTRUMENT DETAILS.
 6. △ INDICATES REVISION LEVEL.
 7. * INDICATES VALVES SUPPLIED BY WESTINGHOUSE. ⚠ CR 05-05041
 8. VENTS, DRAINS AND TEST CONNECTION CODE BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER 1-NHY-685111, UNLESS NOTED OTHERWISE.
 9. DELETED
 10. DELETED
 11. VALVE SYMBOL MAY NOT BE REPRESENTATIVE OF INSTALLED COMPONENT TYPE, REFER TO VALVE LIST.

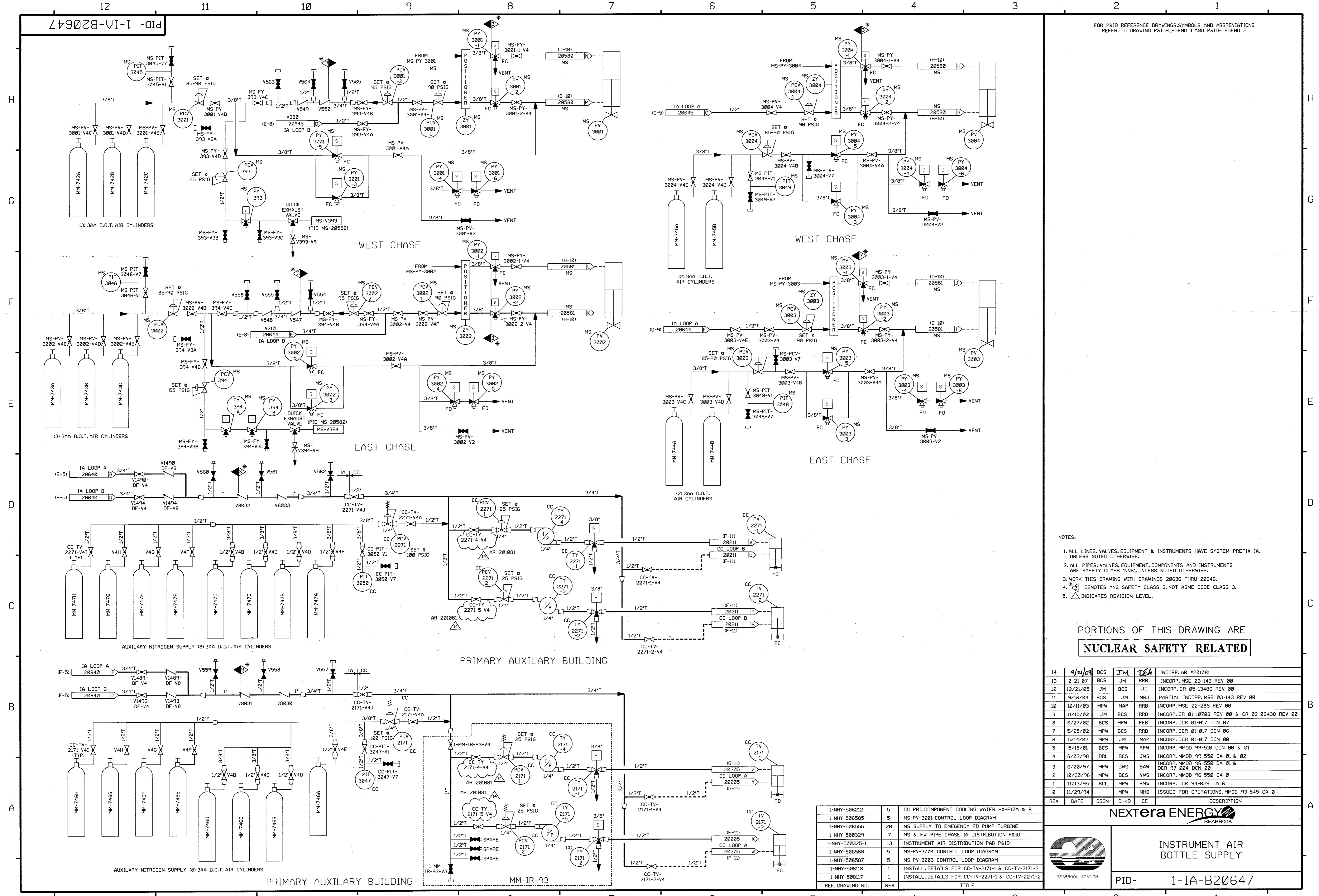
REV	DATE	DSGN	CHKD	CE	DESCRIPTION
14	1/25/06	BCS	JM	JM	REINCORP CR 05-05041 REV.0
13	6/7/05	BCS	JM	RRB	INCORP CR 05-05041 REV.0
12	1/31/05	BCS	MPW	RSB	INCORP MM00 95-570 CAB
11	5/12/05	BCL	DWS	DJM	INCORP MM00 94-570 CAB
10	12/4/04	BCL	MPW	MHD	REINCORP DCR 980004 CA*0 AND INCORP MM00 930545 CA*0
9	7/18/04	MPW	BCL	JCM	INCORP DCR 85-420 CA 0 AND REINCORP. DCR 98-004 CA 0
8	2/2/04	BCL	MRB	GRM	ADDED TAG NUMBERS PER FIELD WALKDOWN AND SPEC 46-1
7	4/5/03	MRB	BCL	JM	INCORP MM00 92-553 CAB
6	10/21/01	MRB	BCL	IW	INCORP DCR 98-004 CAB
5	10/9/01	MRB	FCB	RWM	INCORP DCR 98-32 CAB
4	8/18/98	MRB	GPM	GRM	REVISED NOTE 4 PER ENG DSGN STD. 31788 SEC. 3.8.
3	11/23/87	DWS	BCL	RRB	INCORP DCR 86-320 CAB DETAILS REMOVED FROM AUX AIR SUPPLY, DETAILS WILL BE SHOWN ON CONTROL LOOP DIAG AS SPECIFIED BY ECA 05-11330F.
2	11/14/86	MRJ	PAL	RRB	ADDED NOTE 6 & CHANGED NOTE 5. ADDED CONT FLAG COORDS, V8834 THRU V8841, NIPPLES & CAPS, ABANDONED CONN'S, ADDITIONAL DUAL FILTERS AND AIR USERS, REVISED LOC OF TAKE-OFFS & TUBING SIZES PER AS-INSTALLED CONDITIONS. INCORP ECA 05/11330F & 74/187155A, CORRECTED DRAFTING ERRORS.
1	6/23/86	DBF	VNK	RRB	INCORPORATED ECA 05/11330F
0	4/25/86	DBF	JDM	WFO	ISSUED FOR OPERATIONS. INCORP ECA 05/213448, 05/213438, 05/213438, 05/213438

REF. DRAWING NO.	REV	TITLE
9763-F-282105	11	COMP AIR SYS KEY PLAN P & ID
9763-F-500335	4	RHR VAULTS IA DISTRIB P & ID
9763-F-500379	4	RADIOACTIVE TUNNEL IA DISTRIB P & ID
9763-F-500329	7	MS & FW PIPE CHASE IA DISTRIB P & ID
9763-F-282100	15	MISC BLDGS COMP AIR HEADERS P & ID

FPL ENERGY Seabrook Station

INSTRUMENT AIR MISCELLANEOUS BUILDING DETAILS

PID- 1-IA-B20645



- NOTES:
1. ALL LINES, VALVES, EQUIPMENT & INSTRUMENTS HAVE SYSTEM PREFIX IA, UNLESS NOTED OTHERWISE.
 2. ALL PIPES, VALVES, EQUIPMENT, COMPONENTS AND INSTRUMENTS ARE SAFETY CLASS 'NS', UNLESS NOTED OTHERWISE.
 3. WORK THIS DRAWING WITH DRAWINGS 20636 THRU 20646.
 4. * DENOTES ANS SAFETY CLASS 3, NOT ASME CODE CLASS 3.
 5. Δ INDICATES REVISION LEVEL.

PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
14	9/21/09	BCS	JW	DEA	INCOMP. AR #201081
13	2-21-07	BCS	JM	RRB	INCOMP. MSE 03-143 REV 00
12	12/21/05	JM	BCS	JC	INCOMP. CR 05-13486 REV 00
11	9/16/04	BCS	JM	MRJ	PARTIAL INCOMP. MSE 03-143 REV 00
10	10/11/03	MPW	MAP	RRB	INCOMP. MSE 02-286 REV 00
9	11/15/02	JM	BCS	RRB	INCOMP. CR 01-10708 REV 00 & CR 02-08438 REV 00
8	6/27/02	BCS	MPW	RRB	INCOMP. DCR 01-017 DCN 07
7	5/25/02	MPW	BCS	RRB	INCOMP. DCR 01-017 DCN 06
6	5/14/02	MPW	JM	MAP	INCOMP. DCR 01-017 DCN 05
5	5/15/01	BCS	MPW	RPW	INCOMP. MMOD 99-510 DCN 00 & 01
4	6/02/98	DRL	BCS	JWS	INCOMP. MMOD 99-550 CA 01 & 02
3	6/20/97	MPW	DWS	BAW	INCOMP. MMOD 96-550 CA 01 & DCR 97-024 DCN 00
2	10/30/96	MPW	BCS	VWS	INCOMP. MMOD 96-550 CA 0
1	11/13/95	BCL	MPW	RMW	INCOMP. DCR 94-029 CA G
0	11/29/94	---	MPW	MHO	ISSUED FOR OPERATIONS, MMOD 93-545 CA 0

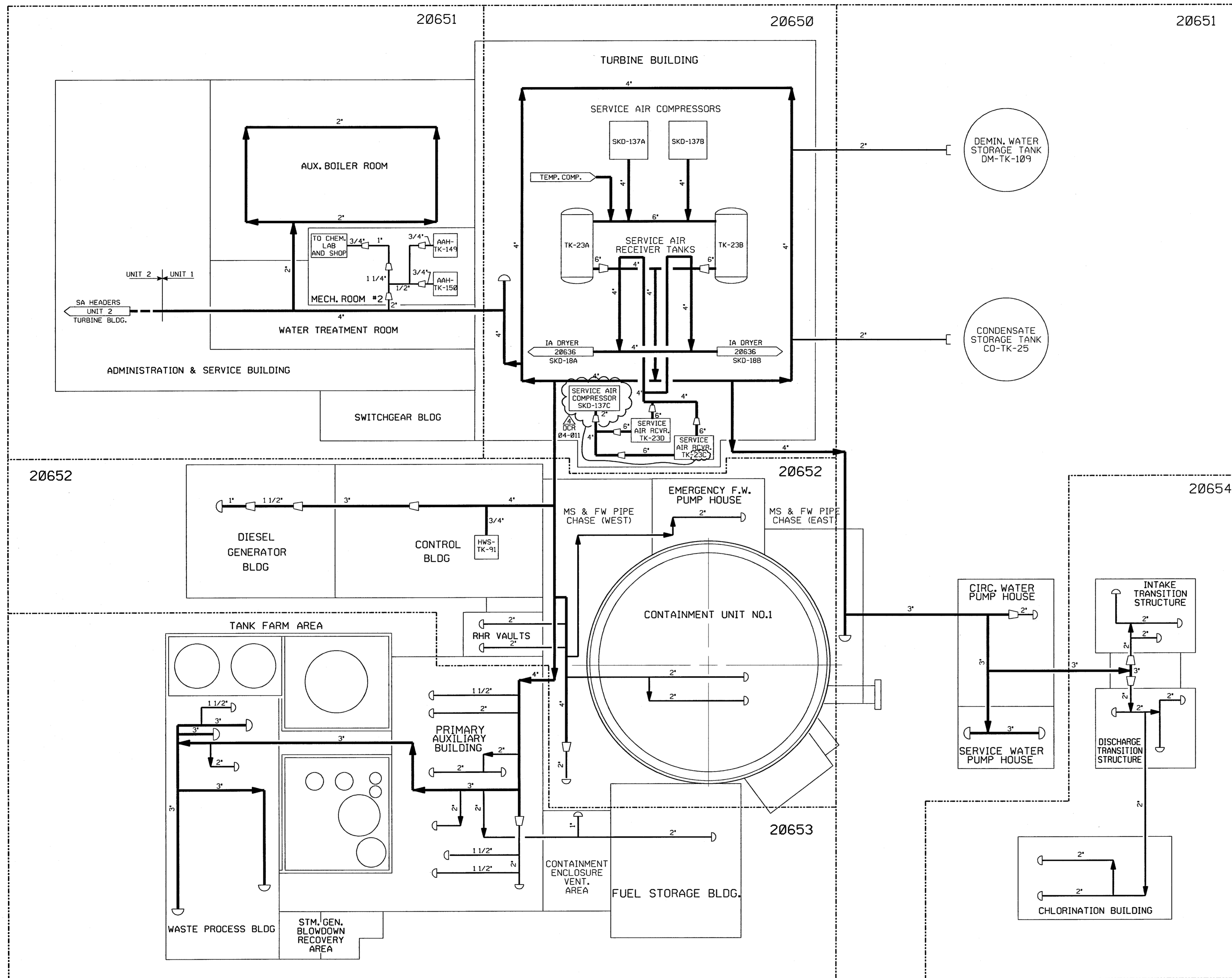
REF. DRAWING NO.	REV	TITLE
1-NHY-506212	5	CC PRI. COMPONENT COOLING WATER HX-E17A & B
1-NHY-506595	5	MS-PV-3001 CONTROL LOOP DIAGRAM
1-NHY-506555	20	MS SUPPLY TO EMERGENCY FD PUMP TURBINE
1-NHY-500329	7	MS & FW PIPE CHASE IA DISTRIBUTION P&ID
1-NHY-500325-1	13	INSTRUMENT AIR DISTRIBUTION P&ID
1-NHY-506588	5	MS-PV-3004 CONTROL LOOP DIAGRAM
1-NHY-506587	5	MS-PV-3003 CONTROL LOOP DIAGRAM
1-NHY-508118	1	INSTALL. DETAILS FOR CC-TV-2171-1 & CC-TV-2171-2
1-NHY-508117	1	INSTALL. DETAILS FOR CC-TV-2271-1 & CC-TV-2271-2

NEXTERA ENERGY
SEABROOK

INSTRUMENT AIR BOTTLE SUPPLY

PID- 1-1A-B20647

PID-1-SA-B20649



NOTES :

1. WORK THIS DRAWING WITH DRAWINGS 20650, 20651, 20652, 20653 & 20654
2. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX SA, UNLESS NOTED OTHERWISE.
3. Δ INDICATES REVISION LEVEL.

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
4	11/16/08	JM	NWB	MS	INCRP DCR 04-011 DCN 00
3	5/29/96	BCS	DWS	RSG	INCRP DCR 91-26 CA-01
2	3/24/94	DWS	BCL	WFZ	INCRP DCR 930016 CA*0 & 1
1	1/28/87	WDS	WRD	RRC	REVISED REF. DWG. REVISIONS. ADDED NOTE 3. REVISED PER LATEST SYS. DWGS.
0	3/21/86	TAK	JDM	WFD	ISSUED FOR OPERATIONS

REF. DRAWING NO.	REV	TITLE
9763-F-804989	7	SERVICE AIR P & ID
9763-F-202109	9	COMP. AIR HEADERS, MISC. BLDGS. P & ID
9763-F-202108	15	COMP. AIR HEADERS, MISC. BLDGS. P & ID
9763-F-202107	12	COMP. AIR HEADERS, TURB. BLDG. P & ID
9763-F-202106	11	COMPRESSED AIR SYS. P & ID
9763-F-202105	11	COMPRESSED AIR SYS. KEY PLAN P & ID

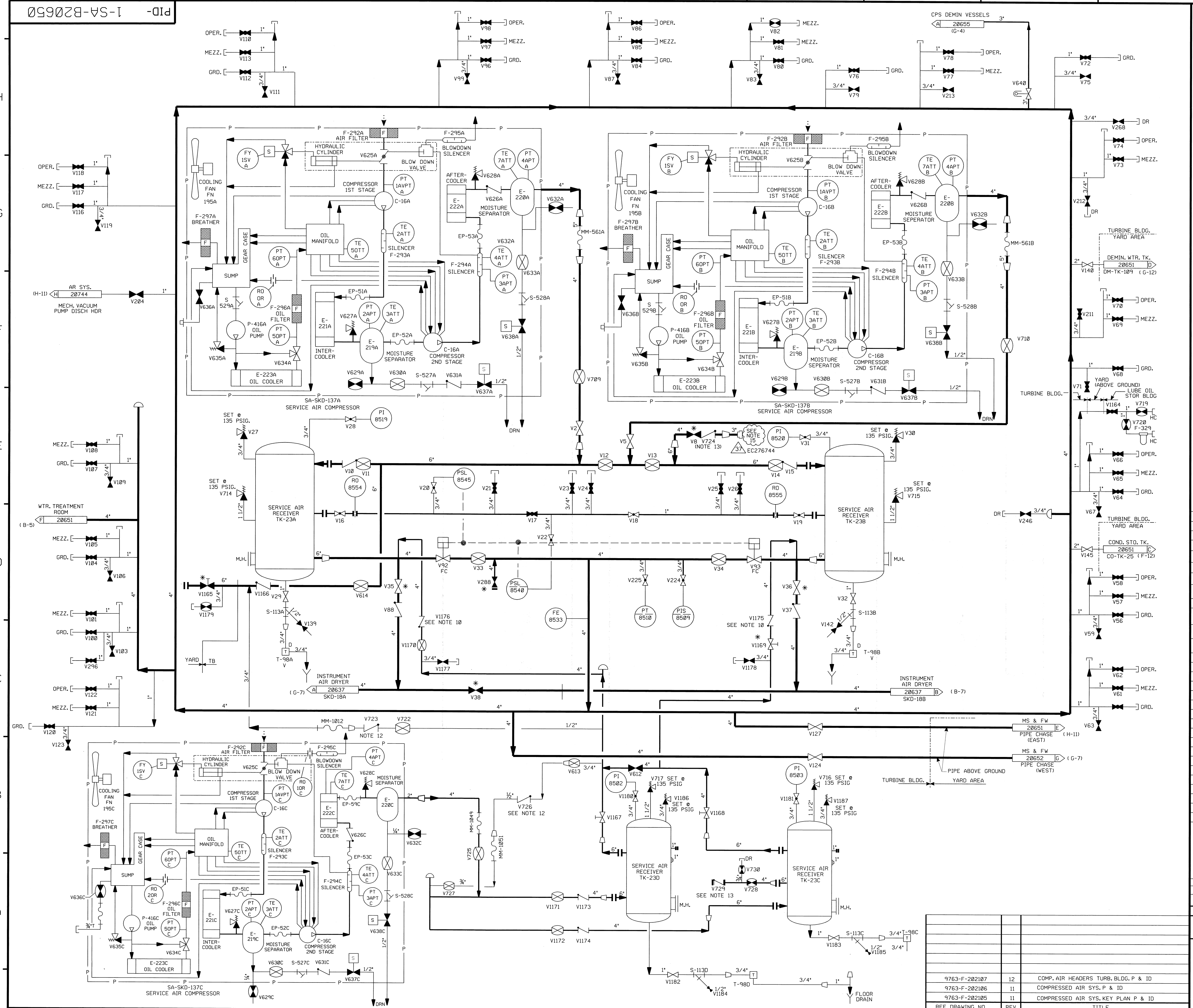
FPL ENERGY Seabrook Station

SERVICE AIR SYSTEM OVERVIEW

PID- 1-SA-B20649

1-SA-B20650 P-ID

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



- NOTES:
- WORK THIS DRAWING WITH DRAWINGS 20649, 20651, 20652 & 20653.
 - ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX SA, UNLESS NOTED OTHERWISE.
 - ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS ARE SAFETY CLASS NNS UNLESS NOTED OTHERWISE.
 - INSTRUMENT REFERENCES:
 - (A) TO SCC-V126, FV-7060 (DWG. SCC-20078)
 - (B) TO SCC-V129, FV-7061 (DWG. SCC-20078)
 - (C) TO SCC-V132, FV-7062 (DWG. SCC-20078)
 - ALL PIPING RUNNING BETWEEN BUILDINGS OR TO OUTSIDE EQUIPMENT IS BELOW GROUND EXCEPT AS NOTED.
 - △ INDICATES REVISION LEVEL.
 - DELETED.
 - PIPE CAPS OR QUICK DISCONNECTS MAY BE INSTALLED ON SERVICE AIR STATIONS AS DEEMED NECESSARY BY STATION STAFF.
 - DELETED.
 - INTERNALS OF CHECK VALVES, SA-V1175 & 1176 HAVE BEEN REMOVED.
 - VALVE SYMBOL MAY NOT BE REPRESENTATIVE OF INSTALLED COMPONENT TYPE, REFER TO VALVE LIST.
 - EXCESS FLOW CHECK VALVES 1-SA-V-723 & V-726 SEATS IF FLOW EXCEEDS 120 SCFM @ 100 PSIG INLET PRESSURE.
 - CHECK VALVE HAS 0.285" HOLE IN DISC TO SUPPORT AUTO START OF PORTABLE COMPRESSOR.
 - * THESE VALVES ARE SUBJECT TO A PART SUBSTITUTION AUTHORIZED BY 04MSE147. VALVE SYMBOL MAY NOT REFLECT INSTALLED VALVE TYPE. DRAWING UPDATES WILL BE MADE UPON RECEIPT OF FORM NM 84F.
 - THIS CONNECTION IS APPROVED FOR A PORTABLE COMPRESSOR INSIDE THE TURBINE BLDG.
 - △ EC276744

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
37	3/11/13	BCS	JM	CE	INCORP EC276744
36	11/12/08	JM	JWB	JET	INCORP MSE 04-147 REV. 00, 02, 03, 04
35	10/16/07	BCS	JM	DEA	INCORP. DCR 04-011 DCN-00, 04, 13 & ASBUILT INFO
34	8/7/07	BCS	JM	MAP	PARTIAL INCORP. MSE 04-147 REV. 00
33	6/21/07	BCS	JM	RWM	INCORP. CR 07-03416 REV. 0
32	10/6/06	BCS	JM	RRB	PARTIAL INCORP. MMOD 04-147 DCN 00
31	7/27/06	BCS	JM	DEA	INCORP. MSE 06-046 DCN-00
30	12/15/05	JM	BCS	DEA	INCORP. MMOD 05-520 DCN 00
29	11/17/05	BCS	JM	DEA	PARTIAL INCORP. MSE 04-147 REV 03
28	10/05/05	BCS	JM	RRB	INCORP. MSE 05-135 REV.00 & REMOVED INCOMPLETE ITEM #1 PER SA OP. PROCED. (01042.01 & 03)
27	4/19/05	BCS	JM	RRB	INCORP. DCR-97-13 DCN-00, 54; MMOD 95-570 DCN-00; PARTIAL INCORP. MSE 04-147 REV 00
26	2/27/04	JM	BCS	SAK	INCORP. MSE 03-0180 REV 00, PARTIAL INCORP. DCR 97-13, DCN-00
25	11/3/03	JM	BCS	MR	INCORP. MSE 03-0205 REV 00
24	8/18/03	MPW	JM	JGC	INCORP. MMOD 01-537 DCN 00
23	7/14/03	BCS	JM	JGC	PARTIAL INCORP. MMOD 01-537 DCN 00
22	6/17/03	MPW	JM	JC	PARTIAL INCORP. MMOD 01-537 DCN 00
21	12/19/02	BCS	JM	DEA	INCORP. MSE 02-0216 REV.0
20	5/29/02	BCS	MPW	RRB	INCORP. MSE 00-0247 REV.0, CR 01-09349
19	9/15/00	BCS	MPW	JCM	INCORP. MMOD 99-626 DCN-00
18	8/22/00	BCS	DWS	JCM	PARTIAL INCORP. MMOD 99-626 DCN-00
17	1/28/97	BCS	DWS	RKM	INCORP. MMOD 96-669 CA-0
16	1/31/96	BCS	MPW	RSO	INCORP. MMOD 95-570 CA-0
15	9/14/95	BCL	MPW	JCM	INCORP. MMOD 95-552 CA-0
14	1/17/95	BCL	DWS	WFC	INCORP. DCR 93-16 CA-21
13	3/24/93	MRB	BCL	WFZ	INCORP. DCR 93-16 CA0,01
12	3/24/93	BCL	MRB	JCM	REINCORP. DCR-91-31, CA-0
11	2/12/93	BCL	MRB	JCM	INCORP. DCR-91-31, CA-0
10	1/25/93	BCL	MRB	JCM	PARTIAL INCORP. DCR-91-31, CA-0
9	5/11/92	MRB	BCL	GPM	INCORP. MMOD 90-582 CA00
8	7/18/91	MRB	JM	GRM	INCORP. MMOD 90-582 CA00
7	11/7/88	GPM	MRB	RRR	INCORP. ECA 74/11373B REVISED; NOTE 3 ADDED; FILTERS 8000, 8001 & 8002 PER EP 20441, V204 PER IJE & P & ID 202093, NOTE 9 & INCOMPLETE ITEM 1. CHANGED VALVES V1180 & V1181 FROM GATE TO GLOBE VALVES AND CORRECTED GATE TO GLOBE VALVES AND CORRECTED VALVE TAG NO. PER ECA 99/1002C.
6	8/26/87	MPW	BCL	RRR	INCORP. DCR 87-034.
5	6/1/87	MPW	DWS	VWS	INCORP. ECA 19/18567B
0	3/21/86	TAK	JDM	WFD	ISSUED FOR OPERATIONS & INCORP. ECA 74/11373B

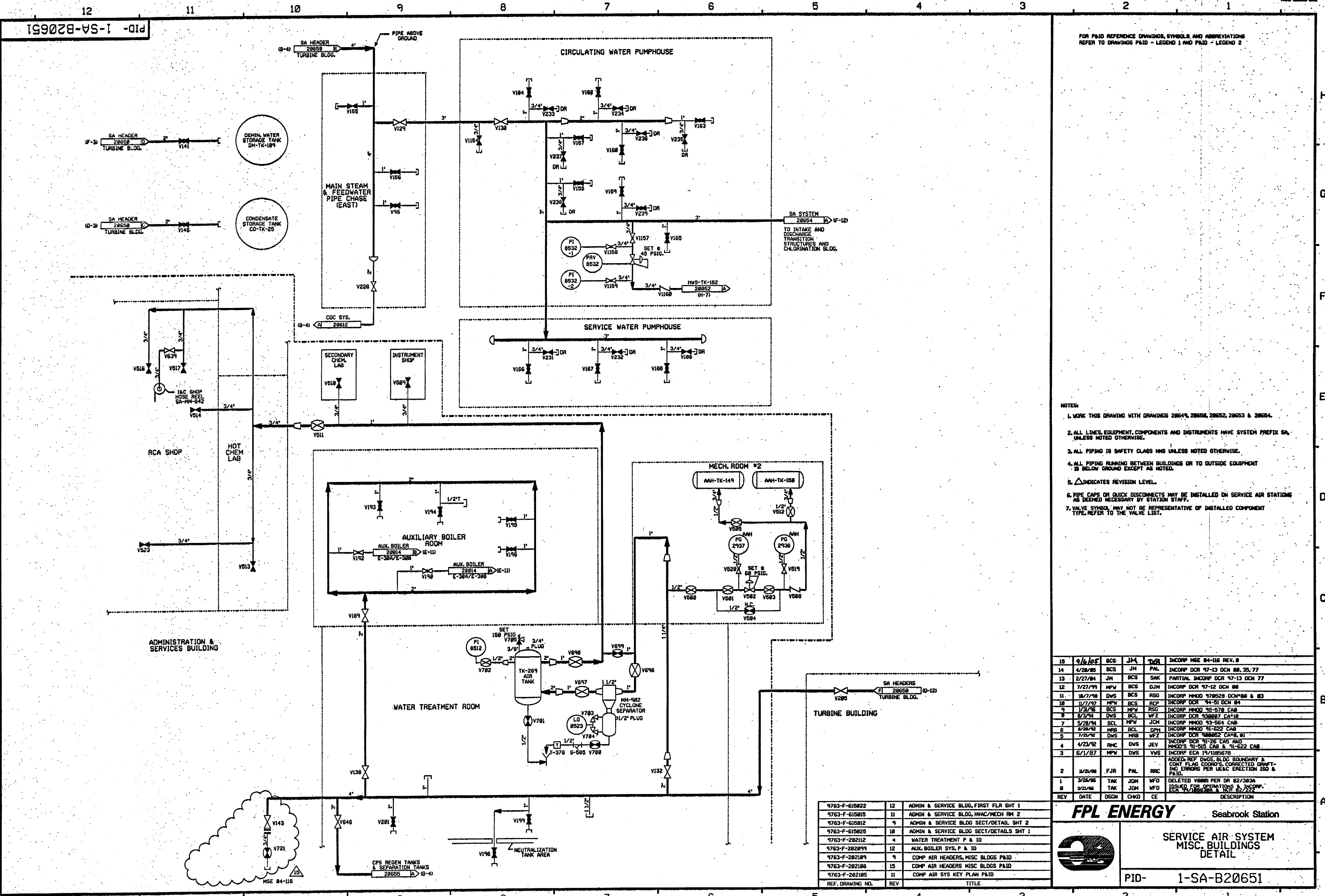
NEXTERA ENERGY
SEABROOK

SEABROOK STATION

SERVICE AIR SYSTEM TURBINE BUILDING DETAIL

PID- 1-SA-B20650

REF. DRAWING NO.	REV	TITLE
9763-F-202107	12	COMP. AIR HEADERS TURB. BLDG. P & ID
9763-F-202106	11	COMPRESSED AIR SYS. P & ID
9763-F-202105	11	COMPRESSED AIR SYS. KEY PLAN P & ID



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

NOTES

1. WORK THIS DRAWING WITH DRAWINGS 28649, 28650, 28652, 28653 & 28654.
2. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX SA, UNLESS NOTED OTHERWISE.
3. ALL PIPING IS SAFETY CLASS MMS UNLESS NOTED OTHERWISE.
4. ALL PIPING RUNNING BETWEEN BUILDINGS OR TO OUTSIDE EQUIPMENT IS BELOW GROUND EXCEPT AS NOTED.
5. Δ INDICATES REVISION LEVEL.
6. PIPE CAPS OR QUICK DISCONNECTS MAY BE INSTALLED ON SERVICE AIR STATIONS AS DEEMED NECESSARY BY STATION STAFF.
7. VALVE SYMBOL MAY NOT BE REPRESENTATIVE OF INSTALLED COMPONENT TYPE, REFER TO THE VALVE LIST.

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
15	9/6/05	BCS	JM	WJ	INCRP MSE 04-116 REV. 0
14	4/28/05	BCS	JM	PAL	INCRP DCR 97-13 DCM 00, 35, 77
13	2/27/04	JM	BCS	SAK	PARTIAL INCRP DCR 97-13 DCM 77
12	7/27/99	MPW	BCS	DJM	INCRP DCR 97-12 DCM 00
11	10/7/98	DWS	BCS	RSC	INCRP MM00 970528 DCM#00 & 02
10	11/7/97	MPW	BCS	RCP	INCRP DCR 94-51 DCM 04
9	1/31/96	BCS	MPW	RSC	INCRP MM00 95-570 CAB
8	8/3/94	DWS	BCL	WFZ	INCRP DCR 930007 CA#10
7	5/20/94	BCL	MPW	JCM	INCRP MM00 93-564 CAB
6	3/20/93	HRB	BCL	DMV	INCRP MM00 91-022 CAB
5	7/25/92	DWS	HRB	WFZ	INCRP DCR 900002 CA#8, 01
4	4/23/92	RMC	DWS	JEV	INCRP DCR 91-26 CAB AND MM00'S 91-515 CAB & 91-522 CAB
3	6/17/87	MPW	DWS	VWS	INCRP ECA 19/1185670
2	1/21/86	FJR	PAL	RRC	ADDED REF DWGS, BLDG BOUNDARY & CONT FLAG COORDS, CORRECTED DRMT-ING ERRORS PER LEAC ERECTION ISO & PAID.
1	3/28/86	TAK	JDM	WFD	DELETED 98001 PER DR 02/30/86
0	3/21/86	TAK	JDM	WFD	ISSUED FOR OPERATIONS & INCRP. ECA 19/1185670 & 19/1185670

REF. DRAWING NO.	REV	TITLE
9763-F-010022	12	ADMIN & SERVICE BLDG, FIRST FLR SHT 1
9763-F-010015	11	ADMIN & SERVICE BLDG, HVAC/MECH RM 2
9763-F-010012	9	ADMIN & SERVICE BLDG SECT/DETAIL SHT 2
9763-F-010025	10	ADMIN & SERVICE BLDG SECT/DETAILS SHT 1
9763-F-202112	4	WATER TREATMENT P & ID
9763-F-202099	12	AUX. BOILER SYS. P & ID
9763-F-202104	9	COMP AIR HEADERS, MISC BLDGS PAID
9763-F-202106	15	COMP AIR HEADERS, MISC BLDGS PAID
9763-F-202105	11	COMP AIR SYS KEY PLAN PAID

FPL ENERGY Seabrook Station

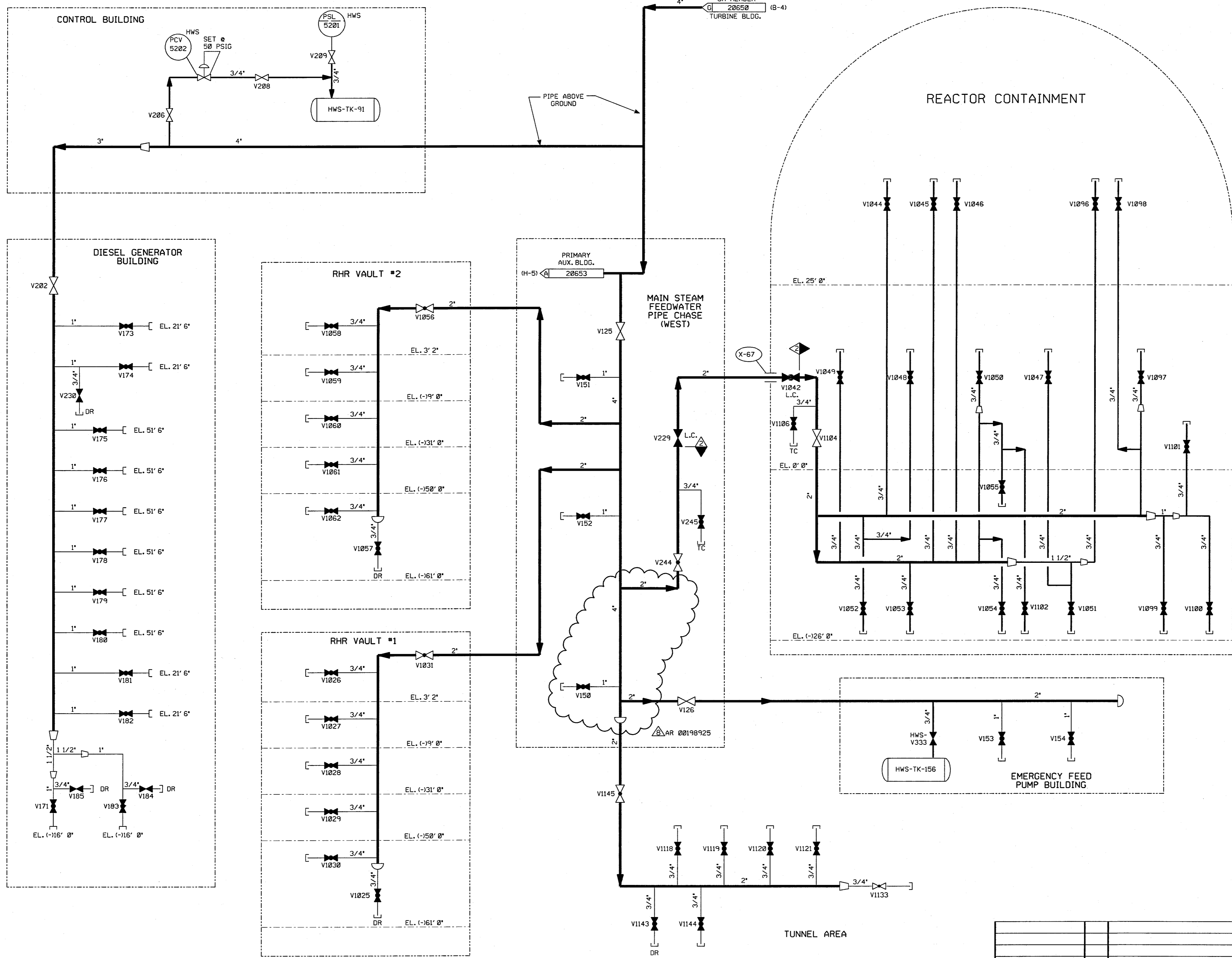


SERVICE AIR SYSTEM
MISC BUILDINGS
DETAIL

PID- 1-SA-B20651

PID-1-SA-B20652

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



- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 20649, 20650, 20651 & 20653.
 2. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX SA, UNLESS NOTED OTHERWISE.
 3. ALL PIPING IS SAFETY CLASS NNS UNLESS NOTED OTHERWISE.
 4. ALL PIPING RUNNING BETWEEN BUILDINGS OR TO OUTSIDE EQUIPMENT IS BELOW GROUND EXCEPT AS NOTED.
 5. Δ INDICATES REVISION LEVEL.
 6. DELETED.
 7. PIPE CAPS OR QUICK DISCONNECTS MAY BE INSTALLED ON SERVICE AIR STATIONS AS DEEMED NECESSARY BY STATION STAFF.
 8. VALVE SYMBOL MAY NOT BE REPRESENTATIVE OF INSTALLED COMPONENT TYPE, REFER TO VALVE LIST.

PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
8	01/12/07	GPS	JUL	RCS	INCORPORATED; AR NO. 00198925
7	02/05/03	BCS	MPW	SPF	INCORPORATED; MSE 99-332 REV. 0, 1 & CR 02-13862
6	6/31/96	BCS	MPW	RSR	INCORPORATED; MMOD 95-570 CAB
5	5/11/92	MRB	BCL	GPM	INCORPORATED; MMOD 91-622 CAB
4	9/11/90	MRB	HP	RRR	INCORPORATED; MMOD 90-595 CAB0
3	6/1/87	MPW	DWS	RRR	ADDED ERECTION ISO NO & CONT LOCATION AND INCRP ECA 19/118567B.
2	10/24/86	PAL	WRD	PHH	DELETED NOTE 6, UPDATED REF DWG REV'S. ADDED ZONE LOC TO FLAG.
1	6/16/86	TAK	MPW	RRR	REVISED CHANGE ITEM NO.1 PER 202108 REV 16
0	3/21/86	TAK	JDM	WFD	ISSUED FOR OPERATIONS

REF. DRAWING NO.	REV	TITLE
9763-F-004989	7	SERVICE AIR P & I DIAGRAM
9763-F-004103	9	DIE. GEN BLDG & CONT. BLDG HWS SYS P&ID
9763-F-202109	9	MISC. BLDG. COMP. AIR SHT 2 OF 2 P&ID
9763-F-202108	16	MISC. BLDG. COMP. AIR SHT 1 OF 2 P&ID
9763-F-202105	11	COMP. AIR SYS. KEY PLAN P&ID

NEXTERA ENERGY
SEABROOK

SEABROOK STATION

SERVICE AIR SYSTEM
MISC. BUILDINGS
DETAIL

PID- 1-SA-B20652

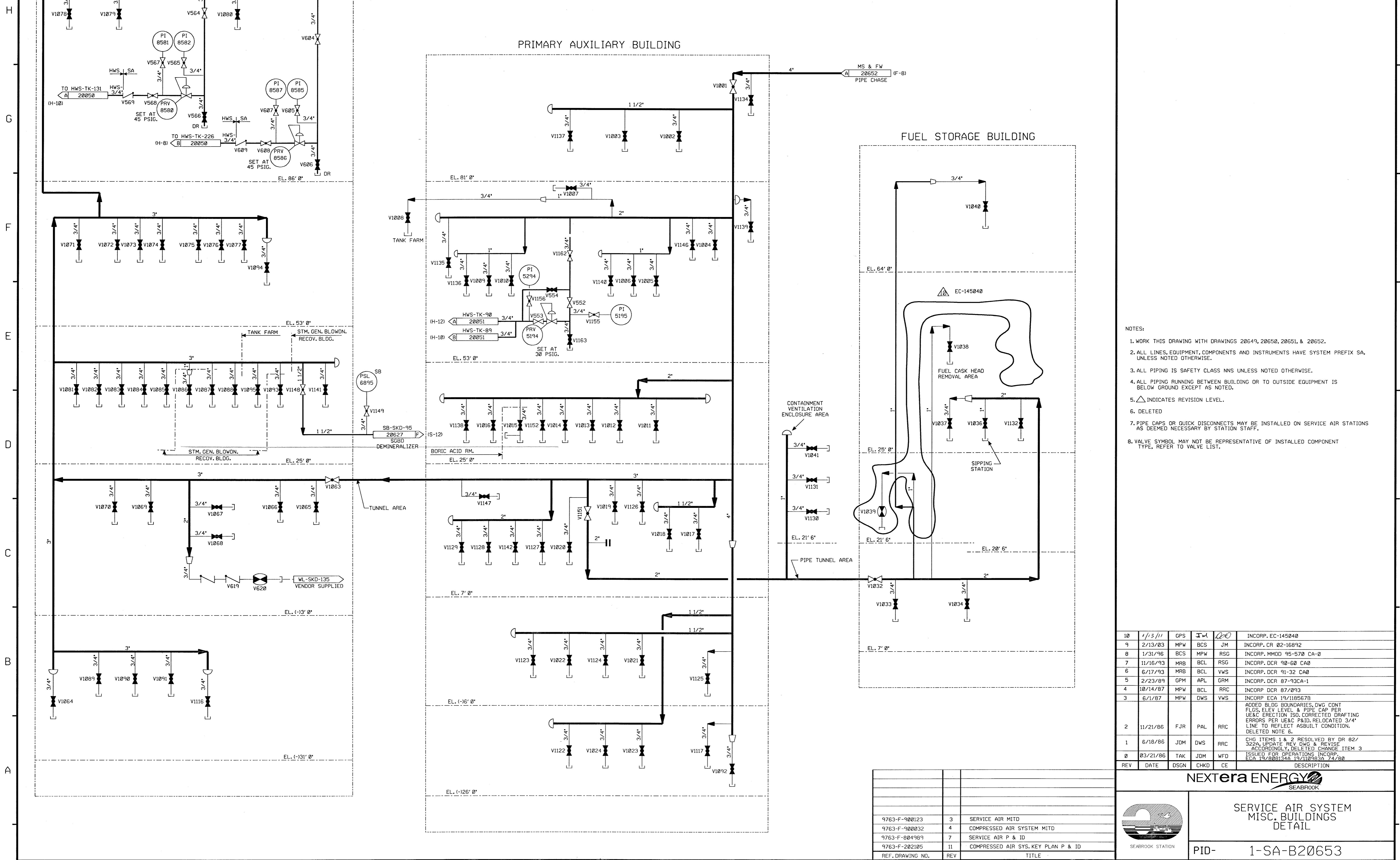
PID-1-SA-B20653

WASTE PROCESS BUILDING

PRIMARY AUXILIARY BUILDING

FUEL STORAGE BUILDING

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



- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 20649, 20650, 20651, & 20652.
 2. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX SA, UNLESS NOTED OTHERWISE.
 3. ALL PIPING IS SAFETY CLASS NNS UNLESS NOTED OTHERWISE.
 4. ALL PIPING RUNNING BETWEEN BUILDING OR TO OUTSIDE EQUIPMENT IS BELOW GROUND EXCEPT AS NOTED.
 5. Δ INDICATES REVISION LEVEL.
 6. DELETED
 7. PIPE CAPS OR QUICK DISCONNECTS MAY BE INSTALLED ON SERVICE AIR STATIONS AS DEEMED NECESSARY BY STATION STAFF.
 8. VALVE SYMBOL MAY NOT BE REPRESENTATIVE OF INSTALLED COMPONENT TYPE, REFER TO VALVE LIST.

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
10	1/13/11	GPS	JW	CE	INCORP. EC-145040
9	2/13/03	MPW	BCS	JM	INCORP. CR 02-16892
8	1/31/96	BCS	MPW	RSG	INCORP. MM00 95-570 CA-0
7	11/16/93	MRB	BCL	RSG	INCORP. DCR 98-60 CA0
6	6/17/93	MRB	BCL	VWS	INCORP. DCR 91-32 CA0
5	2/23/89	GPM	APL	GRM	INCORP. DCR 87-93CA-1
4	10/14/87	MPW	BCL	RRC	INCORP. DCR 87-093
3	6/1/87	MPW	DWS	VWS	INCORP. ECA 19/118567B ADDED BLDG BOUNDARIES, DWG CONT FLOS, ELEV LEVEL & PIPE CAP PER UE&C ERECTION ISO. CORRECTED DRAFTING ERRORS PER UE&C P&ID, RELOCATED 3/4" LINE TO REFLECT ASBUILT CONDITION. DELETED NOTE 6.
2	11/21/86	FJR	PAL	RRC	CHG ITEMS 1 & 2 RESOLVED BY DR 02/322A, UPDATE REV DWG & REVISE ACCORDINGLY, DELETED CHANGE ITEM 3
1	6/18/86	JDM	DWS	RRC	ISSUED FOR OPERATIONS, INCORP. ECA 19/888134A 19/112933A 74/80
0	03/21/86	TAK	JDM	WFD	

REF. DRAWING NO.	REV	TITLE
9763-F-900123	3	SERVICE AIR MITD
9763-F-900032	4	COMPRESSED AIR SYSTEM MITD
9763-F-004989	7	SERVICE AIR P & ID
9763-F-202105	11	COMPRESSED AIR SYS. KEY PLAN P & ID



NEXTERA ENERGY
SEABROOK

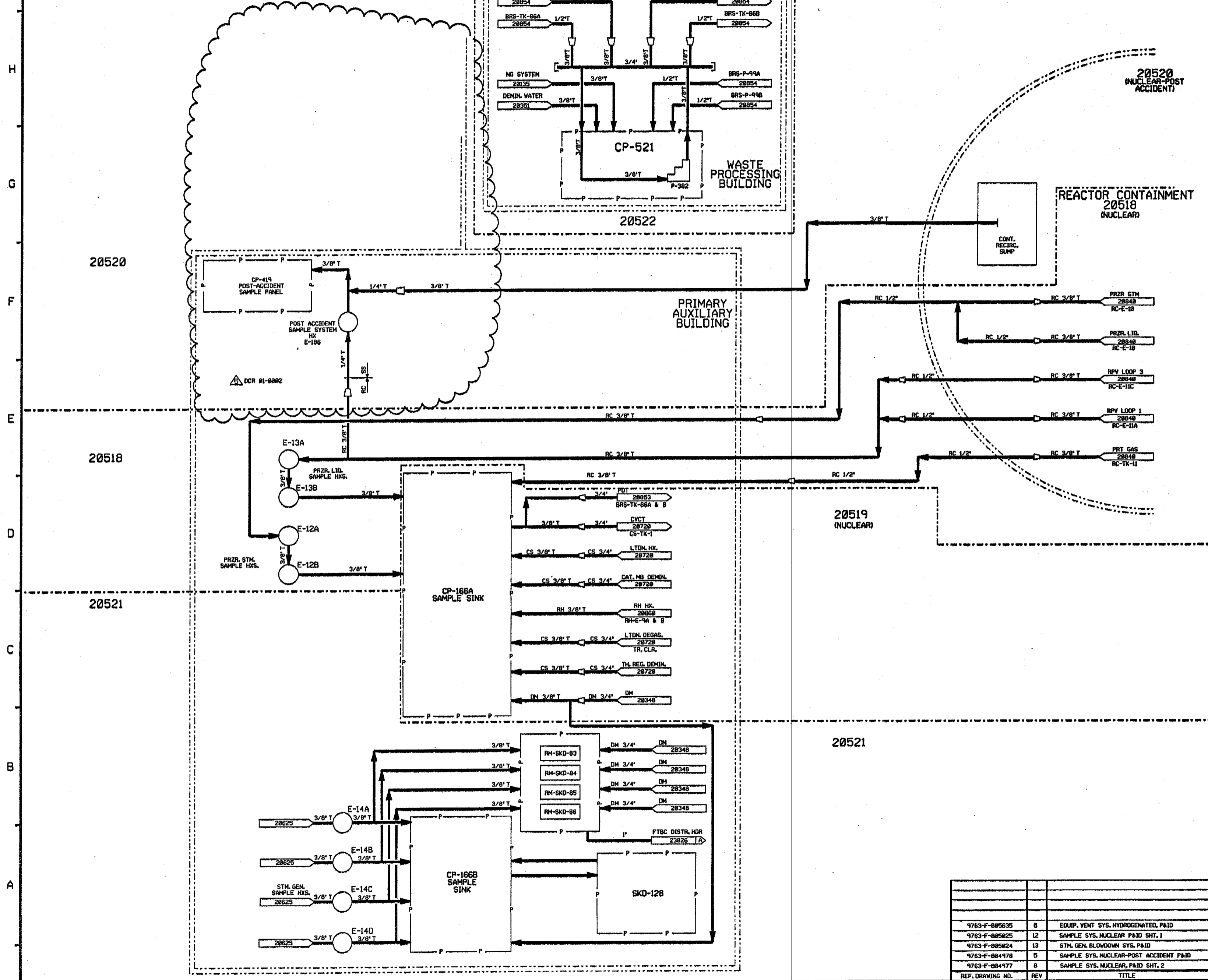
SERVICE AIR SYSTEM
MISC. BUILDINGS
DETAIL

PID- 1-SA-B20653

919028-SS-1 -PID

PROTORSK04 A/M

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



- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 20518 THRU 20522.
 2. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX SS, UNLESS NOTED OTHERWISE.
 3. Δ INDICATES REVISION LEVEL.

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
5	1-10-82	MPV	JMA	2205	INCRP. DCR 81-0002 DCN 08
4	5/31/79	MWB	RMB	IV	INCRP. MCOO 99-550 CA 81
3	5/25/81	MWB	PHL	IV	INCRP. DCR 87-118 CA 11 REVISED NOTE 2. ADDED LEGEND REFERENCE NOTE
2	4/21/89	OPM	APL	ORM	REVISED NOTE 1. INCRP. DCR 88-81 CA 82
1	2/2/87	WDS	WHD	WMS	REVISED PER LATEST SYSTEM DRAWINGS. ADDED NOTE 3
0	12/21/85	DWS	DWS	MFD	ISSUED FOR OPERATIONS

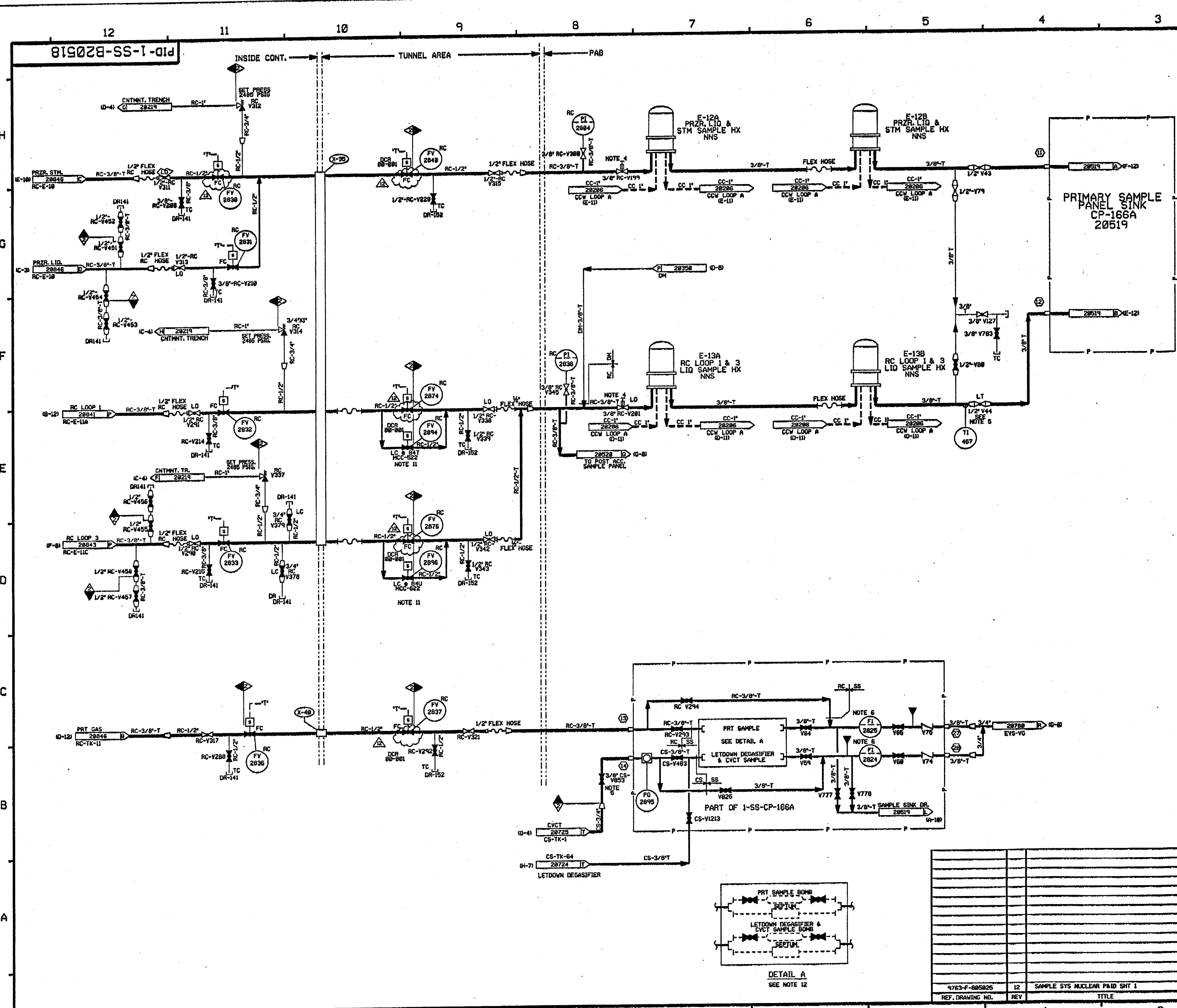
REF. DRAWING NO.	REV	TITLE
9763-F-085635	8	EQUIP. VENT SYS. HYDROGENATED, PAID
9763-F-085825	12	SAMPLE SYS. NUCLEAR PAID SHT. 1
9763-F-085824	13	STM. GEN. BLOWDOWN SYS. PAID
9763-F-084978	5	SAMPLE SYS. NUCLEAR-POST ACCIDENT PAID
9763-F-084977	8	SAMPLE SYS. NUCLEAR, PAID SHT. 2

North Atlantic Energy Service Corporation

SEABROOK STATION

SAMPLE SYSTEM OVERVIEW

PID- 1-SS-B20516



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

- NOTES:
- WORK THIS DRAWING WITH DRAWINGS 20516, 20519 THRU 20522.
 - ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX SS, UNLESS NOTED OTHERWISE.
 - ALL SAMPLE INSTRUMENTATION INDICATION SHALL BE LOCATED ON A PANEL AT THE SAMPLE SINK.
 - REACH ROD OPERATED FROM THE SAMPLE ROOM SIDE OF THE SAMPLE HL BODY-SAMPLE WALL.
 - THIS VALVE SHALL BE ADJUSTED AND SET TO GIVE A 0.5 GPM SAMPLE FLOW FROM RPV LOOP 1 OR 2.
 - ALL FLOW INDICATORS ON SS-CP-166A & B HAVE INTEGRAL NEEDLE VALVES WHICH ARE NOT SHOWN ON THE PAID.
 - TYPICAL CONNECTION IDENTIFICATION FOR SS-CP-166A & B
 - DELETED
 - INDICATES REVISION LEVEL
 - VENTS, DRAINS AND TEST CONNECTION CODEBREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER 1-WH-00511 UNLESS OTHERWISE NOTED.
 - VALVE DISABLED IN THE LOCKED CLOSED POSITION BY LOCKING BREAKERS B4T & B4U OPEN.
 - SAMPLE BOMBS AND SEPTUMS ARE INSTALLED DURING SAMPLING FUNCTIONS, EITHER THE SAMPLE BOMB OR THE SAMPLE SEPTUM MAY BE USED, SEE DETAIL A (W-18).

PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED

REV	DATE	DSGN	DRWN	CHKD	CODE	SES	DESCRIPTION
12	11/21/82	BCL	JHM	APL	BCL	RRG	INCORP DCR 89-081 DCMH8
11	6/13/79	DMS	MPV	FAC	DND	INCORP DCR 87-088 DCMH8	
10	12/1/74	DMS	BCL	MEW	WHD	INCORP HMD 93-545 CAP8	
9	1/21/76	MRB	JEV	BCL	DMS	INCORP HMD 94-515 CAP8	
8	5/23/76	MRB	FCB	JM	CDM	INCORP HMD 94-515 CAP8	
7	10/25/76	MRB	FCB	JM	APL	RE-INCORP DCR 87-76 CAB8	
6	6/21/76	MRB	JM	APL	BCL	INCORP DCR 89-113 CAB8, 87-269 CAB8, 87-76 CAB8	
5	12/28/69	MRB	FCB	APL	ES	DELETED NOTE 8, ADDED REACH ROD SYMBOL TO VALVES V193 & V201 PER NOTE 4.	
4	2/1/69	GPH	RMC	MRB	APL	INCORPORATED DCR 89-01 REV 1	
3	3/22/66	GPH	RMC	BCL	APL	REVISED EQUIP. TITLES, INCORP ECA 85-114/87B, NOTE 10 ADDED EQUIPMENT SAFETY CLASS DELETED INCOMPLETE ITEM	
2	10/1/66	JHM	DMS	MHP	BCL	RRG	ADDED NOTE 10 DELETED CODE BREAKS, REVISED VALVE IDENTIFICATION & LOCATION CODES, REVISED VALVE EXD COMMS, CONNECTED INCORP ECA 85-114/87B, NOTE 9, LOCATION OF FLEX HOSE FROM UPSTN OF 21-2848 TO UPSTN OF FV-2876, REDED ECA 85-114/87B, REVISED NOTE 9, PARTIAL INCORP OF ECA 85-114/87B, REVISED NOTE 9
1	5/22/66	DMS	WES	MLM	---	GFS	GENERAL REV INCORP ECA 85-114/87B, REVISED NOTE 9
8	1/3/66	DMS	MRB	DJM	JMC	WFD	INCORP ECA 85-114/87B, REVISED NOTE 9
7	1/12/66	DMS	MRB	---	---	---	REVISED FOR

North Atlantic Energy Service Corporation

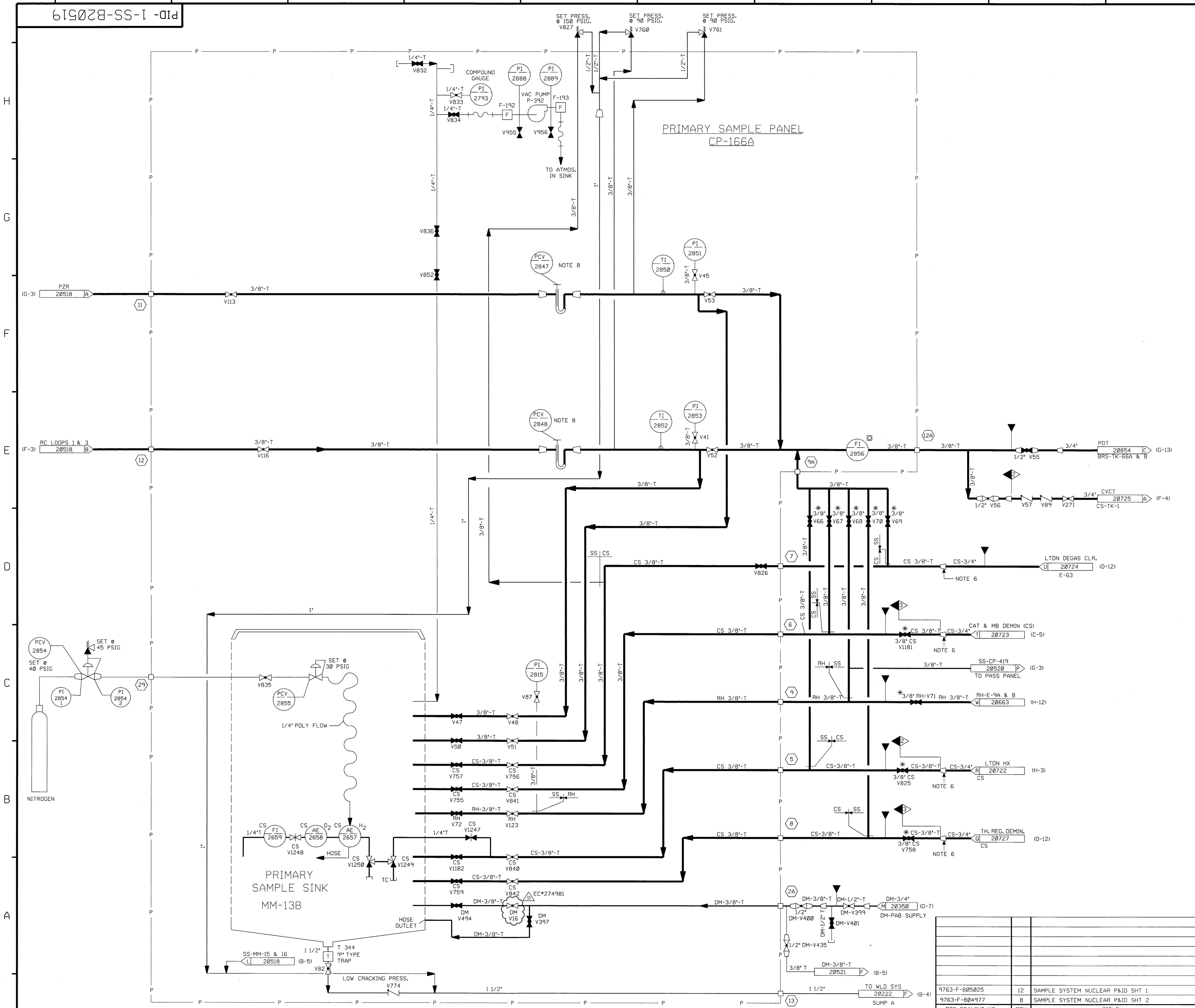
SAMPLE SYSTEM
(NUCLEAR-NORMAL OPERATION)
DETAIL

SEABROOK STATION PID: 1-SS-B20518

REF. DRAWING NO.	REV	TITLE
4763-F-005026	12	SAMPLE SYS NUCLEAR PAID SHT 1

PID-1-SS-B20519

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



- NOTES:
1. WORK THIS DRAWING WITH DRAWING 20516, 20518, 20520 THRU 20522.
 2. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX "SS"; UNLESS OTHERWISE NOTED.
 3. ALL TUBING 3/8" T AND MAT'L 2508 UNLESS OTHERWISE NOTED.
 4. DELETED
 5. DELETED
 6. THESE REDUCERS ARE TO BE AS CLOSE AS POSSIBLE TO ROOT VALVE.
 7. * THIS VALVE TO BE REACH ROD OPERATED FROM THE SAMPLE RM SIDE OF THE SAMPLE HX ROOM - SAMPLE WALL.
 8. THIS EQUIPMENT HAS 1/4" TUBING CONNECTORS.
 9. INDICATES REVISION LEVEL.
 10. DELETED.
 11. CONTINUATION CONNECTION, SEE FP-74082.

PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED

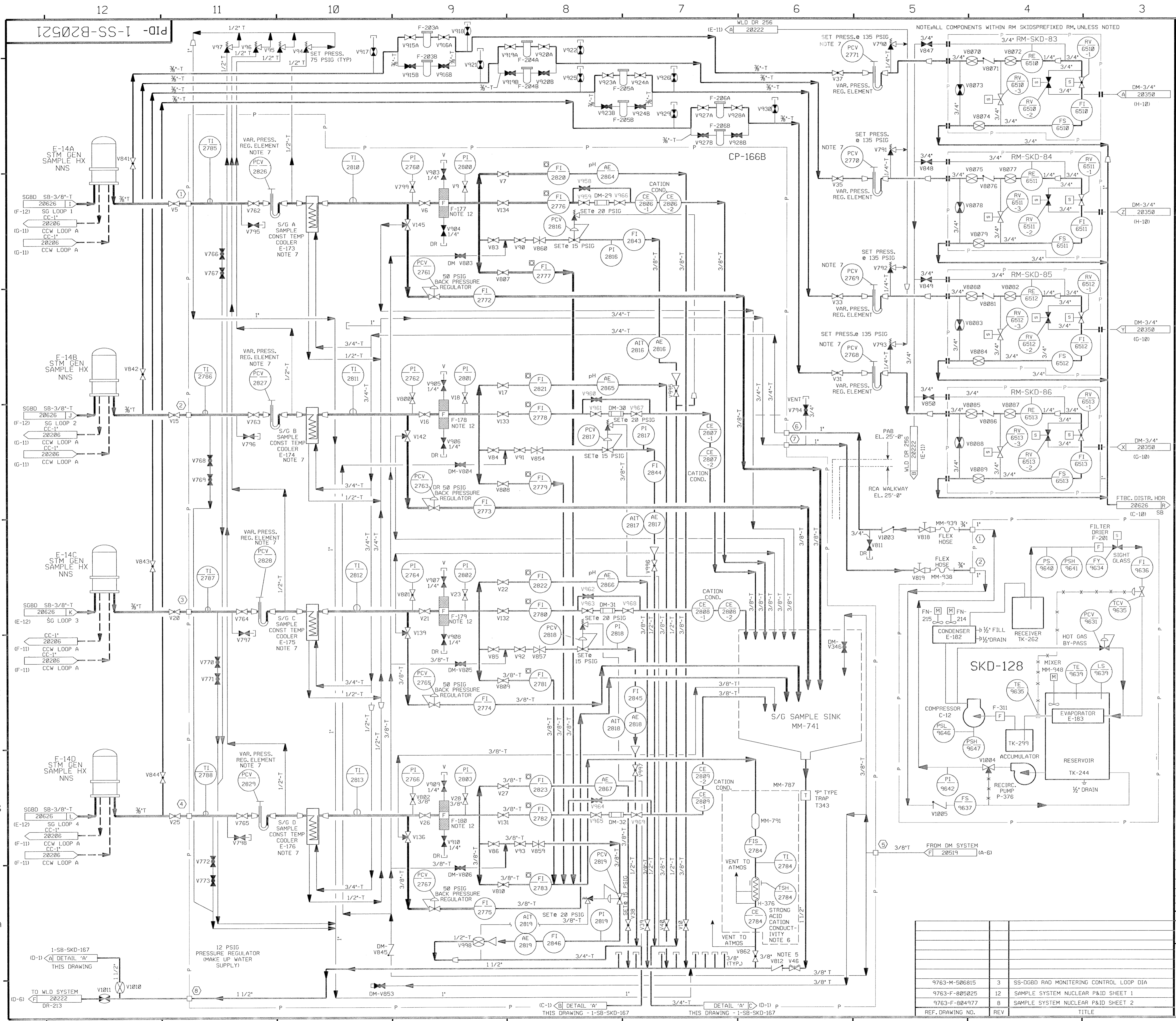
REV	DATE	DSGN	CHKD	CE	DESCRIPTION
11	1/11/12	JM	Bes	DJM	INCRP EC*274981
10	11/15/99	BCS	DWS	RCP	INCRP, DCR 99-0010 DCN-00, 01
9	8/18/97	MPW	BCS	VWS	INCRP, MMOD 96-550 DCN 01
8	8/3/95	DWS	BCL	RCP	INCRP, MMOD 920550 CA#0
7	9/3/91	GPM	JM	RCL	INCRP, MMOD 90-597 CA01
6	5/23/91	MRB	JM	BCL	INCRP, MMOD 90-586 CA04
5	1/4/91	MRB	JM	BCL	INCRP, MMOD 90-639 CA01
4	2/23/90	MRB	APL	IW	INCRP, DCR 87-76, CA01
3	2/1/89	GPM	MRB	DJM	INCRP, DCR 88-51 REV 1 REVISION; DWG CONT NUMBER, NOTES 1 & 2. ADDED; P & ID LEGEND NOTE, NOTE 9 DWG CONT COORD'S & SYSTEM INTERFACE. DELETED; NOTES 4 & 5, NNS-1 CL BOUNDARY, INCOMPLETE ITEM ECA 05/114987B SUPERCEDED BY DRR 88-51.
2	9/17/86	BCL	MAP	RRC	RE-INCRP, PORTION OF ECA 05/114987B (ECA REMAINS AS PARTIALLY INCORPORATED)
1	09/12/86	JDM	WRD	RRC	INCRP, ECA 05/114987A AND PARTIAL INCORP, ECA 05/114987B, REV PER VENDOR FP-71448, ADDED NOTE 8.
0	12/31/85	DWS	JDM	WFD	ISSUED FOR OPERATIONS

NEXTERA ENERGY
SEABROOK STATION

SAMPLE SYSTEM
PRIMARY SAMPLE PANEL
CP-166A

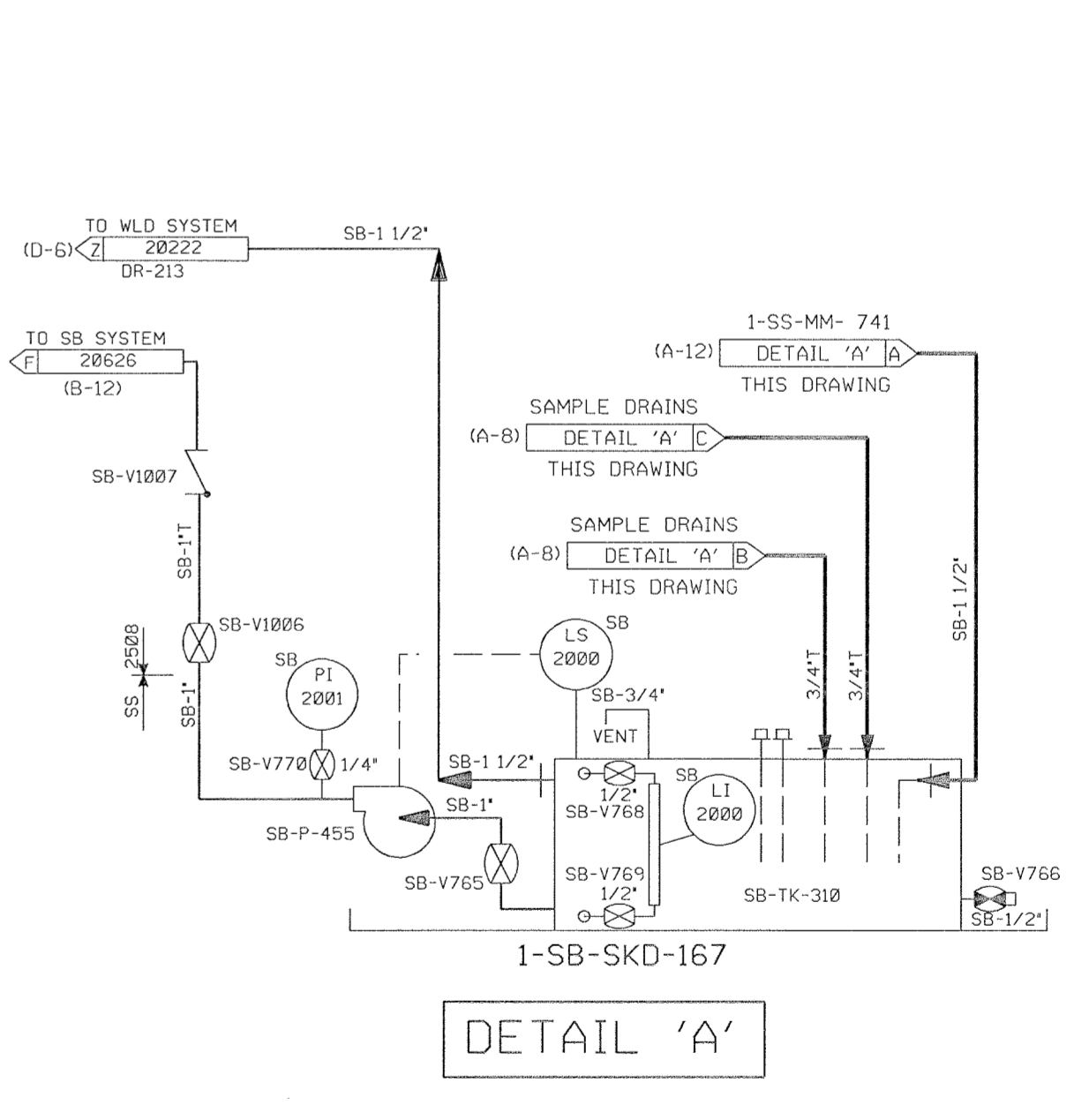
PID- 1-SS-B20519

9763-F-805025	12	SAMPLE SYSTEM NUCLEAR P&ID SHT 1
9763-F-804977	8	SAMPLE SYSTEM NUCLEAR P&ID SHT 2
REF. DRAWING NO.	REV	TITLE



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

- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 20516, 20518, 20519, 20520 & 20522.
 2. ALL LINES, EQUIPMENT COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX SS, UNLESS NOTED OTHERWISE.
 3. ALL TUBING 3/8" T AND MATL CLASS 2508 UNLESS NOTED OTHERWISE.
 4. SEE DWG 20518 FOR ADDITIONAL NOTES.
 5. LOW CRACKING PRESSURE VALVE.
 6. ONLY ONE S/G AT A TIME IS LINED UP TO THE SACC ANALYZER.
 7. THIS EQUIPMENT HAS 1/4" TUBING CONNECTIONS.
 8. DISPOSE OF COOLANT IN A PROPER CONTAINER FOR OFF SITE DISPOSAL, DO NOT DIRECT TO FLOOR DRAINS.
 9. DRAINS ARE SLOPED TO OUTLET CONNECTION (#8).
 10. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS ARE SAFETY CLASS NNS UNLESS NOTED OTHERWISE.
 11. Δ INDICATES REVISION LEVEL.
 12. FILTER ELEMENTS OF THE FOLLOWING FILTERS MAY BE OPTIONALLY INSTALLED PER THE DIRECTION OF CHEMISTRY: 1-SS-F-177, 178, 179, 180



REV	DATE	DSGN	CHKD	CE	DESCRIPTION
18	9/21/10	JM	MM	SAK	REVISED TO ELECTRONICALLY INCORP EC#12718 PER AP#578748
17	9/9/10	BCS	MW	SAK	INCORP. EC#12718
16	6/9/10	JM	MPW	SAK	INCORP. EC#12718
15	12/6/01	BCS	MPW	DEA	INCORP. MSE 01-0231 REV. 00
14	6/22/01	JM	BCS	SB	INCORP. DCR 00-0028, DCN-00, 05
13	11-2-96	BCL	MW	REP	INCORP. DCR 92-42 CAB. 4, 5
12	8/25/93	MRB	BCL	JWB	INCORP. DCR 90-39 CAB8

NEXTERA ENERGY
SEABROOK

SAMPLE SYSTEM
STEAM GENERATOR
SAMPLE PANEL 166B P&ID

PID- 1-SS-B20521

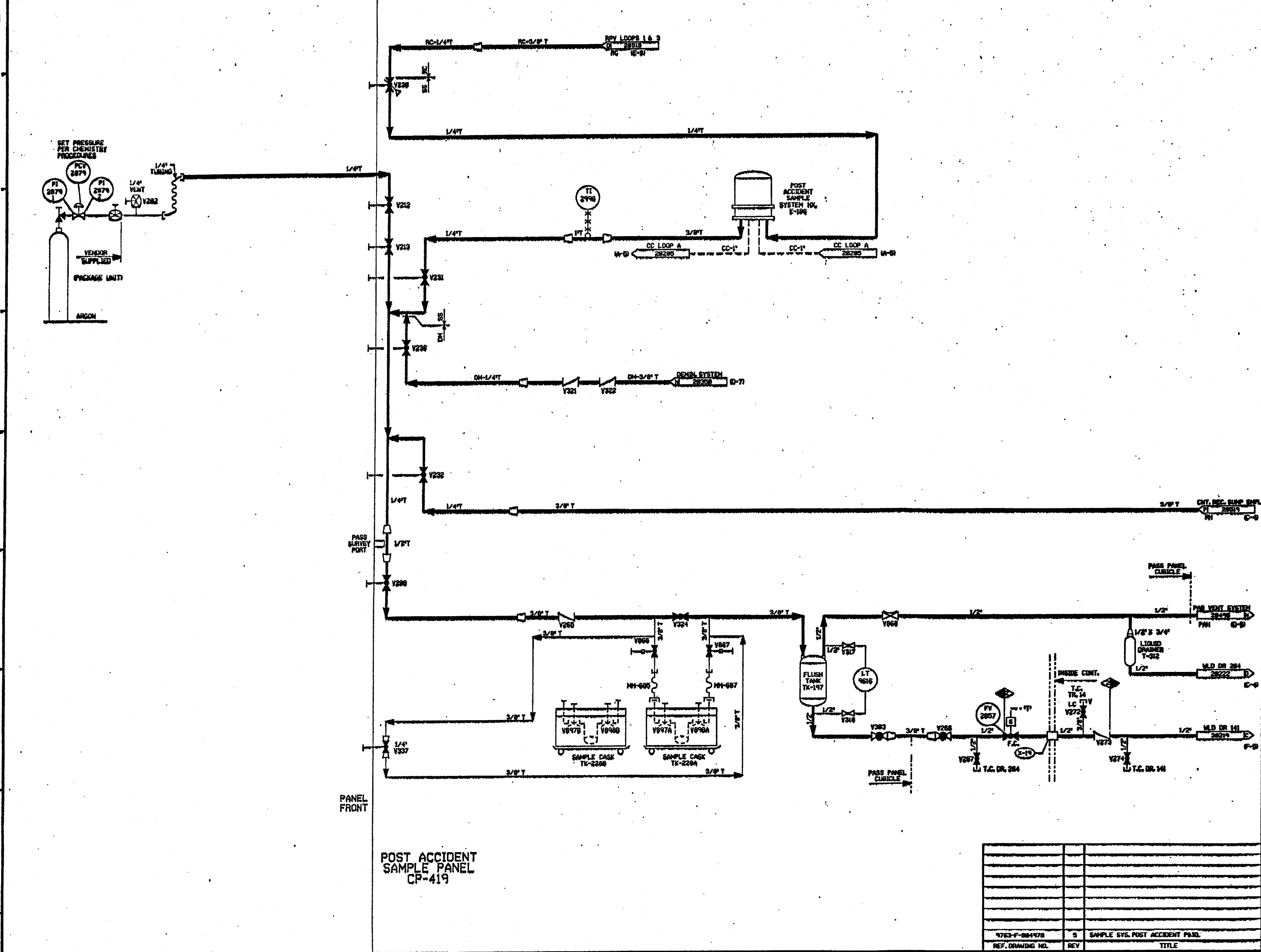
REF. DRAWING NO.	REV	TITLE
9763-M-506815	3	SS-DG8D RAD MONITORING CONTROL LOOP DIA
9763-F-805025	12	SAMPLE SYSTEM NUCLEAR P&ID SHEET 1
9763-F-804977	8	SAMPLE SYSTEM NUCLEAR P&ID SHEET 2

PID-1-SS-B20520

PANEL FRONT

PANEL FRONT

POST ACCIDENT
SAMPLE PANEL
CP-419



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

- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 2052, 2053, 2054, 2055 AND 2052.
 2. ALL PIPING, VALVES, EQUIPMENT, AND INSTRUMENTS HAVE SYSTEM PREFIX 08, UNLESS NOTED OTHERWISE.
 3. VENT AND DRAIN CODE BRINGS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER I-NR-88511, UNLESS NOTED OTHERWISE.
 4. Δ INDICATES REVISION LEVEL.
 5. MAINTAIN LEVEL OF DRAIN WATER IN REFERENCE LEL.
 6. ALL LINEAL EQUIPMENT, COMPONENTS AND INSTRUMENTS ARE SAFETY CLASS UNLS, UNLESS NOTED OTHERWISE.
 7. QUICK DISCONNECT COUPLINGS.

PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED

REV	DATE	BY	CHKD	APP'D	DESCRIPTION
13	1/10/02	MPH	JM	ZCB	REVISED ENTIRE PID PER DCR 01-002 DCM 88

North Atlantic Energy Service Corporation

SEABROOK STATION

SAMPLE SYSTEM (NUCLEAR-POST ACCIDENT) DETAIL

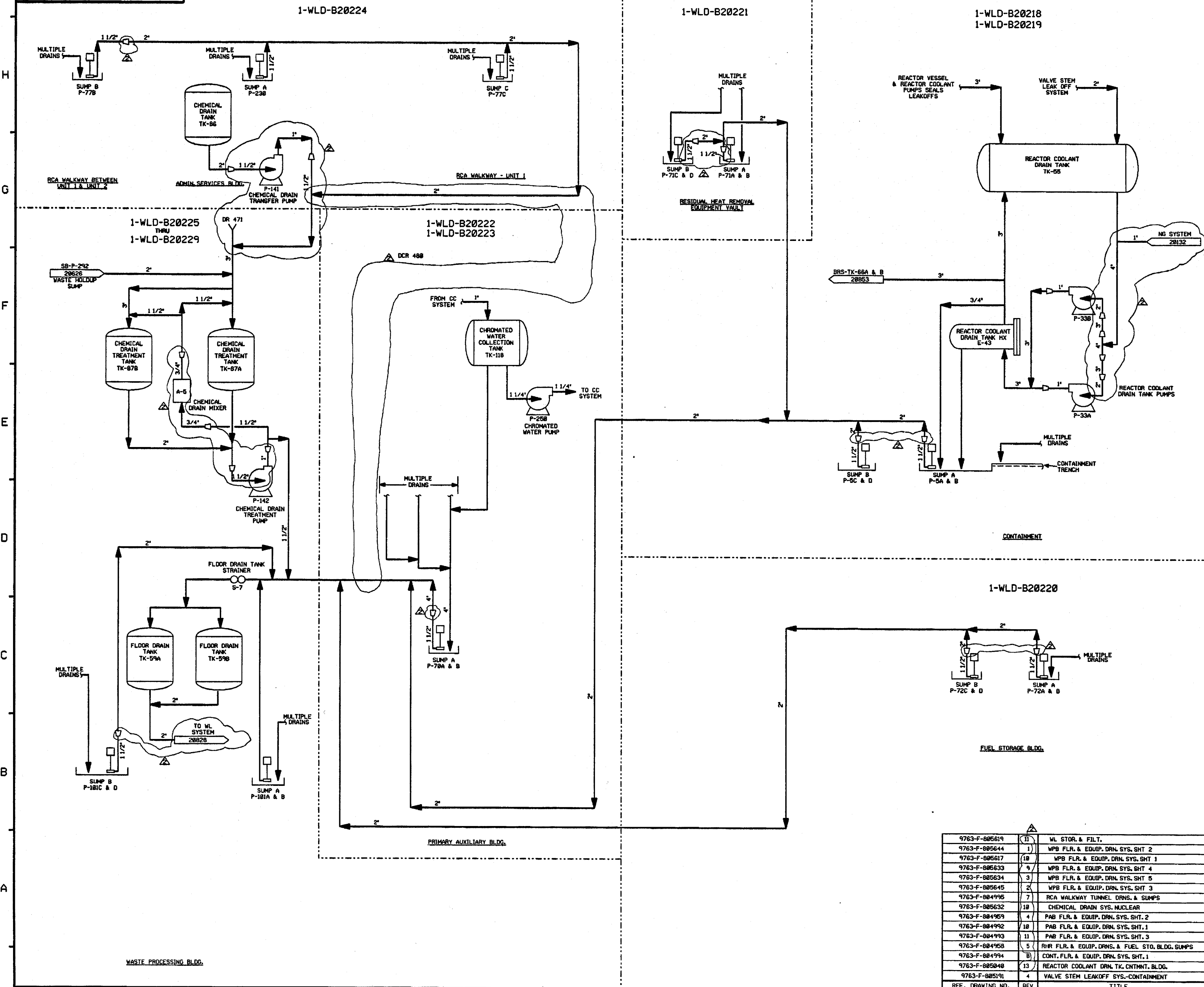
PID-1-SS-B20520

REF. DRAWING NO.	REV	TITLE
1763-F-084978	5	SAMPLE SYS. POST ACCIDENT PANO

01/09/02

12 11 10 9 8 7 6 5 4 3 2 1
 H
 G
 F
 E
 D
 C
 B
 A
 PID-1-WLD-B20216

INCOMPLETE ITEMS
ITEM NUMBER



NOTES:
 1. WORK THIS DWG WITH DWGS 20218 THRU 20229.
 2. ALL LINES, EQUIPMENT, COMPONENTS & INSTRUMENTS HAVE SYSTEM PREFIX WLD UNLESS NOTED OTHERWISE.
 3. Δ INDICATES DRAWING REVISION

REF. DRAWING NO.	REV.	TITLE
9763-F-805619	(1)	WL STOR. & FILT.
9763-F-805644	(1)	WPB FLR. & EQUIP. DRN. SYS. SHT 2
9763-F-805617	(10)	WPB FLR. & EQUIP. DRN. SYS. SHT 1
9763-F-805633	(9)	WPB FLR. & EQUIP. DRN. SYS. SHT 4
9763-F-805634	(3)	WPB FLR. & EQUIP. DRN. SYS. SHT 5
9763-F-805645	(2)	WPB FLR. & EQUIP. DRN. SYS. SHT 3
9763-F-804995	(7)	RCA WALKWAY TUNNEL DRNS. & SUMPS
9763-F-805632	(10)	CHEMICAL DRAIN SYS. NUCLEAR
9763-F-804959	(4)	PAB FLR. & EQUIP. DRN. SYS. SHT. 2
9763-F-804992	(10)	PAB FLR. & EQUIP. DRN. SYS. SHT. 1
9763-F-804993	(11)	PAB FLR. & EQUIP. DRN. SYS. SHT. 3
9763-F-804958	(5)	RWR FLR. & EQUIP. DRNS. & FUEL STO. BLDG. SUMPS
9763-F-804994	(8)	CONT. FLR. & EQUIP. DRN. SYS. SHT. 1
9763-F-805040	(13)	REACTOR COOLANT DRN. TK. CNTMT. BLDG.
9763-F-805191	(4)	VALVE STEM LEAKOFF SYS.-CONTAINMENT

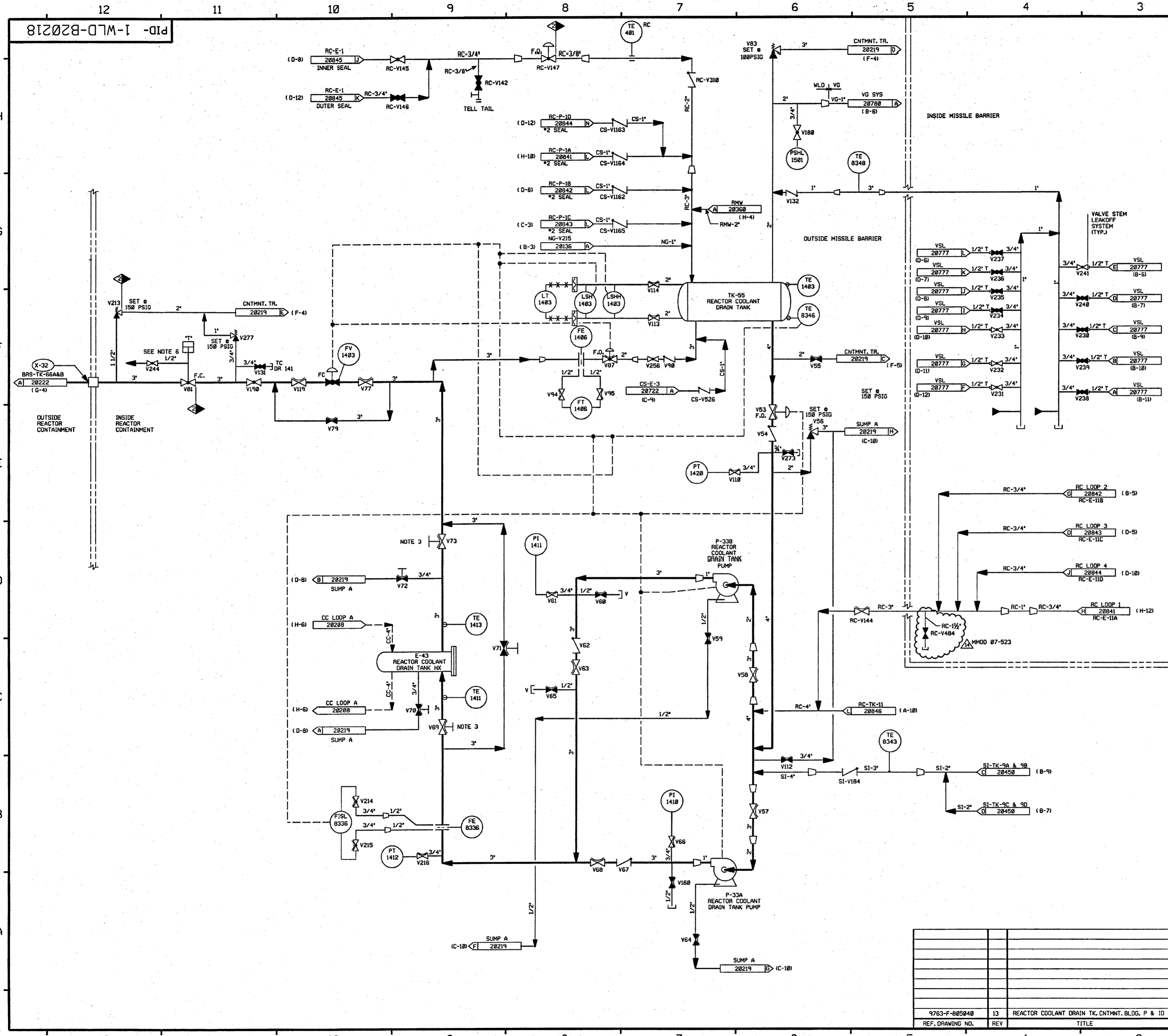
REV	DATE	DSGN	DRWN	CHKD	CE	LDE	DESCRIPTION
2	2/3/87	WDS	DWS	JHM	B-L	RCC	INCORP DCR 488, REVISED REF DWG REVISIONS, ADDED NOTE 3, REMOVED 'S' FROM DWG NOS IN NOTE 1, REVISED PER LATEST SYSTEM DWG'S, ADDED LINE SIZES.
1	4/2/86	GD	SKN	JHM	BJA	WFD	ISSUED FOR OPERATIONS
0	3/29/86	MLS	RI	JHM	JMK	WFD	ISSUED FOR FIELD VERIFICATION

PSNH PUBLIC SERVICE OF NEW HAMPSHIRE

WASTE PROCESSING LIQUID DRAINS OVERVIEW

SEABROOK STATION PID- 1-WLD-B20216

PID-1-WLD-B20218



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

- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 20216, & 20219 THRU 20229.
 2. ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS HAVE SYSTEM PREFIX WLD UNLESS NOTED OTHERWISE.
 3. VALVES V69 THRU V73 ARE REACH ROD OPERATED.
 4. ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS ARE SAFETY CLASS NNS, UNLESS NOTED OTHERWISE.
 5. Δ INDICATES REVISION LEVEL
 6. REFER TO DRAWING VSL-20774 FOR VALVE LEAKOFFS.

PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
14	4/15/08	JM	BCL	WFO	INCCORP MMOD 07-523 DCN 00
13	8/13/07	DWS	MPW	DMO	INCCORP DCR 970208 DCN*00
12	11/31/97	DWS	BCS	AM	INCCORP DCR 970205 CA*0
11	11/27/95	MPW	BCS	DMO	INCCORP DCR 95-23 CA-6
10	11/13/95	BCS	MPW	RJF	PARTIAL INCCORP DCR 95-23 CA-6
9	6-3-94	MPW	DWS	JLD	INCCORP DCR 91-13 CAB & DCR 93-23 CA 3
8	4-3-92	DWS	BCL	ES	INCCORP DCR'S 90-3 CA0
7	9-24-91	HRB	RMC	JEV	INCCORP MMOD 91-610 CAB REVISED NOTE 4 PER ENGINEERING DESIGN STANDARD 37100 SEC 3.0
6	4/28/88	MPW	BCL	RRC	REVISED; DRAIN LINES TO SUMP CONTINUATION LETTER REF. COORD AND DUPLICATED PIPING SHOWN IN PHANTOM.
5	7/2/87	GPM	PAL	VMS	REVISED; PIPING TO REFLECT AS INSTALLED CONFIG. ADDED NOTE 6
4	2/27/87	WDS	PAL	VMS	INCCORP. WR 87-0000155
3	1/19/87	MAP	PAL	VMS	ADDED VSL CONT FLAGS & REF COORD'S & WR TO ILL. RELOCATED PIPING FROM V112 & V58. REMOVED CAPILLARY FROM P1418 & P1411 AND RELOCATED TE-081 PER AS-BUILT CONDITION. ADDED DRAIN LINES PER USE&C ISOMETRIC. ADDED REF COORD TO REF FLAGS. UPDATED REF DWG BLOCK & ADDED NOTE 5.
2	6/17/86	TAK	BCL	RRC	ADDED REF. RWG. 804994
1	4/2/86	GD	JOM	WFD	ISSUED FOR OPERATIONS
0	3/29/85	MLS	JNM	WFD	ISSUED FOR FIELD VERIFICATION
REV	DATE	DSGN	CHKD	CE	DESCRIPTION

FPL ENERGY Seabrook Station

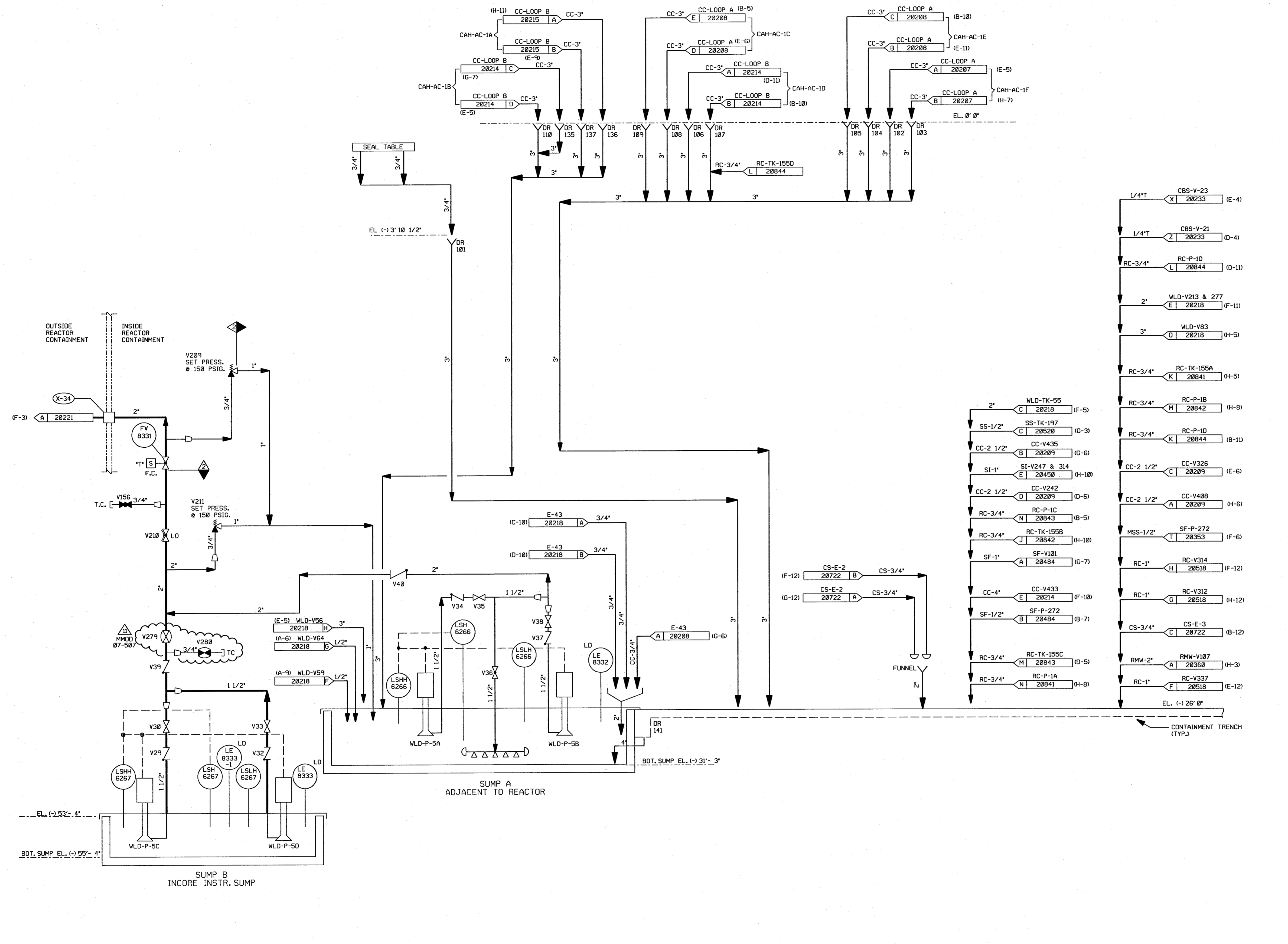
WASTE PROCESSING LIQUID DRAINS
REACTOR COOLANT SYSTEM

PID- 1-WLD-B20218

REF. DRAWING NO.	REV	TITLE
9763-F-805040	13	REACTOR COOLANT DRAIN TK. CNTNMT. BLDG. P & ID

PID-1-WLD-B20219

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



DRAINS SHOWN ON THIS DRAWING

101	106	135
102	107	136
103	108	137
104	109	141
105	110	

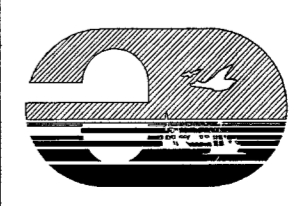
- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 20216, 20218 & 20220 THRU 20229.
 2. ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS HAVE SYSTEM PREFIX WLD UNLESS NOTED OTHERWISE.
 3. ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS ARE SAFETY CLASS NNS UNLESS NOTED OTHERWISE.
 4. Δ INDICATES REVISION LEVEL.
 5. DELETED

PORTIONS OF THIS DRAWING ARE

NUCLEAR SAFETY RELATED

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
11	4/14/89	JM	Bes	JME	INCRP MMOD 07-507 DCN 00, 01
10	4/6/85	JM	MPW	RRB	INCRP MSE 04-196 REV 01, 00
9	8/18/97	MPW	BCS	VWS	INCRP MMOD 96-550 DCN 01
8	6/13/97	DWS	MPW	DMG	INCRP DCR 970008 DCN*00
7	1/17/97	DWS	MPW	DMG	INCRP DCR 970002 CA*0 & 1
6	10/14/88	MRB	GPM	RRC	INCRP NCR 96-508 REV 1 DELETED NOTE 2
5	4/28/88	MPW	BCL	RRC	ADDED LINE SIZES; REVISED DRAIN LINES TO SUMP A AND NOTE 3. DELETED REF. DOC. REVISED DRAFTING ERRORS; DRAIN LOC. FOR HW-E-43, ADDED DRAIN FOR RC-P-ID, NOTE 5 & DESIGNATION AND NCR 86/600 AS INCOMP. ITEM, INCRP NCR 86/111 REV.0 & NCR 86/112 REV.0
4	12/22/86	WDS	WRD	RRC	DELETED VG DRAIN LINE, ADDED CONT. REF. LOCATIONS AND NOTE 4. INCRP'D ECA 19/108341A, 19/108443A
3	10/10/86	JDM	MPW	RRC	REMOVED CHANGE ITEM #1 PER ECA 19/108566A, INCRP. ECA 19/116102A & 74/102536B & C
2	6/16/86	TAK	DWS	RRC	INCRP. ECA 19/108566A ISSUED FOR OPERATIONS
1	4/2/86	GD	JDM		
0	3/29/85	MLS	JNM	WFD	ISSUED FOR FIELD VERIFICATION

FPL ENERGY Seabrook Station



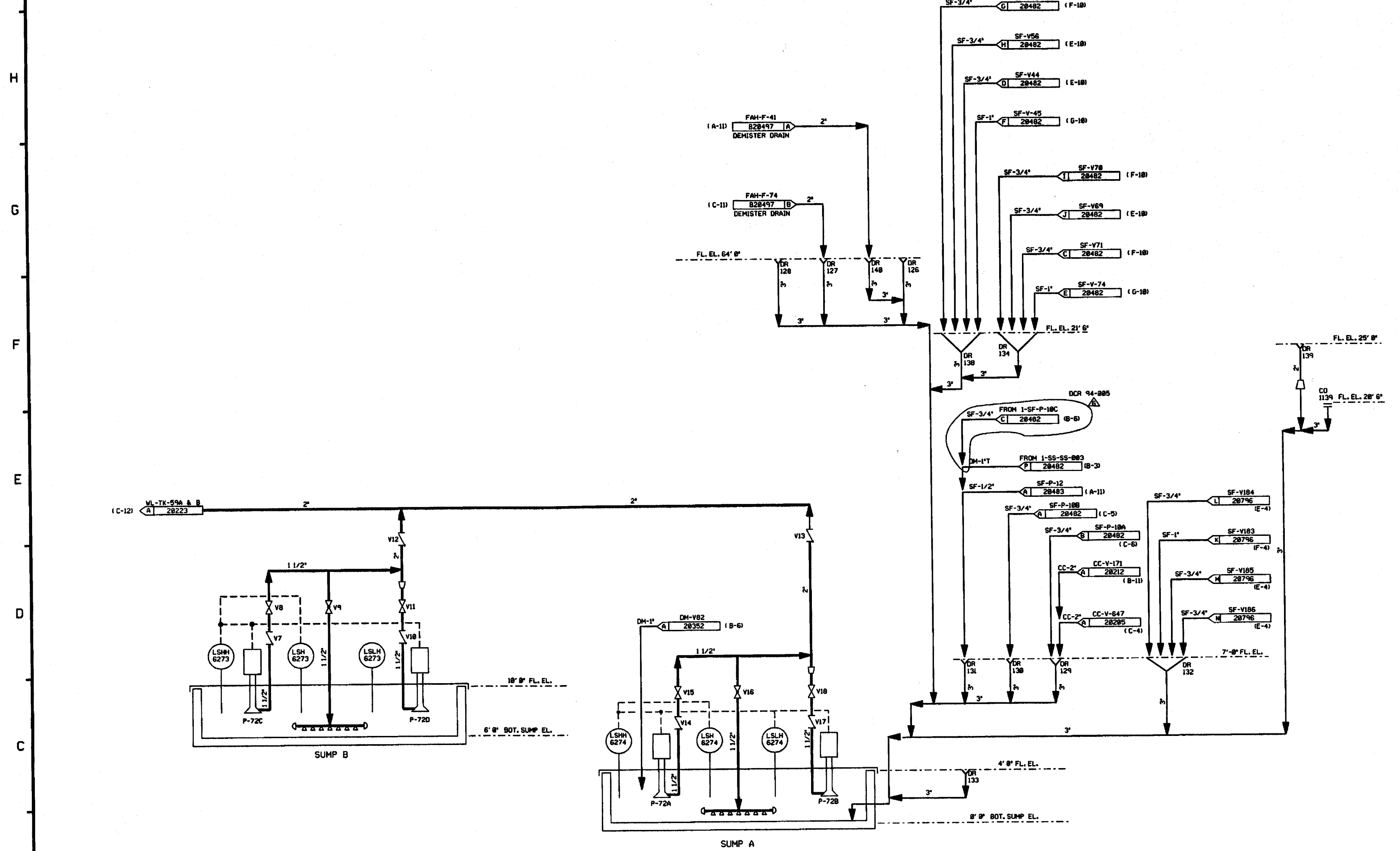
WASTE PROCESSING LIQUID DRAINS CONTAINMENT BUILDING SUMPS

PID- 1-WLD-B20219

9763-F-004994	8	CONTNMT. FLR. & EQUIP. DR. SYS. SHT. 1 P & ID
REF. DRAWING NO.	REV	TITLE

PID-1-WLD-B20220

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



DRAINS ON THIS DRAWING

126	132
127	133
128	134
129	136
130	139
131	140

CLEANOUT ON THIS DRAWING
1139

- NOTES:**
1. WORK THIS DRAWING WITH DRAWINGS 28216, 28218, 28219, & 28221 THRU 28224.
 2. ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS HAVE SYSTEM PREFIX WLD UNLESS NOTED OTHERWISE.
 3. ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS ARE SAFETY CLASS NWS.

4. Δ - INDICATES REVISION LEVEL.

REV	DATE	DSGN	DRWN	CHKD	CODE	SEC	DESCRIPTION
6	3/27/91	BCS	MRB	MPW	RRC	INCORP. DCR 94-885 CAB	
5	12/83/91	JM	FCB	QPM	BCL	INCORP. DCR 98-42 CA32	
4	8/14/91	MRB	JM	FCB	QPM	INCORP. DCR 98-42 CAB	
3	5/21/91	MRB	RMC	APL	BCL	INCORP. DCR 87-294 CAB4	
2	12/12/88	FJR	TAK	MRJ	BCL	RRC	ADDED CONTINUATION FLAG COORDS, REFERENCE DRAWINGS AND NOTE 4.
1	4/2/88	GD	CJS	JDM	DFH	WFD	ISSUED FOR OPERATIONS
0	3/24/85	NLS	MRB	JNM	JMK	WFD	ISSUED FOR FIELD VERIFICATION

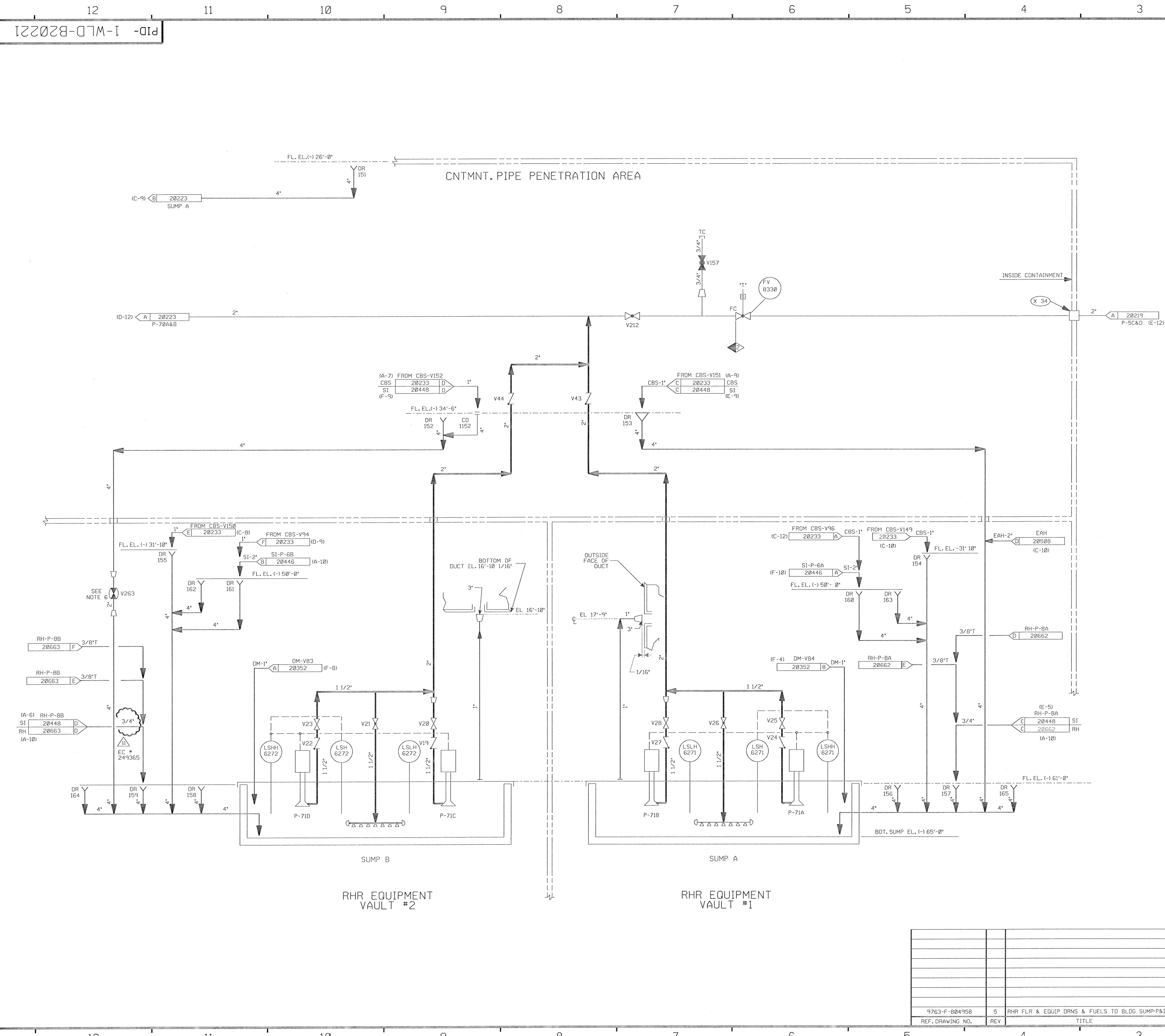
North Atlantic Energy Service Corporation



WASTE PROCESSING LIQUID DRAINS
FUEL STORAGE BUILDING

PID- 1-WLD-B20220

REF. DRAWING NO.	REV	TITLE
9763-F-804958	4	RHR FLR & EQUIP DRNS & FUEL STO. BLDG SUMPS-PAID



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

DRAINS ON THIS DRAWING

151	156	161
152	157	162
153	158	163
154	159	164
155	160	165

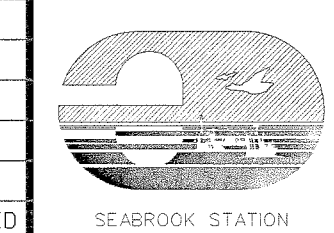
CLEANOUT ON THIS DRAWING

1152

- NOTES:**
1. WORK THIS DRAWING WITH DRAWINGS 20216, 20218 THRU 20220, & 20222 THRU 20229.
 2. ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS HAVE SYSTEM PREFIX WLD UNLESS NOTED OTHERWISE
 3. DELETED
 4. ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS ARE SAFETY CLASS NNS UNLESS NOTED OTHERWISE
 5. Δ INDICATES REVISION LEVEL.
 6. V263 IS A SPRING LOADED, SELF-CLOSING VALVE, PROVIDING MELB PROTECTION FROM CROSS-TRAIN FLOODING OF VAULTS.

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

REV	DATE	DCSN	CHKD	CE	DESCRIPTION
11	11/25/76	GPS	JM	BSS	INCRP. EC #249365
10	1/10/82	MPW	BCS	RRB	INCRP. DCR 01-0202 DCN 00
9	3/25/99	BCL	MIRB	GPM	INCRP. MMOD 92-552 CAB
8	10/25/98	MRB	JM	BCL	INCRP. MMOD 98-601 CAB
7	11/1/89	MRB	APL	GRM	COMPLETE INCRP. DCR 87-311 CA16
6	9/6/89	MRB	APL	WFD	PARTIAL INCRP. OF DCR 87-311 CA 07
5	4/21/89	MPW	APL	GPM	ADDED: LINES FROM DWG #20520 SHOWN ON THIS DWG. PER CHEMISTRY REQUEST REVISED: CONT. REF. COORD., EAH CONT. & NOTE 4 DELETED: PIPE SPECS.
4	7/10/87	MPW	PAL	VWS	INCRP. DCR 86-482.
3	11/4/86	MAP	WRD	RRC	REVISED REF DWG REV. ADDED P&ID LEGEND NOTE, DWG COORDS. REMOVED ALFA FROM DWG REF NOTE 1.
2	9/2/86	MAP	JDM	RRC	DELETED NOTE 3 & INCRP. ECA 74/1165676
1	4/2/86	GD	JDM	WFO	ISSUED FOR OPERATIONS
0	3/29/85	MLS	JNM	WFO	ISSUED FOR FIELD VERIFICATION

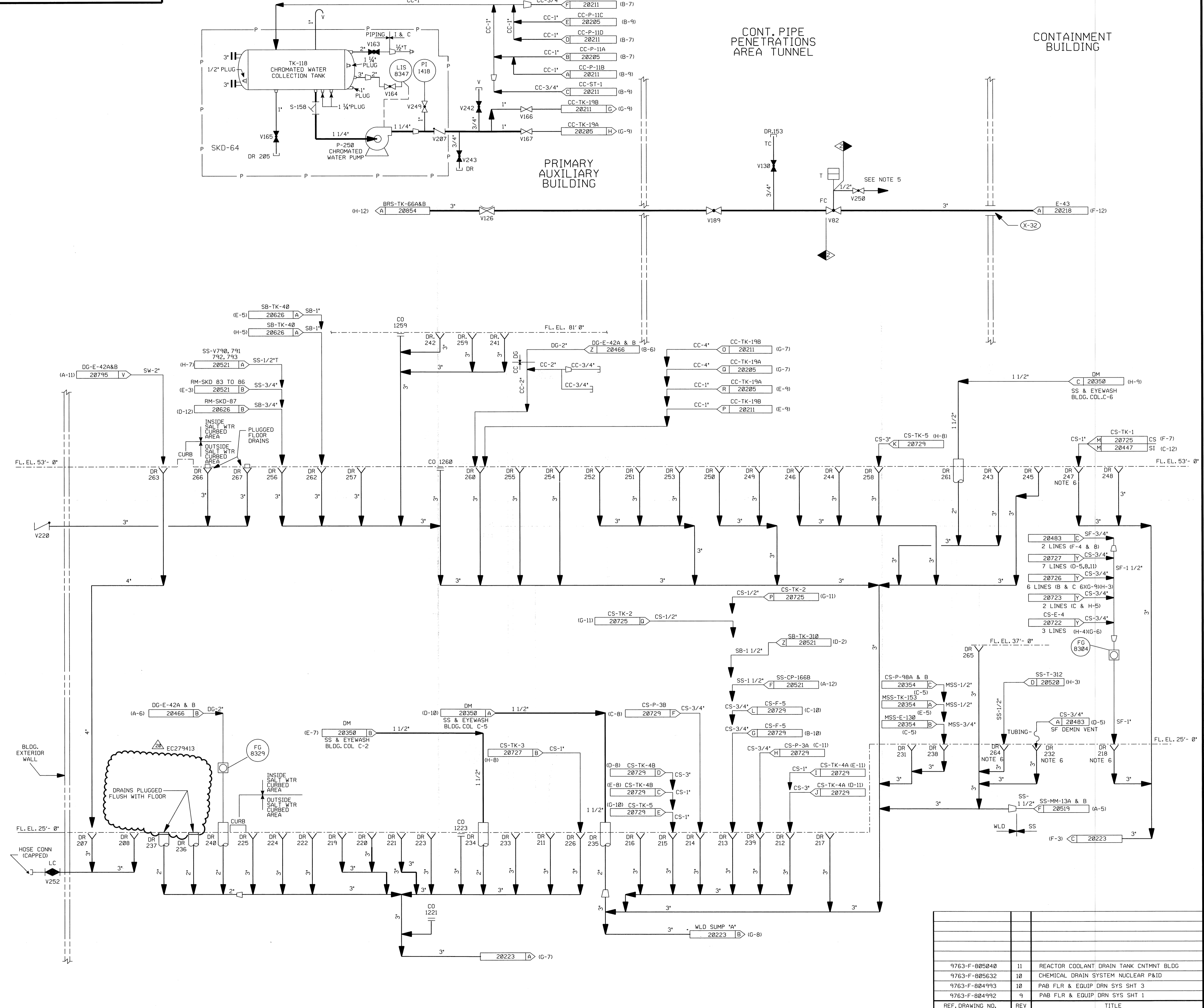


**WASTE PROCESSING LIQUID DRAINS
RHR
EQUIPMENT VAULTS #1 & #2**

PID- 1-WLD-B20221

9763-F-804958	5	RHR FLR & EQUIP DRNS & FUELS TO BLDG SUMP-P&ID
REF. DRAWING NO.	REV	TITLE

222028-07M-1 -PID



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

DRAINS ON THIS DRAWING

207	219	233	243	253	263
208	220	234	244	254	264
211	221	235	245	255	265
212	222	236	246	256	266
213	223	237	247	257	267
214	224	238	248	258	
215	225	239	249	259	
216	226	240	250	260	
217	231	241	251	261	
218	232	242	252	262	

CLEANOUTS ON THIS DRAWING

1221
1223
1259
1260

- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 20216, 20218 THRU 20221, & 20223 THRU 20229.
 2. ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTATION HAVE SYSTEM PREFIX WLD UNLESS NOTED OTHERWISE.
 3. ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTATION ARE SAFETY CLASS NNS UNLESS NOTED OTHERWISE.
 4. Δ INDICATES REVISION LEVEL.
 5. REFER TO DRAWING VSL-20774 FOR VALVE LEAKOFF.
 6. THIS DRAIN HAS A GAS CONTAINMENT DEVICE ADDED PER MMOD 96-655.

PORTIONS OF THIS DRAWING ARE NUCLEAR SAFETY RELATED

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
20	12/3/13	BCS	MW	SAK	INCORP. EC279413
19	1/9/10	BCS	MW	SAK	INCORP. EC 12718
18	1/10/02	MPW	BCS	RRB	INCORP. DCR 01-002 DCN 00
17	10/13/00	BCS	MPW	JCM	INCORP. MMOD 99-507 DCN-00
16	3/4/98	BCS	DWS	VMS	INCORP. MMOD 96-655 DCN-03
15	6/11/97	DWS	MPW	VMS	INCORP. OF DCR 960016 CA#0
14	5/28/97	DWS	MPW	VMS	PARTIAL INCORP OF DCR 960016 CA#0
13	8/10/97	MPW	BCS	VMS	INCORP. MMOD 96-655 CA0
12	1/10/97	MPW	BCS	RRB	INCORP. DCR 87-55 CA0
11	11/2/95	BCL	MPW	MRB	INCORP. DCR 92-42 CA0
10	7/25/95	BCL	DWS	VMS	INCORP. MMOD 94-547 CA0
9	6/3/93	MRB	BCL	DMO	INCORP. MMOD 91-516 CA0
8	4/5/93	BCL	MPW	WFZ	INCORP. MMOD 91-507 CA0
7	4/21/92	MRB	BCL	JRM	INCORP. MMOD 91-515 CA0
6	8/18/89	MRB	DWS	GEV	INCORP. MMOD 89-530 REV 0
5	4/21/88	GPM	APL	POS	INCORP. DCR 86-401CA1 REVISED NOTE 3, PIPING PER AS INSTALLED CONFIGURATION. CONT DWG NO'S, & COORD'S, SALT WATER BOUNDARY, ADDED. CONT. COORD'S & MATCH UP LETTERS, NOTE 5, TK-118 CONNECTIONS DELETED. BUILDING DESIGNATION.
4	12/3/86	MAP	MPW	RRC	REVISED PER UE&C ERECTION ISO., ADDED ISO. REF. DWGS., DWG. LOC. COORD'S & NOTE 4.
3	9/2/86	MAP	MAP	RRC	INCORP. ECA 99/115494A
2	6/16/86	JDM	DWS	RRC	ADD LETTER DESIG. TO CONTINUATIONS INCORP. ECA 19/106629A
1	4/2/86	GD	JDM	WFD	INCORP. ECA 08/114678B ISSUED FOR OPERATIONS
0	3/29/85	MNS	JNM	WFD	ISSUED FOR FIELD VERIFICATION

REF. DRAWING NO.	REV	TITLE
9763-F-805040	11	REACTOR COOLANT DRAIN TANK CNTNMT BLDG
9763-F-805632	10	CHEMICAL DRAIN SYSTEM NUCLEAR P&ID
9763-F-804993	10	PAB FLR & EQUIP DRN SYS SHT 3
9763-F-804992	9	PAB FLR & EQUIP DRN SYS SHT 1



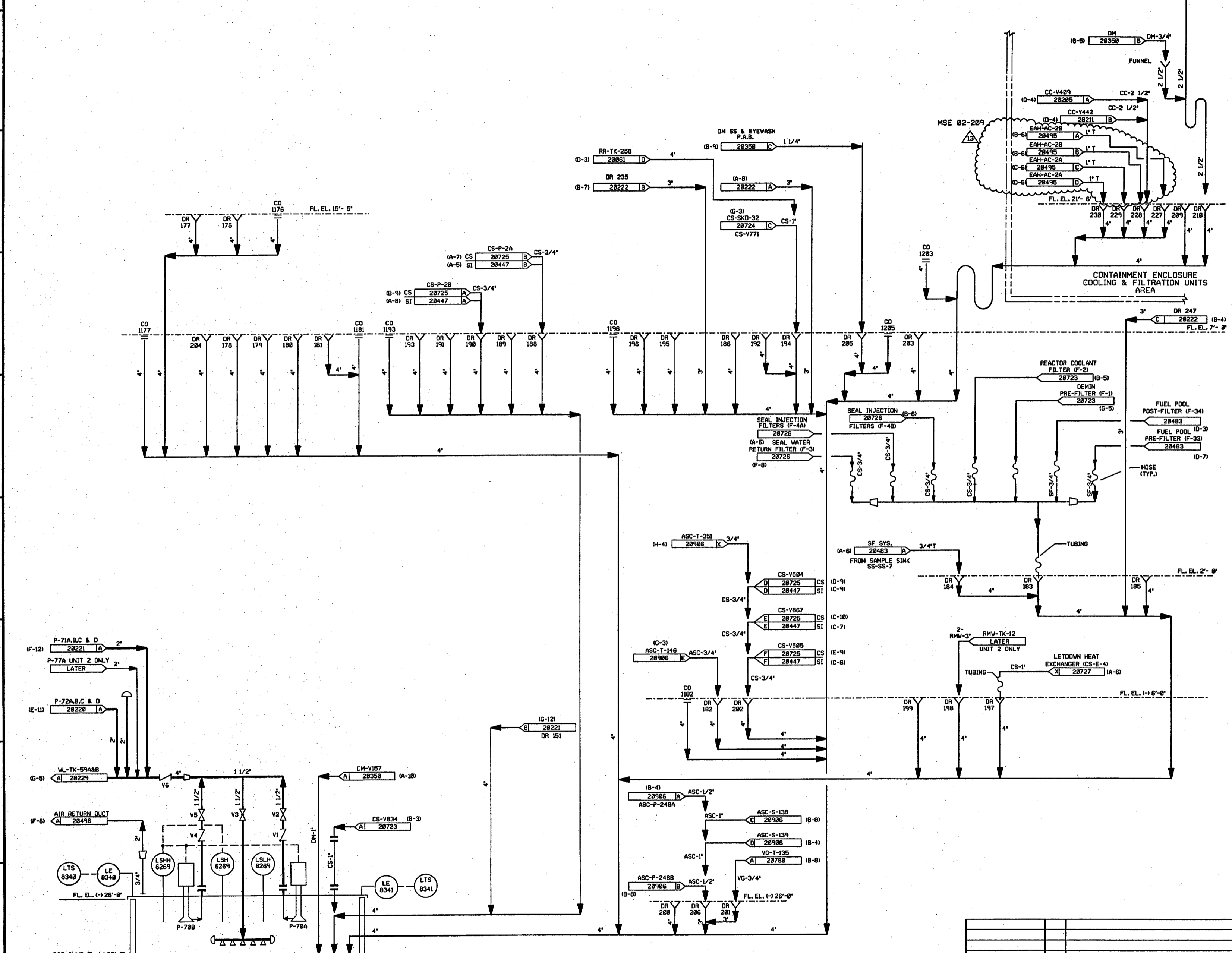
Nextera ENERGY
SEABROOK

WASTE PROCESSING LIQUID DRAINS
PRIMARY AUXILIARY BLDG.
SHT. 1 OF 2

PID- 1-WLD-B20222

PID-1-WLD-B20223

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



DRAINS ON THIS DRAWING

176	183	191	198	205	238
177	184	192	199	206	
178	185	193	200	207	
179	186	194	201	208	
180	187	195	202	209	
181	188	196	203	210	
182	189	197	204	211	

CLEANOUTS ON THIS DRAWING

1176	1193	1446 UNIT #2
1177	1196	
1181	1203	
1182	1205	

- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 28216, 28218 THRU 28222, & 28224 THRU 28229.
 2. ALL LINES, EQUIPMENT, COMPONENTS, & INSTRUMENTS HAVE SYSTEM PREFIX WLD UNLESS NOTED OTHERWISE.
 3. ALL LINES, EQUIPMENT, COMPONENTS, & INSTRUMENTS ARE SAFETY CLASS NNS, UNLESS NOTED OTHERWISE.
 4. Δ INDICATES REVISION LEVEL.

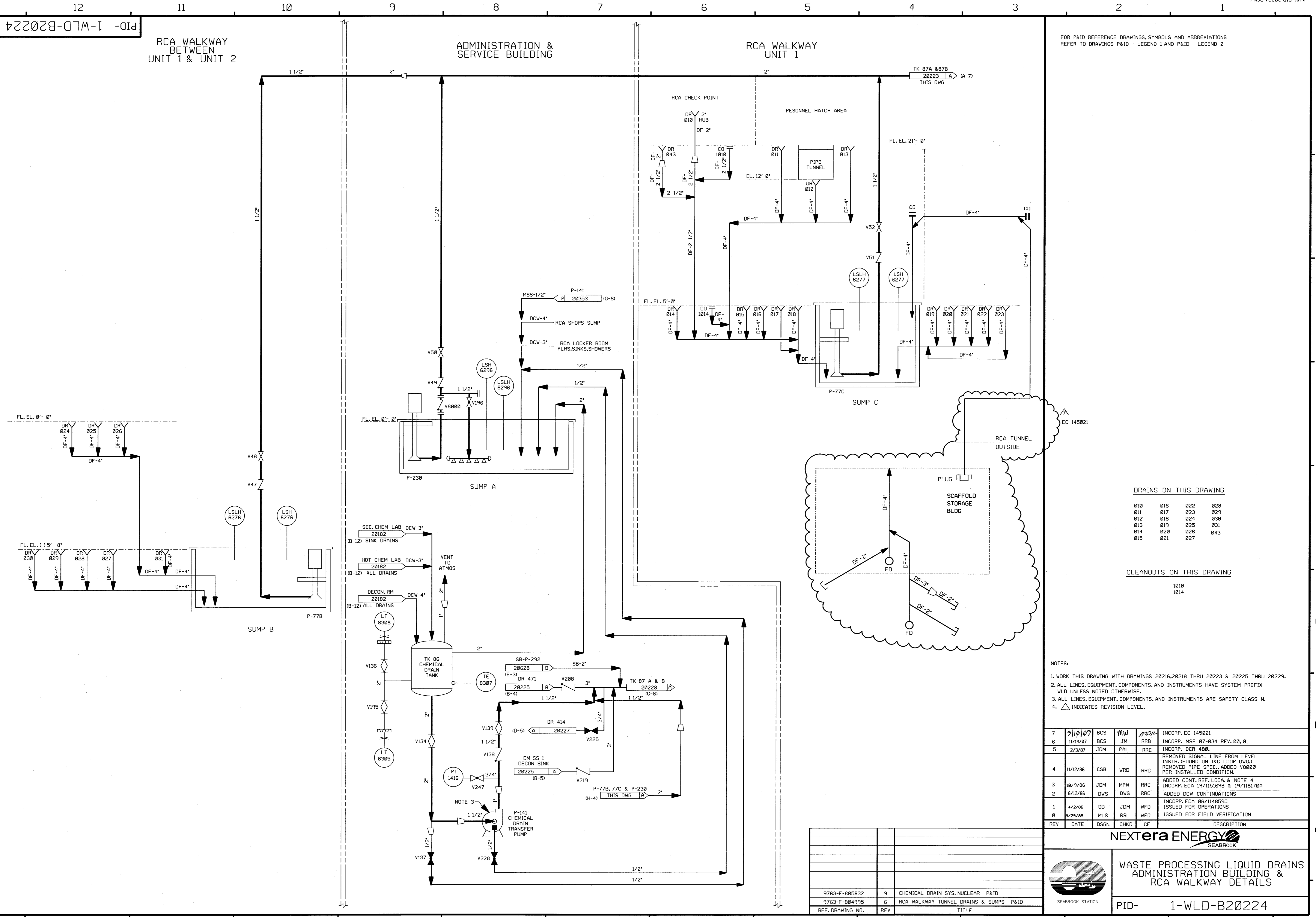
NO	DATE	DSGN	CHKD	CE	DESCRIPTION
13	10-21-05	BCS	JMA	gsp	INCRP. MSE 02-209 REV. 00
12	1/18/02	MPW	BCS	RRB	INCRP. DCR 01-0006 DCN 00
11	8/18/97	BCL	BCS	VWS	INCRP. MH00-91-507 CA-0
10	11/2/92	BCL	DWS	DJM	INCRP. DCR 88-179 CAB
9	4/23/92	MRB	BCL	JEV	INCRP. MH00-91-515 CAB
8	7/25/91	MRB	JM	JEV	INCRP. DCR 88-244 CAB
7	3-16-90	MRB	APL	RSG	INCRP. DCR 87-93 CA7 REVISED NOTE 3 ADDED CONTINUATION TAG DESCRIPTIONS
6	3/22/88	MPW	BCL	RRC	LINE FROM DWG 20528 SHOWN GOING TO SUMP PER CHEMISTRY REQUEST.
5	2/3/87	JDM	MPW	RRC	INCRP. DCR 488
4	12/11/86	WDS	MRJ	RRC	REVISED REF. DWG. REVISIONS, ADDED FLANGES AT SUMP A
3	10/18/86	MAP	JDM	RRC	ADDED DWG. LOCATION COORD. & NOTE 4. RE-INCORPORATED ECA 99/114510A INC. ECA'S 99/886183C, 99/180049A
2	6/13/86	TAK	DWS	RRC	INC ECA'S 99/114510A & 99/886183A
1	4/2/86	GD	JDM	WFO	ISSUED FOR OPERATIONS
0	3/24/85	MLS	RSL	WFO	ISSUED FOR FIELD VERIFICATION

FPL ENERGY Seabrook Station

WASTE LIQUID DRAINS
PRIMARY AUXILIARY BLDG.
SHT. 2 OF 2

PID- 1-WLD-B20223

REF. DRAWING NO.	REV	TITLE
9763-F-884993	10	PAB FLR & EQUIP DRN SYS SHT 3 PAID
9763-F-884994	4	PAB FLR & EQUIP DRN SYS SHT 2 PAID
9763-F-884992	10	PAB FLR & EQUIP DRN SYS SHT 1 PAID



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

DRAINS ON THIS DRAWING

010	016	022	028
011	017	023	029
012	018	024	030
013	019	025	031
014	020	026	043
015	021	027	

CLEANOUTS ON THIS DRAWING

1010
1014

- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 20216, 20218 THRU 20223 & 20225 THRU 20229.
 2. ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS HAVE SYSTEM PREFIX WLD UNLESS NOTED OTHERWISE.
 3. ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS ARE SAFETY CLASS N.
 4. △ INDICATES REVISION LEVEL.

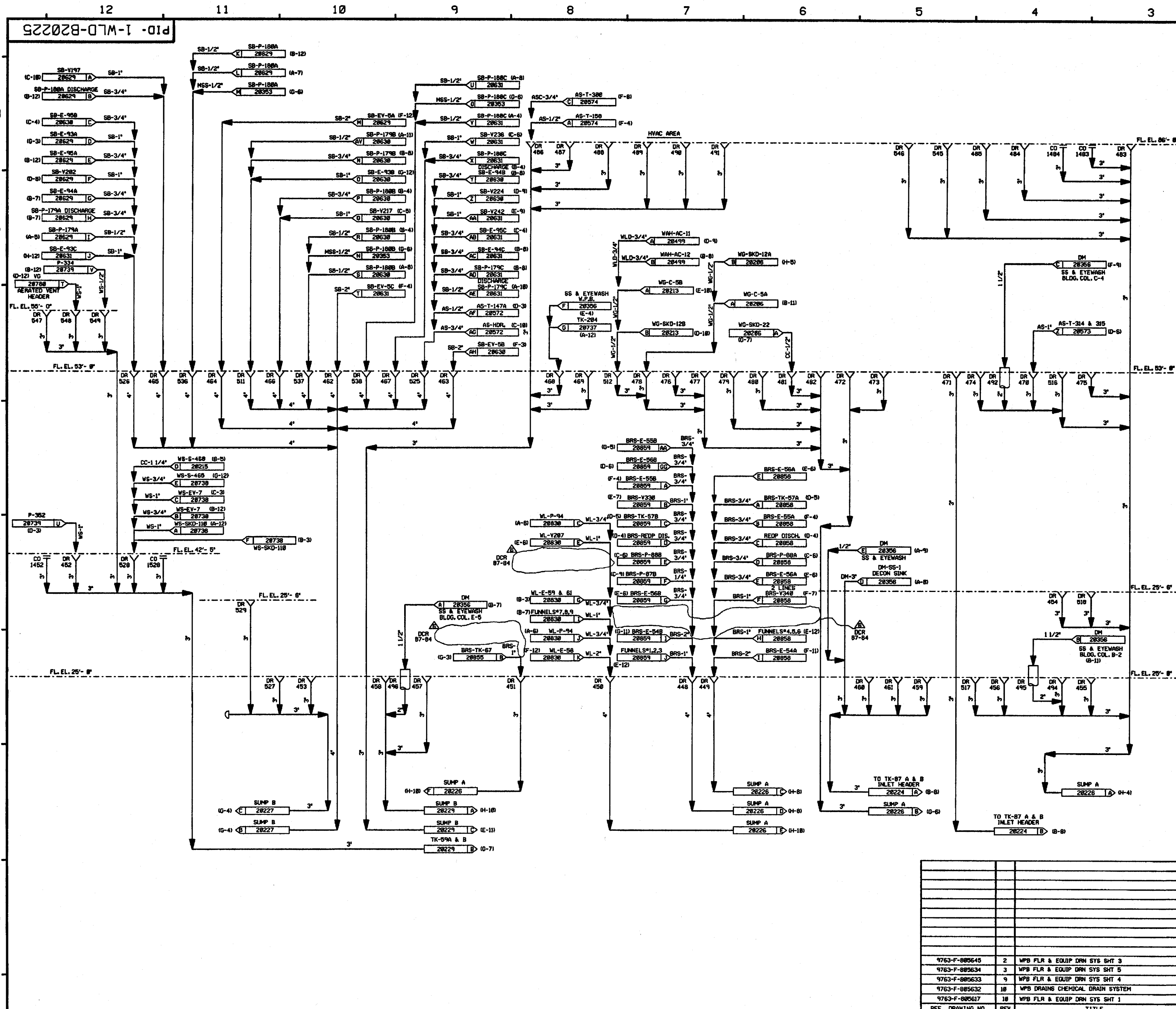
REV	DATE	DSGN	CHKD	CE	DESCRIPTION
7	9/18/09	BCS	MLW	MDK	INCCORP. EC 145021
6	11/14/07	BCS	JM	RRB	INCCORP. MSE 07-034 REV. 00, 01
5	2/3/07	JDM	PAL	RRC	INCCORP. DCR 480.
4	11/12/06	CSB	WRD	RRC	REMOVED SIGNAL LINE FROM LEVEL INSTR. (FOUND ON I&C LOOP DWG.) REMOVED PIPE SPEC., ADDED V8000 PER INSTALLED CONDITION.
3	10/9/06	JDM	MPW	RRC	ADDED CONT. REF. LOCA. & NOTE 4 INCCORP. ECA 19/11516/98 & 19/118170A
2	6/12/06	DWS	DWS	RRC	ADDED DCW CONTINUATIONS
1	4/2/06	GD	JDM	WFD	INCCORP. ECA 06/114859C
0	5/24/05	MLS	RSL	WFD	ISSUED FOR OPERATIONS ISSUED FOR FIELD VERIFICATION

NEXTERA ENERGY
SEABROOK

**WASTE PROCESSING LIQUID DRAINS
ADMINISTRATION BUILDING &
RCA WALKWAY DETAILS**

PID- 1-WLD-B20224

REF. DRAWING NO.	REV	TITLE
9763-F-805632	9	CHEMICAL DRAIN SYS. NUCLEAR P&ID
9763-F-804995	6	RCA WALKWAY TUNNEL DRAINS & SUMPS P&ID



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

DRAINS ON THIS DRAWING

448	458	468	478	489	517	548
449	459	469	479	490	518	546
450	460	470	480	491	525	547
451	461	471	481	492	526	548
452	462	472	482	493	527	549
453	463	473	483	494	528	
454	464	474	484	495	529	
455	465	475	485	496	536	
456	466	476	486	511	537	
457	467	477	487	512	538	
			488	516		

CLEANOUTS ON THIS DRAWING

1452
1483
1484
1520

- NOTES:**
1. WORK THIS DRAWING WITH DRAWINGS 28216, 28218 THRU 28224, & 28226 THRU 28229.
 2. ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTATION HAVE SYSTEM PREFIX MLD UNLESS NOTED OTHERWISE.
 3. ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTATION ARE SAFETY CLASS MNS UNLESS NOTED OTHERWISE.
 4. Δ INDICATES REVISION LEVEL.

REV	DATE	DSGN	DRWN	CHKD	CE	LDE	DESCRIPTION
6	11/12/98	MRS	FCB	W/C	W/P	M/M	INCORP. DCR 87-84 C&B
5	3/15/98	MRS	RMC	APL	WCL	RSG	INCORPORATED DCR 87-33 C&B7 REVISIONS FROM SINK CONT. TO CLARIFY DUPLICATION OF SYSTEM INTERFACE, CONT. TAGS & COORD. PER SYSTEM. ADDED CONT. DESCRIPTIONS.
4	11/7/88	MRS	RMC	GRM	APL	RRC	INCORP. ECA 19/08229A REVISION NOTE 3 ADDS CONTINUATION COORDS DELETED REDUNDANT CONTINUATION TAGS
3	12/17/88	HAP	OPD	MRJ	BCL	RRC	REVISED PIPING TIE-IN CONNECTION PER US&C PIPING DIAG. ADDED DMC LOC. COORDS & REVISED REVISION NOS. ADDED NOTE 4.
2	6/12/86	TAK	TAK	DVS	JMS	RRC	INCORP. DR 94/327B, AND ADDED REF. DWGS.
1	4/2/86	GD	DJS	JDM	DJM	WFD	INCORP. ECA 99/134853A INCORP. ECA 19/138999A ISSUED FOR OPERATIONS
8	2/29/86	M.S.	MRS	JHM	JMK	WFD	ISSUED FOR FIELD VERIFICATION

PSNH PUBLIC SERVICE OF NEW HAMPSHIRE

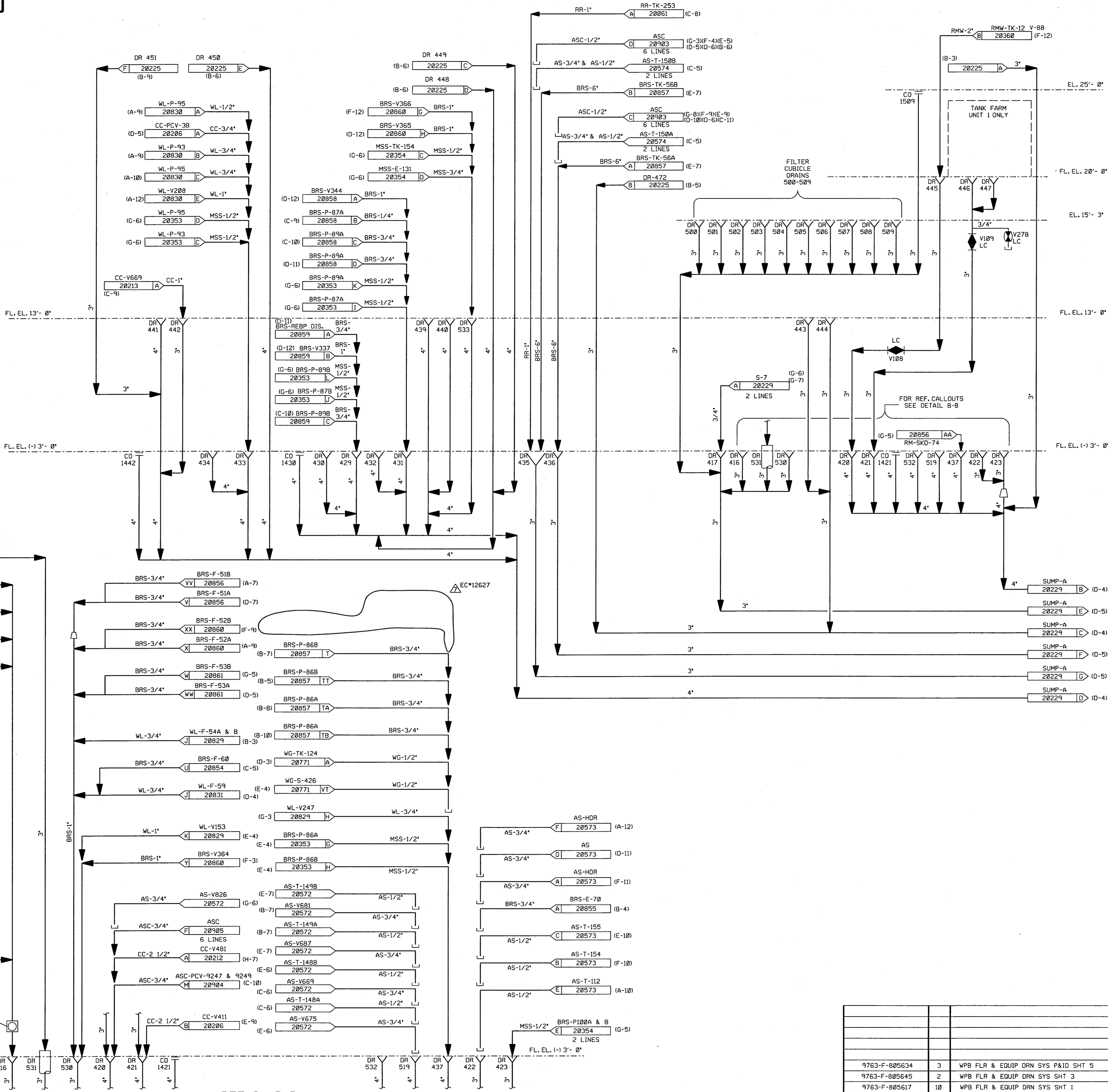
WASTE PROCESSING LIQUID DRAINS
WASTE PROCESSING BUILDING
DRAINS
SHT 1 OF 3

SEABROOK STATION PID- 1-WLD-B20225

REF. DRAWING NO.	REV	TITLE
9763-F-885645	2	WPS FLR & EQUIP DRN SYS SHT 3
9763-F-885634	3	WPS FLR & EQUIP DRN SYS SHT 4
9763-F-885633	9	WPS FLR & EQUIP DRN SYS SHT 4
9763-F-885632	18	WPS DRAINS CHEMICAL DRAIN SYSTEM
9763-F-885617	18	WPS FLR & EQUIP DRN SYS SHT 1

PID-1-WLD-B20226

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



DRAINS ON THIS DRAWING

416	431	440	500	508
417	432	441	501	509
420	433	442	502	519
421	434	443	503	530
422	435	444	504	531
423	436	445	505	533
429	437	446	506	532
430	439	447	507	

CLEANOUTS ON THIS DRAWING

1421
1430
1442
1509

- NOTES:
- WORK THIS DRAWING WITH DRAWINGS 20216, 20218 THRU 20225, 20227 THRU 20229.
 - ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTATION HAVE SYSTEM PREFIX WLD, UNLESS NOTED OTHERWISE.
 - ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS ARE SAFETY CLASS NNS, UNLESS NOTED OTHERWISE.
 - △ INDICATES REVISION LEVEL.

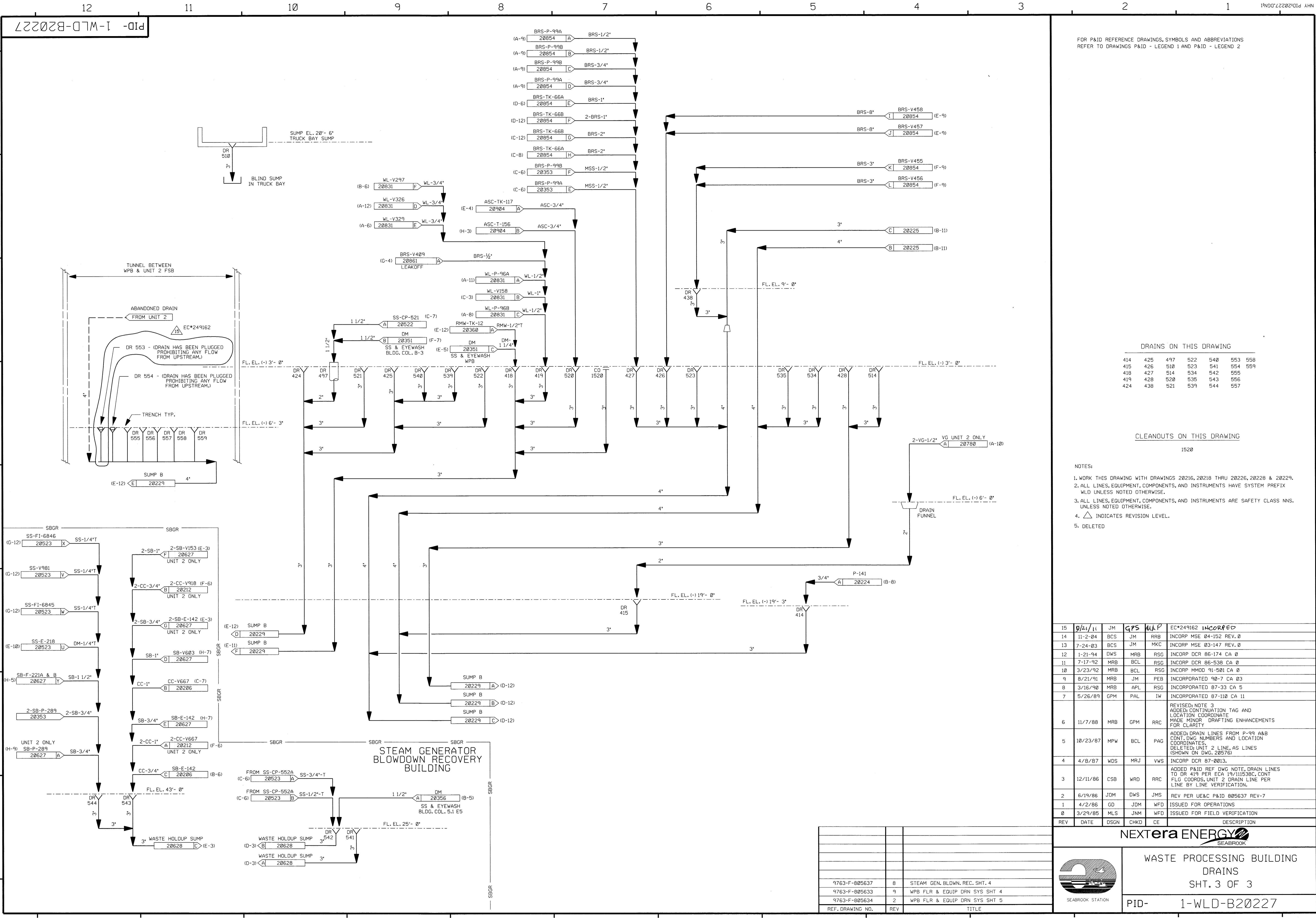
REV	DATE	DSGN	CHKD	CE	DESCRIPTION
7	3/11/09	JM	BCS	DEA	INCORPORATED EC*12627
6	7/11/00	BCS	MPW	DEA	INCORP MMOD 99-594 DCN-00
5	11/7/92	MRB	BCL	DJM	INCORP DCR 87-84 CA0
4	9/27/91	MRB	JM	WFD	INCORP DCR 90-07 CA0 REVISED NOTE 3 PER ENG DESIGN STANDARD 31700 SECT. 3.0
3	12/9/86	MPW	WRD	RRC	ADDED CONT. REF. LOS. CAPS TO DRAINS PER ERECTION ISO, NOTE 4, DELETED WL LINE, DUPLICATED SHOWN ON DWG. 20829
2	6/24/86	GD	VFS	RRC	SIZES OF DRAINS 437, 519, & 532 CHANGED & GENERAL REVISION PER P&ID REVIEW.
1	3/29/85	GD	JDM		ISSUED FOR OPERATIONS
0	3/29/85	MLS	JNM	WFD	ISSUED FOR FIELD VERIFICATION

FPL ENERGY Seabrook Station

WASTE PROCESSING LIQUID DRAINS
WASTE PROCESSING BUILDING
DRAINS
SHT. 2 OF 3

PID- 1-WLD-B20226

REF. DRAWING NO.	REV	TITLE
9763-F-005634	3	WPB FLR & EQUIP DRN SYS P&ID SHT 5
9763-F-005645	2	WPB FLR & EQUIP DRN SYS SHT 3
9763-F-005617	10	WPB FLR & EQUIP DRN SYS SHT 1
9763-F-005644	1	WPB FLR & EQUIP DRN SYS SHT 2



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

DRAINS ON THIS DRAWING

414	425	497	522	540	553	558
415	426	510	523	541	554	559
418	427	514	534	542	555	
419	428	520	535	543	556	
424	438	521	539	544	557	

CLEANOUTS ON THIS DRAWING

1520

- NOTES:**
1. WORK THIS DRAWING WITH DRAWINGS 20216, 20218 THRU 20226, 20228 & 20229.
 2. ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS HAVE SYSTEM PREFIX WLD UNLESS NOTED OTHERWISE.
 3. ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS ARE SAFETY CLASS NNS UNLESS NOTED OTHERWISE.
 4. Δ INDICATES REVISION LEVEL.
 5. DELETED


REV	DATE	DSGN	CHKD	CE	DESCRIPTION
15	9/21/11	JM	GPS	WJP	EC*249162 INCORPORATED
14	11-2-04	BCS	JM	RRB	INCRP MSE 04-152 REV. 0
13	7-24-03	BCS	JM	MKC	INCRP MSE 03-147 REV. 0
12	1-21-94	DWS	MRB	RSG	INCRP DCR 86-174 CA 0
11	7-17-92	MRB	BCL	RSG	INCRP DCR 86-538 CA 0
10	3/23/92	MRB	BCL	RSG	INCRP MMOD 91-501 CA 0
9	8/21/91	MRB	JM	PEB	INCRPORATED 90-7 CA 03
8	3/16/90	MRB	APL	RSG	INCRPORATED 87-33 CA 5
7	5/26/89	GPM	PAL	IW	INCRPORATED 87-110 CA 11
6	11/7/88	MRB	GPM	RRC	REVISED; NOTE 3 ADDED; CONTINUATION TAG AND LOCATION COORDINATE MADE MINOR DRAFTING ENHANCEMENTS FOR CLARITY
5	10/23/87	MPW	BCL	PAG	ADDED; DRAIN LINES FROM P-99 A&B CONT. DWG NUMBERS AND LOCATION COORDINATES. DELETED; UNIT 2 LINE, AS LINES (SHOWN ON DWG. 20576)
4	4/8/87	WDS	MRJ	VWS	INCRP DCR 87-0013.
3	12/11/86	CSB	WRD	RRC	ADDED P&ID REF DWG NOTE, DRAIN LINES TO DR 419 PER ECA 19/111538C, CONT FLD COORDS, UNIT 2 DRAIN LINE PER LINE BY LINE VERIFICATION.
2	6/19/86	JDM	DWS	JMS	REV PER UE&C P&ID 805637 REV-7
1	4/2/86	GD	JDM	WFD	ISSUED FOR OPERATIONS
0	3/29/85	MLS	JNM	WFO	ISSUED FOR FIELD VERIFICATION

REF. DRAWING NO.	REV	TITLE
9763-F-805637	8	STEAM GEN. BLDWN. REC. SHT. 4
9763-F-805633	9	WPB FLR & EQUIP DRN SYS SHT 4
9763-F-805634	2	WPB FLR & EQUIP DRN SYS SHT 5

NEXTERA ENERGY
SEABROOK

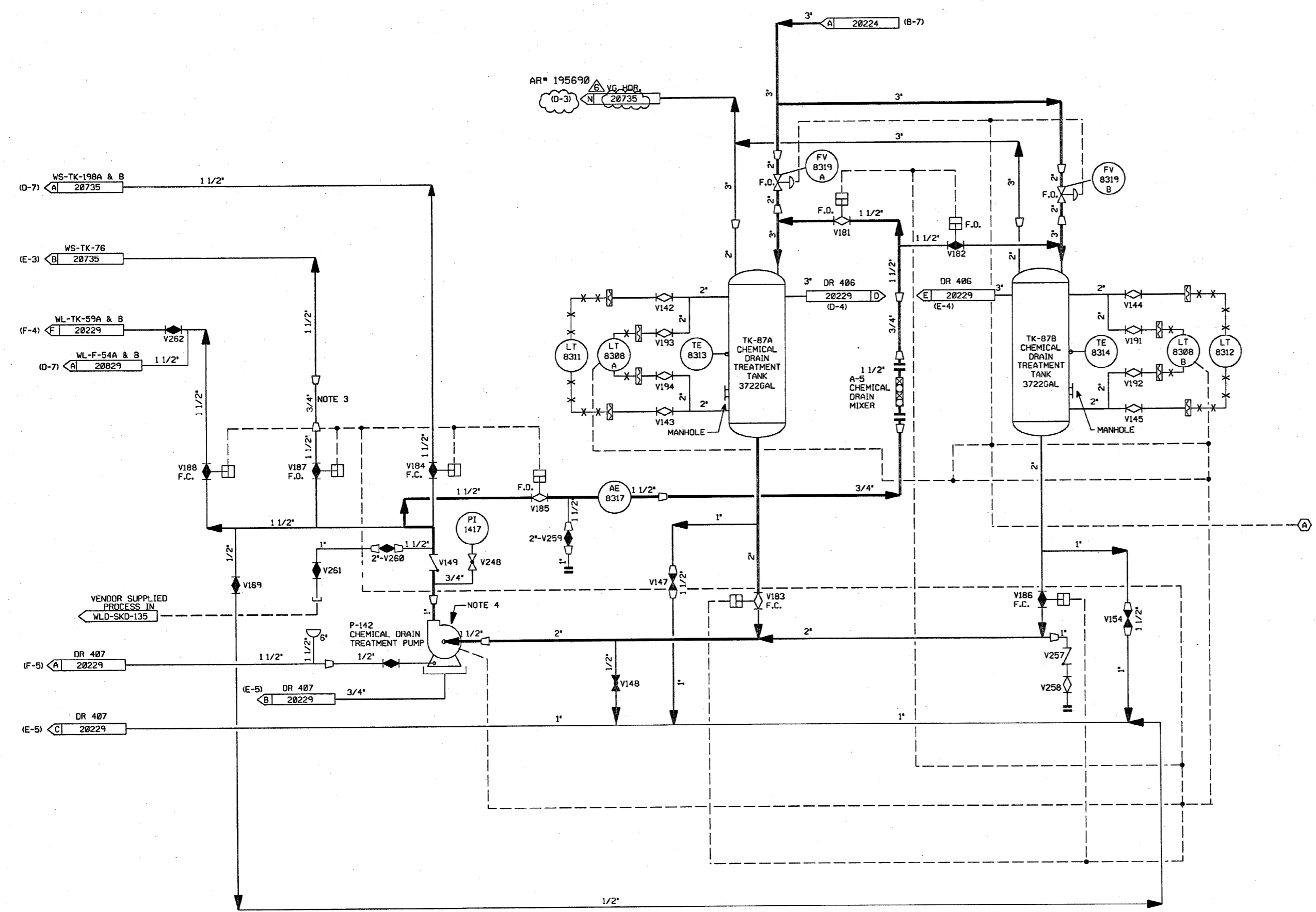
WASTE PROCESSING BUILDING DRAINS
SHT. 3 OF 3

PID- 1-WLD-B20227



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

PID-1-WLD-B20228



INSTRUMENTATION IDENTIFICATION
A TO WLD-LT-8308 & WLD-P-141 ON DWG. B20224.

- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 20216, 20218, THRU 20227 & 20229.
 2. ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS HAVE SYSTEM PREFIX WLD UNLESS NOTED OTHERWISE.
 3. FLOW RESTRICTION PIPE SECTION.
 4. SEE DWG. DM-20353 FOR DM SUPPLY TO MECHANICAL SEALS.
 5. ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS ARE SAFETY CLASS N.
 6. Δ INDICATES REVISION LEVEL.

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
5	6-18-89	BCS	JM	2RB	INCRP AR* 195690
4	4/24/86	BCS	JM	MAP	INCRP MSE 86-011 REV. 00
3	6/30/87	MPW	DWS	RRC	INCRP DCR 86-673 AND DCR 86-256 CA03.
2	11/18/86	FJR	WRD	RRC	ADDED CONT. FLAG COORDS. & NOTE 6.
1	4/2/86	GD	JDM	WFO	ISSUED FOR OPERATIONS
0	3/24/85	MLS	JNM	WFO	ISSUED FOR FIELD VERIFICATION

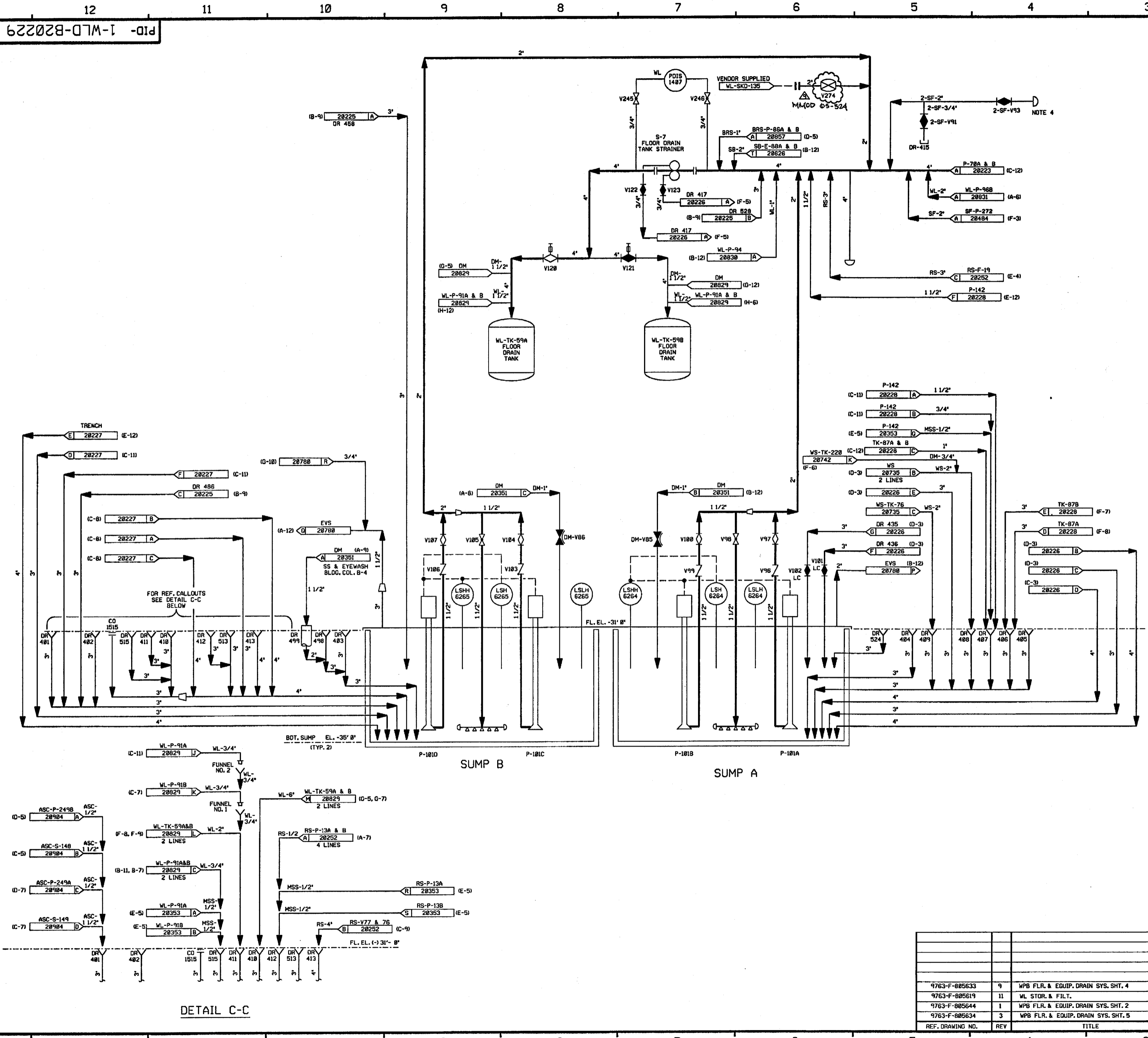
REF. DRAWING NO.	REV	TITLE
9763-F-805632	10	CHEMICAL DRN SYSTEM NUCLEAR



NEXTERA ENERGY
SEABROOK

WASTE PROCESSING LIQUID DRAINS
WASTE PROCESSING BUILDING
CHEMICAL DRAIN SYSTEM

PID- 1-WLD-B20228



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

DRAINS ON THIS DRAWING

481	488	486
482	499	498
483	410	499
484	411	513
485	412	515
486	413	524
487	458	

CLEANOUT ON THIS DRAWING

1515

- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 28216, 28218 THRU 28228.
 2. ALL LINES, EQUIPMENT, COMPONENTS, & INSTRUMENTS HAVE SYSTEM PREFIX WLD UNLESS NOTED OTHERWISE.
 3. ALL LINES, EQUIPMENT, COMPONENTS, & INSTRUMENTS ARE SAFETY CLASS NNS.
 4. J LINES CAPPED TO ISOLATE UNIT 1 FROM UNIT 2.
 5. Δ INDICATES REVISION LEVEL.

DETAIL C-C

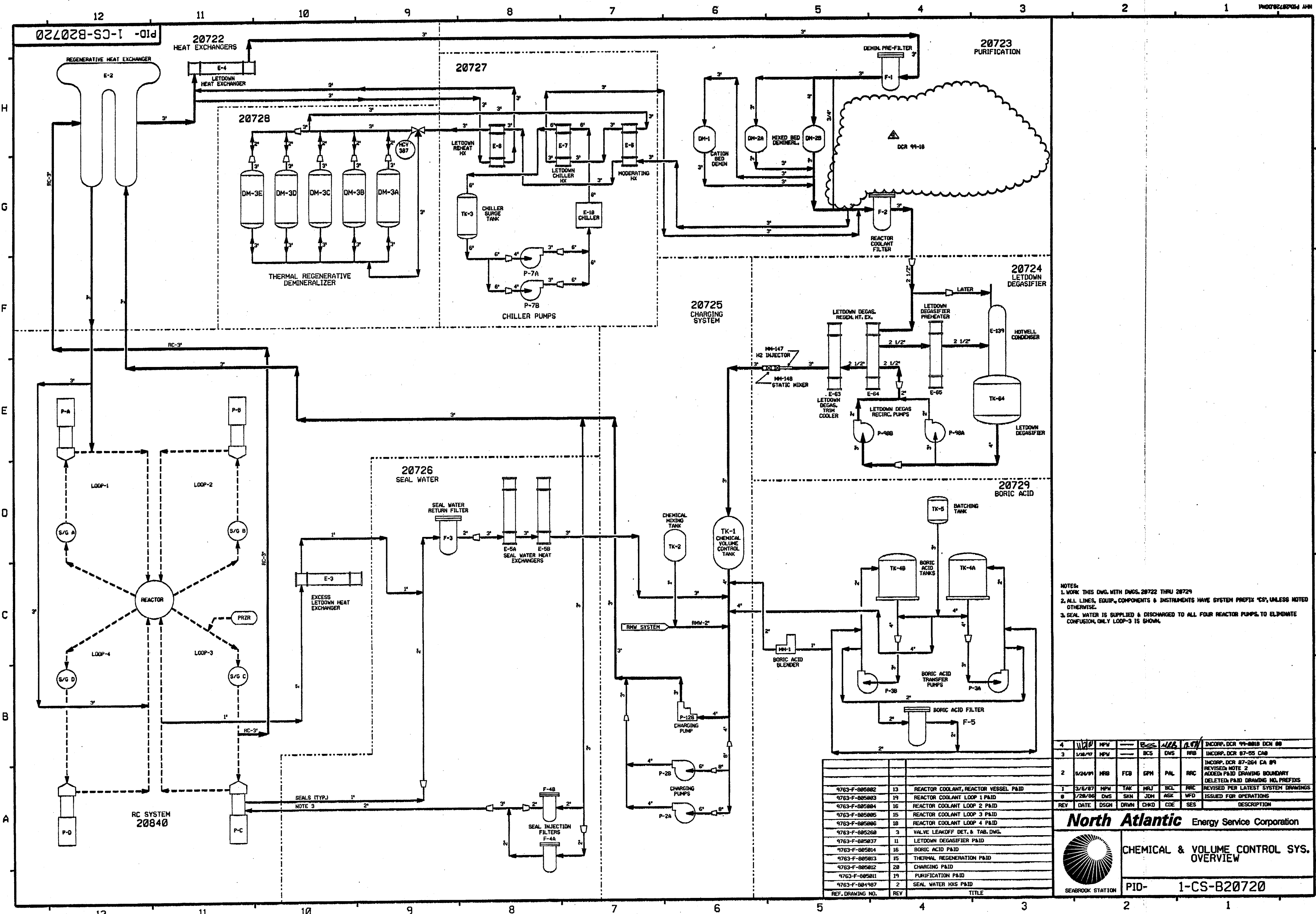
REV	DATE	DSGN	CHKD	CE	DESCRIPTION
9	6/13/04	BCS	JM	DM	INCORP MMDD 85-524 DCN-02
8	2/13/03	BCS	MPW	JM	INCORP MSE 01-288 REV. 0
7	6/17/98	HRB	BCL	VWS	INCORP DCR 91-32 CAB
6	1/1/91	HP	JM	BCL	INCORP DCR 85-536 CA-06 REVISED; NOTE 3
5	8/28/87	MPW	PAL	RRC	ADDED; CONT NO'S; INCORP DCR 86-266
4	4/8/87	WDS	PAL	VWS	INCORP DCR 87-8013
3	12/17/86	WDS	PAL	RRC	ADDED CONT. DWG. COORDS, DRAIN NO'S 458, 485 & 528, NOTE 5 AND NOTE FOR PAID LEGENDS 1 & 2, REVISED CONT DWG NUMBERS AND REF DWG REVISIONS, DELETED ALPHA PREFIX FROM DWG NO'S IN NOTE 1.
2	6/16/86	DWS	DWS	RRC	INCORP ECA 19/1161248 & 19/1161726 ADDED DM CONT. CORRECTED STRAINER CONFIGURATION.
1	4/2/86	GD	JDM	WFD	ISSUED FOR OPERATIONS
0	3/24/85	GD	JNM	WFD	ISSUED FOR FIELD VERIFICATION

FPL ENERGY Seabrook Station

WASTE PROCESSING LIQUID DRAINS
WASTE PROCESSING BUILDING
SUMPS

PID- 1-WLD-B20229

REF. DRAWING NO.	REV	TITLE
9763-F-805633	9	WPB FLR. & EQUIP. DRAIN SYS. SHT. 4
9763-F-805619	11	WL. STOR. & FILT.
9763-F-805644	1	WPB FLR. & EQUIP. DRAIN SYS. SHT. 2
9763-F-805634	3	WPB FLR. & EQUIP. DRAIN SYS. SHT. 5



NOTES:
 1. WORK THIS DNG. WITH DNGS. 20722 THRU 20729
 2. ALL LINES, EQUIP., COMPONENTS & INSTRUMENTS HAVE SYSTEM PREFIX 'CS', UNLESS NOTED OTHERWISE.
 3. SEAL WATER IS SUPPLIED & DISCHARGED TO ALL FOUR REACTOR PUMPS, TO ELIMINATE CONFUSION, ONLY LOOP-3 IS SHOWN.

REV	DATE	DSGN	DRWN	CHKD	CDE	SES	DESCRIPTION
4	1/28/70	MPV	---	BCS	DMS	RRB	INCORP. DCR 99-8819 DCM 88
3	1/28/70	MPV	---	BCS	DMS	RRB	INCORP. DCR 87-55 CAB
2	5/26/69	MRB	FCB	GPH	PAL	RRC	INCORP. DCR 87-264 CA 89 REVISED NOTE 2 ADDED PAID DRAWING BOUNDARY DELETED PAID DRAWING NO. PREFFIS
1	3/6/67	MPV	YAK	MRJ	SCL	RRC	REVISED PER LATEST SYSTEM DRAWINGS
8	1/28/66	DWS	SKN	JDM	ASK	WFD	ISSUED FOR OPERATIONS

North Atlantic Energy Service Corporation

CHEMICAL & VOLUME CONTROL SYS. OVERVIEW

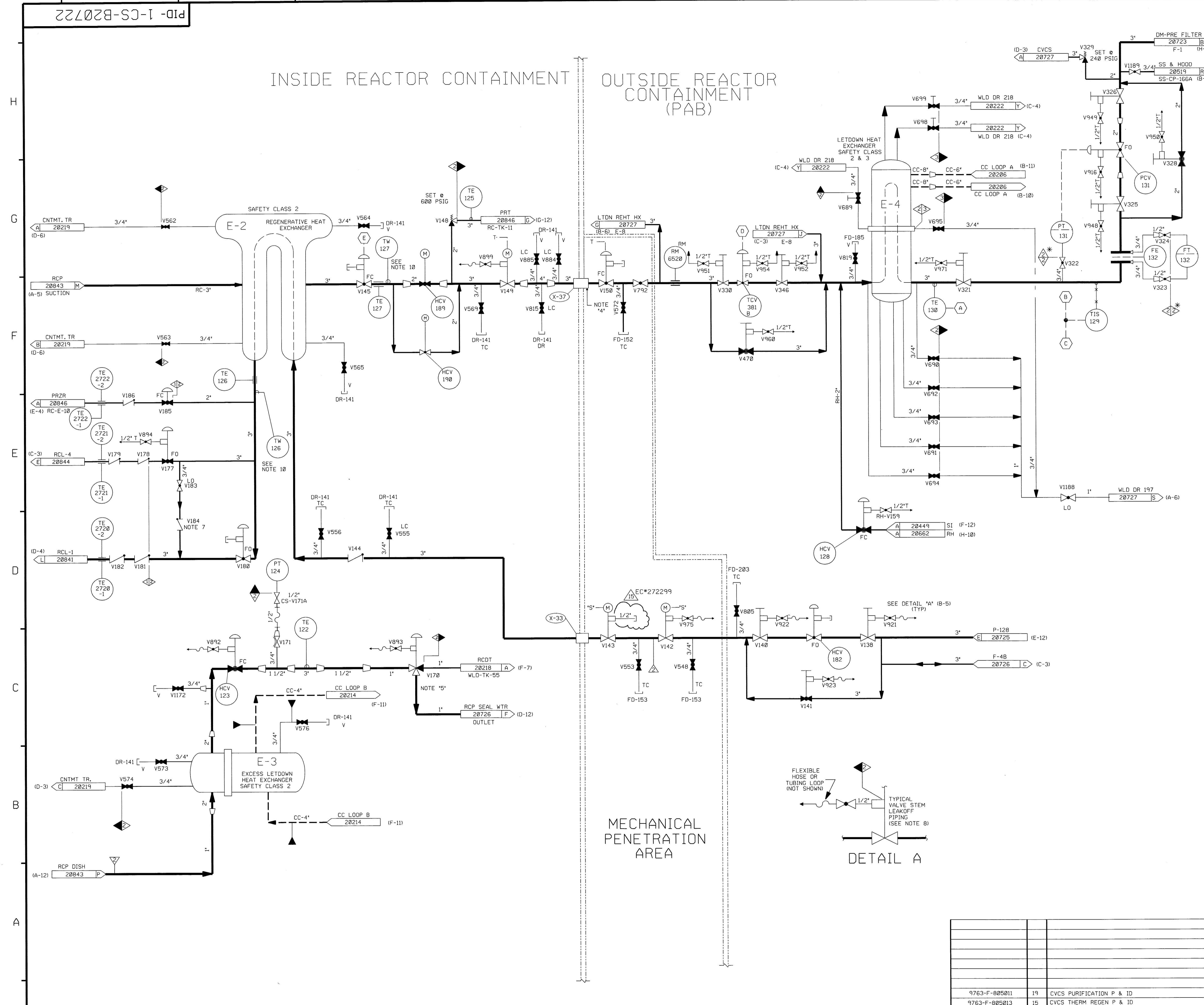
SEABROOK STATION

PID- 1-CS-B20720

REF. DRAWING NO.	REV	TITLE
9763-F-805882	13	REACTOR COOLANT, REACTOR VESSEL PAID
9763-F-805883	19	REACTOR COOLANT LOOP 1 PAID
9763-F-805884	16	REACTOR COOLANT LOOP 2 PAID
9763-F-805885	15	REACTOR COOLANT LOOP 3 PAID
9763-F-805886	18	REACTOR COOLANT LOOP 4 PAID
9763-F-805268	3	VALVE LEAKOFF DET. & TAB. DNG.
9763-F-805837	11	LETDOWN DEGASIFIER PAID
9763-F-805814	16	BORIC ACID PAID
9763-F-805813	15	THERMAL REGENERATION PAID
9763-F-805812	28	CHARGING PAID
9763-F-805811	19	PURIFICATION PAID
9763-F-804987	2	SEAL WATER HXS PAID

PID-1-CS-B20722

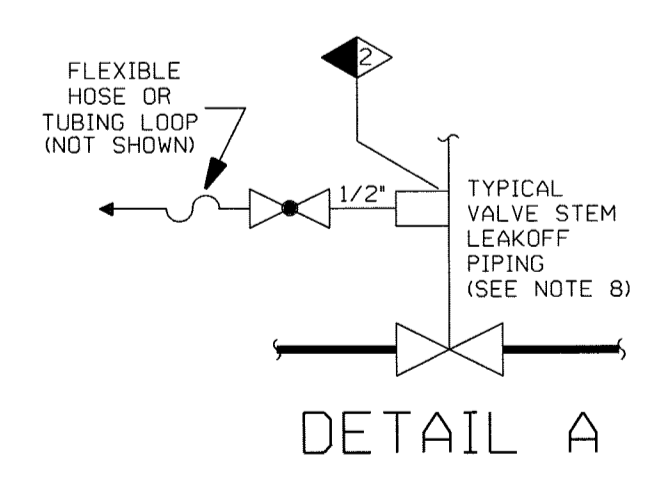
INSIDE REACTOR CONTAINMENT
OUTSIDE REACTOR CONTAINMENT (PAB)



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

- NOTES:
- 1) WORK THIS DWG WITH DWGS. 20720 & 20723 THRU 20729.
 - 2) ALL LINES, EQUIP., COMPONENTS & INSTRUMENTS HAVE SYSTEM PREFIX 'CS', UNLESS NOTED OTHERWISE.
 - 3) VENT AND DRAIN CODE BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER 1-NHY-805111 UNLESS NOTED OTHERWISE.
 - 4) DELAY TIME RCS TO HERE MUST BE 45 SECONDS MIN.
 - 5) VALVE FAILS WITH FLOW TO SEAL WATER RETURN FILTER.
 - 6) DELETED
 - 7) SPRING LOADED CHECK VALVE.
 - 8) REFER TO DRAWING VSL-20774, FOR VALVE LEAKOFFS
 - 9) INSTRUMENT REFERENCE.
- (A) TO CONTROL VALVE TV-130 ON DWG. 20206.
 - (B) TO 3-WAY VALVE TCV-129 ON DWG. 20723.
 - (C) TO TIS-382 ON DWG. 20728.
 - (D) TO TCV-381A, TE-381, TCV-386 & TE-386 ON DWG. 20727.
 - (E) FOR AUTO CLOSE SIGNALS SEE LOGIC 1-NHY-503367
- 10) TW-126 AND TW-127 TO BE ABANDONED IN PLACE.

PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED



MECHANICAL PENETRATION AREA

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
15	5/11/01	JM	Bas	JLD	INCRP. EC*272299
14	10/11/09	BCS	JM	TAS	INCRP. EC 12368
13	10/17/06	BCS	JM	RRB	INCRP. DCR 02-002 DCN 09
12	10/14/06	BCS	JM	RRB	INCRP. DCR 05-003 DCN 00 & MMOD 03-504 DCN 00 PARTIAL INCRP. DCR 02-002 DCN 09
11	10/16/03	BCS	MPW	RRB	INCRP. DCR 02-002 DCN 01, 02, 03
10	9/12/02	BCS	JM	TAS	INCRP. DCR 00-001 DCN 00
9	6/11/00	MPW	BCS	RWM	INCRP. DCR 99-18 DCN 00
8	6/10/99	DWS	RWS	DJM	INCRP. MMOD 970618 DCN*00
7	4/13/92	MRB	BCL	JEV	INCRP. MMOD 91-515 CA0
6	12/5/89	MRB	PAL	WFD	INCRP. DCR 89-12 CA0
5	5/9/89	MRB	GPM	GRM	INCRP. DCR 87-299 CA 04 REVISED NOTE 2
4	10/30/87	GPM	DWS	PAS	REVISED NOTE 3 & 8, PIPING PER AS INSTALLED CONFIGURATION, DET. 'A' NOTE. ADDED NOTE 01 (CS-V921 AND DWG CONT COORD. DELETED; REF DWG'S, NNS-1 CL BOUNDARY.
3	11/26/86	MRJ	WRD	RRC	ADDED DWG CONT COORD'S, REMOVED CODE FLAGS PER NOTE 3, LEAKOFF VLV CODES PER DETAIL A, REVISED DRAIN PIPING PER ASBUILT CONDITION.
0	1/20/86	DWS	JDM	WFD	ISSUED FOR OPERATIONS

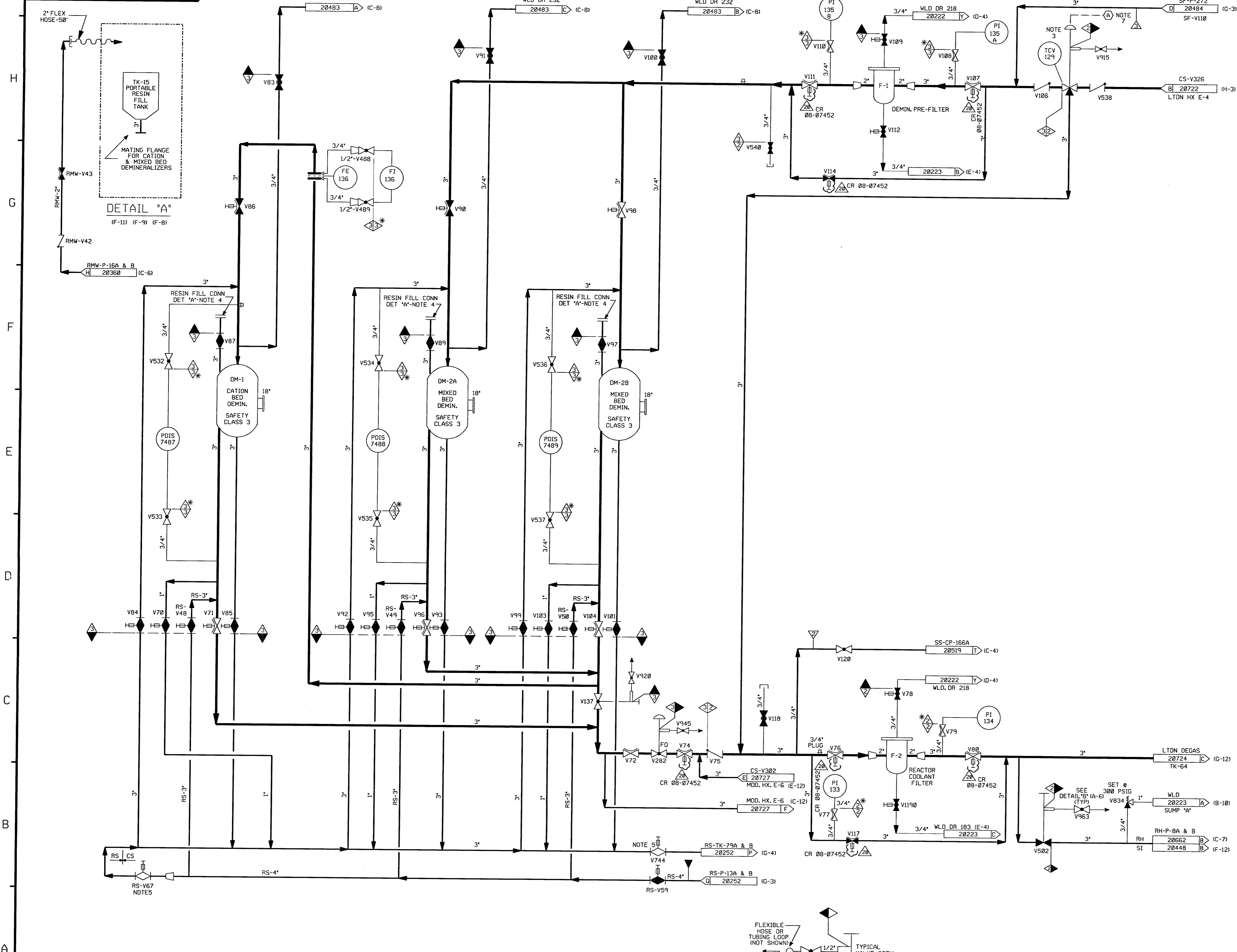
NEXTERA ENERGY
SEABROOK

CHEMICAL & VOLUME CONTROL SYS
HEAT EXCHANGERS
DETAIL

PID- 1-CS-B20722

REF. DRAWING NO.	REV	TITLE
9763-F-805011	19	CVCS PURIFICATION P & ID
9763-F-805013	15	CVCS THERM REGEN P & ID

PID-1-CS-B20723

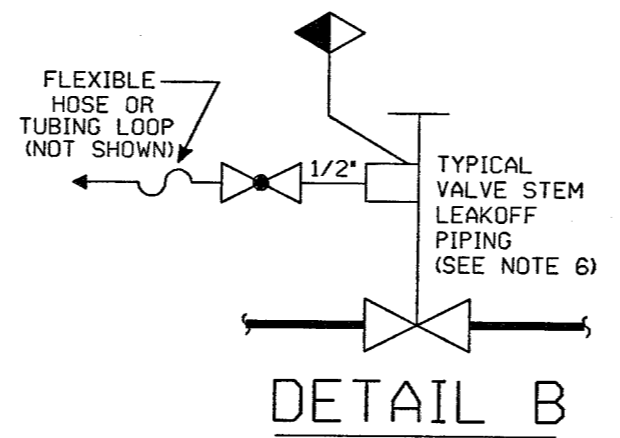


FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LEGEND 1 AND P&ID - LEGEND 2

- NOTES:
1. WORK THIS DWG WITH DWGS. 20720, 20722, & 20724 THRU 20729.
 2. ALL LINES, EQUIPMENT, COMPONENTS & INSTRUMENTS HAVE SYSTEM PREFIX 'CS', UNLESS NOTED OTHERWISE.
 3. VALVE FAILS WITH FLOW BY-PASSING THE DEMINERALIZERS & GOING TO CS-F-2
 4. BLIND FLGS. INSTALLED WITHOUT GASKET
 5. THIS VALVE TO BE CLOSED PRIOR TO ANY RESIN SLICING OPERATIONS.
 6. REFER TO DRAWING VSL-20774 FOR VALVE LEAKOFFS.
 7. INSTRUMENT REFERENCE
 (A) LETDOWN EXCHANGER CS-E-4 & CS-E-8 OUTLET TEMP. TIS-129 & TIS-382 ON DWG. 20722
 8. VENTS, DRAINS AND TEST CONNECTION CODE BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER 1-NHY-805111, UNLESS NOTED OTHERWISE.
 9. Δ INDICATES REVISION LEVEL.
 10. DELETED
 11. DELETED

PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED

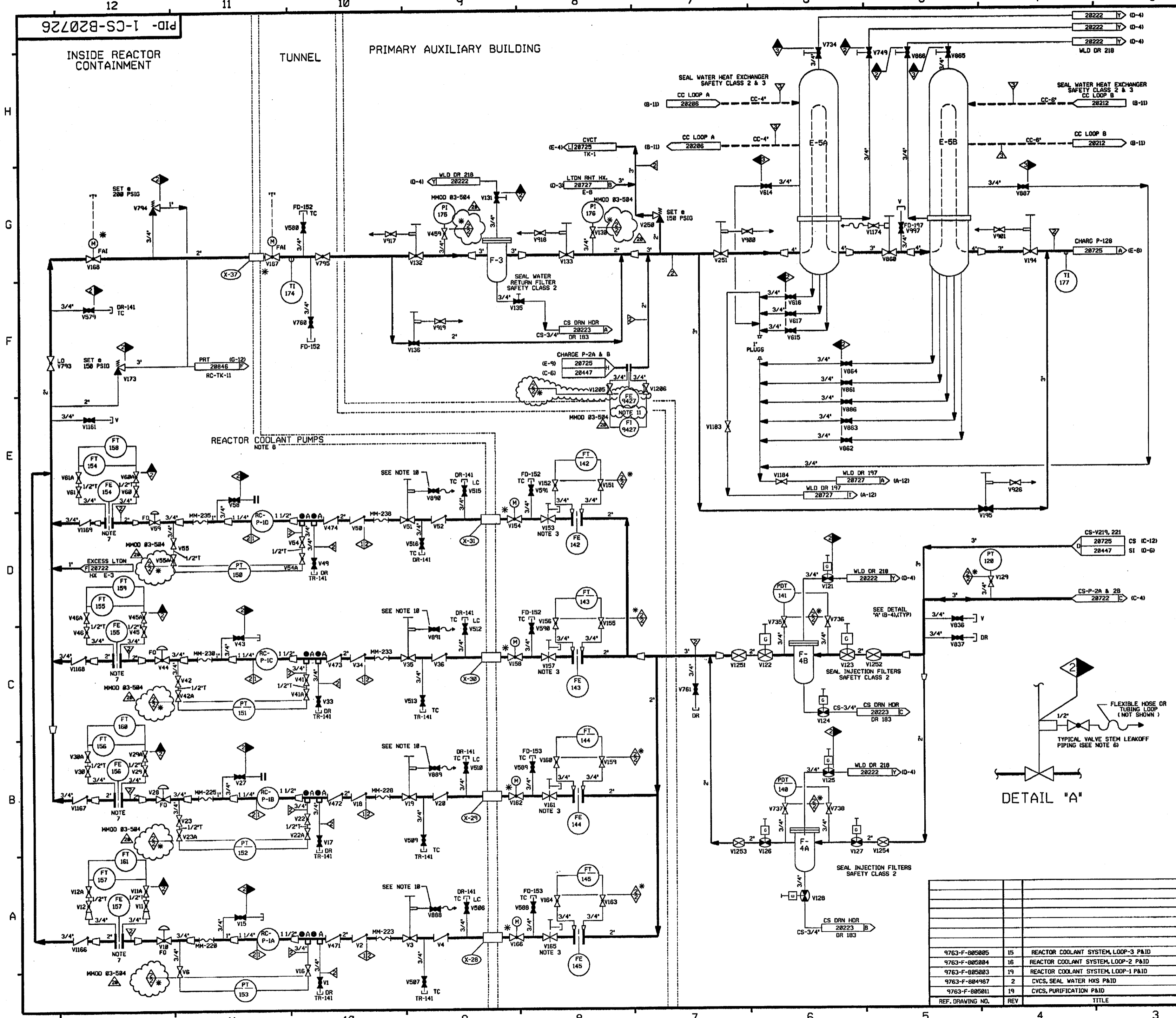
REV	DATE	DSGN	CHKD	CE	DESCRIPTION
20	7/31/08	JM	BCS	BCS	INCORP. CR 08-07452 REV 00
19	11/16/06	JM	BCS	RRB	INCORP. MMOD 03-504 DCR 00
18	11/2/00	MPW	BCS	RPN	INCORP. DCR 99-18 DCN 00
17	6/12/00	BCS	DWS	RWM	PARTIAL INCORP. DCR 99-18 DCN 00
16	1/10/97	MPW	BCS	RRB	INCORP. DCR 87-55 CAB AND DCN 01
15	3/21/96	BCS	DWS	RJF	INCORP. MMOD 940574 CA#01
14	2/28/96	DWS	BCS	VWS	INCORP. MMOD 940574 CA#0
13	3/4/94	MRB	BCL	GRM	INCORP. MMOD 92-553, CA01
12	4/5/93	BCL	MPW	WFZ	MMOD 91-507, CA0
11	4/13/92	MRB	BCL	JEV	MMOD 91-515, CA0
10	10/8/91	MRB	JM	ES	INCORP. MMOD 91-511 CAB AND MMOD 91-625, CA0
9	2/26/91	MRB	RMC	BCL	INCORP. MMOD 90-648 CA01
8	9/24/90	MRB	BMC	BCL	INCORP. MMOD 90-516 CA0
7	5/24/89	MRB	GPM	RRC	INCORPORATED DCR 87-264 CA 09 REVISED NOTE 2
6	5/25/88	GPM	APL	DJM	INCORP. DCR 87-323 REV'D PIPING PER AS INSTALLED CONF.; VALVE POSITION PER DWG. 506272 ADDED DETAIL B NOTE AT CS-V963 & CLASS DESIGNATION DELETED; REF. DWG. NNS-1 CL. BOUNDARY
5	3/20/87	MRJ	WDS	RRC	ADDED 3" AND FLANGE PER ECA 99/116756A ADDED NOTE AND DWG COORD'S. FOR DETAIL A, ADDED CONT FLAC LETTERS AND NOTE 9, DELETED DETAIL 'B'.
4	12/12/86	JDM	PAL	RRC	INCORP. ECA 99/116756A
3	10/17/86	MAP	WRD	RRC	ADDED DWG LOC COORDS, DELETED CLASS BREAKS & CODE BREAKS, ADDED NOTE 8 REVISED TO CLARIFY DUPLICATION OF ASSOCIATED SYSTEMS.
2	8/22/86	MPW	GRD	PHH	REINCORP. ECA 99/114510A, INCORP. NCR 82/1797, DCN 88/177A, ADDED VALVES RM-V826 THRU V830, ADDED VALVE V826 PER 17-1722, CORRECTED CONTINUATIONS & REV'D PER AS-BUILT CONFIG.
1	6/23/86	WES	DWS	RRC	INCORPORATED ECA 99/114510A, 17/100849A, INCORP. 805011-REV 19
0	1/22/86	DWS	JDM	WFD	ISSUED FOR OPERATIONS



REF. DRAWING NO.	REV	TITLE
9763-F-805011	19	CVCS PURIFICATION P&ID

FPL ENERGY Seabrook Station
 CHEMICAL & VOLUME CONTROL SYS. PURIFICATION
 DETAIL
 PID- 1-CS-B20723

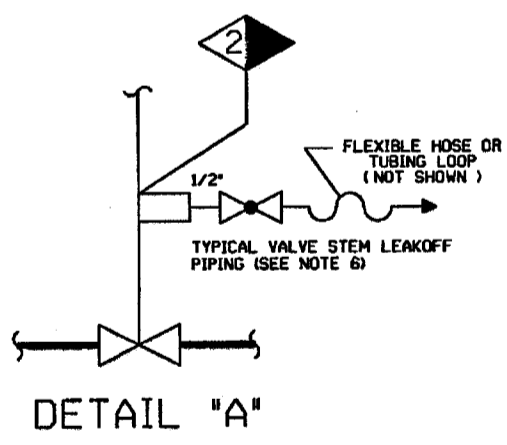
PID-1-CS-B20726



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

- NOTES:
1. WORK THIS DWG WITH DWGS. 28728, 28722 THRU 28725 & 28727 THRU 28729.
 2. ALL PIPING, VALVES, EQUIP. & INSTRUMENTS HAVE SYSTEM PREFIX 'CS', UNLESS NOTED OTHERWISE.
 3. 2" NEEDLE VALVE WITH 1" INTERNALS.
 4. * INDICATES 3/8" FLOW RESTRICTOR INSTALLED. SEE APPLICABLE DETAIL ON DWG RC-28848.
 5. VENTS, DRAINS & TEST CONN. CODE BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER 1-MW-89811, UNLESS NOTED OTHERWISE.
 6. REFER TO DRAWING VSL-28774 FOR VALVE LEAKOFFS.
 7. ORIFICE PLATE IS NON-ASME.
 8. REACTOR COOLANT PUMPS SHOWN ON DWG'S:
- RC P-1A-28841
 RC P-1B-28842
 RC P-1C-28843
 RC P-1D-28844
9. △ INDICATES REVISION LEVEL.
 10. VALVE STEM LEAK-OFF ISOLATION VALVES V868, V869, V890 & V891 ARE TO BE MAINTAINED CLOSED. VALVE STEM LEAK-OFF TO BE CONSIDERED INOPERABLE.
 11. NON-ASME FLOW ELEMENT, MMOD 83-584

PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED



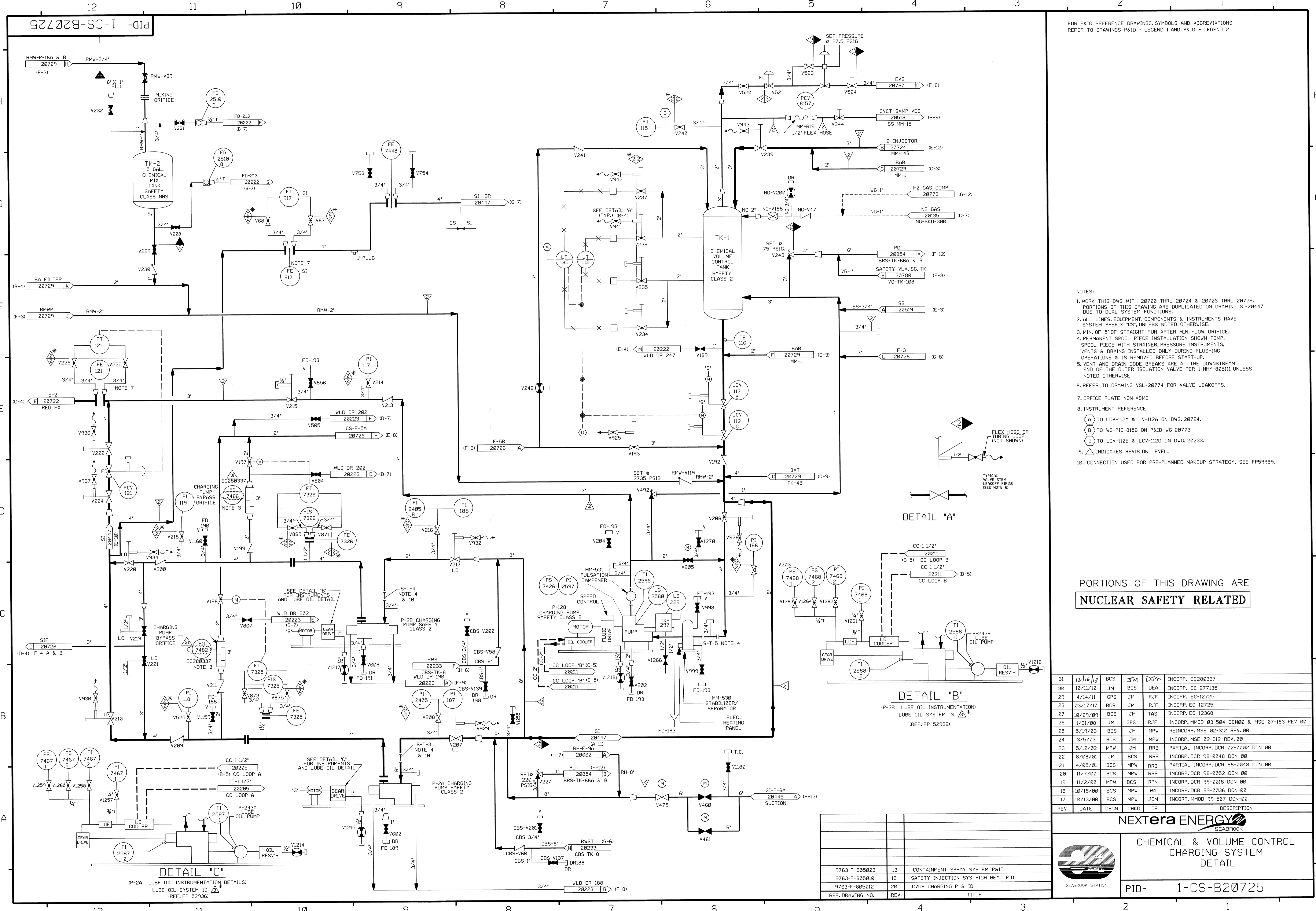
REV	DATE	DSGN	CHKD	CE	DESCRIPTION
28	9/22/06	BCS	JW	PJT	INCCORP MMOD 83-584 DCN-88
19	4/23/99	DWS	BCS	GRM	INCCORP DCR 988045 DCN#84
18	7/1/97	MPW	DWS	JEV	DCR 988087 CA#88 (FINAL)
17	6/13/97	DWS	MPW	JEV	INCCORP DCR 970888 DCN#88 A DCR 988087 CA#88 (PARTIAL)
16	5/16/97	MPW	DWS	WFZ	INCCORP, DCR 97-16 CA-8
15	2/25/97	BCS	MPW	RCP	INCCORP, DCR 94-46 CA-8
14	11/28/96	MPW	BCS	RBB	INCCORP, DCR 88-118 CA-8
13	4-4-94	BCL	MPW	MMO	INCCORP, MMOD-93-517 CA-8
12	4-5-93	BCL	MPW	WFZ	INCCORP, MMOD-91-587 CA-8

FPL ENERGY Seabrook Station

CHEMICAL & VOLUME CONTROL SYS.
 SEAL WATER
 DETAIL

PID- 1-CS-B20726

REF. DRAWING NO.	REV	TITLE
9763-F-885805	15	REACTOR COOLANT SYSTEM, LOOP-3 P&ID
9763-F-885804	16	REACTOR COOLANT SYSTEM, LOOP-2 P&ID
9763-F-885803	19	REACTOR COOLANT SYSTEM, LOOP-1 P&ID
9763-F-884987	2	CVCS, SEAL WATER HXS P&ID
9763-F-885811	19	CVCS, PURIFICATION P&ID



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

- NOTES:
1. WORK THIS DWG WITH 20720 THRU 20724 & 20726 THRU 20729. PORTIONS OF THIS DRAWING ARE DUPLICATED ON DRAWING SI-20447 DUE TO DUAL SYSTEM FUNCTIONS.
 2. ALL LINES, EQUIPMENT, COMPONENTS & INSTRUMENTS HAVE SYSTEM PREFIX 'CS', UNLESS NOTED OTHERWISE.
 3. MIN. OF 5' OF STRAIGHT RUN AFTER MIN. FLOW ORIFICE.
 4. PERMANENT SPOOL PIECE INSTALLATION SHOWN TEMP. SPOOL PIECE WITH STRAINER, PRESSURE INSTRUMENTS, VENTS & DRAINS INSTALLED ONLY DURING FLUSHING OPERATIONS & IS REMOVED BEFORE START-UP.
 5. VENT AND DRAIN CODE BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER 1-NHY-005111 UNLESS NOTED OTHERWISE.
 6. REFER TO DRAWING VSL-20774 FOR VALVE LEAKOFFS.
 7. ORFICE PLATE NON-ASME
 8. INSTRUMENT REFERENCE
 - (A) TO LCV-112A & LV-112A ON DWG. 20724.
 - (B) TO WG-PIC-8156 ON P&ID WG-20773
 - (C) TO LCV-112E & LCV-112D ON DWG. 20233.
 9. Δ INDICATES REVISION LEVEL.
 10. CONNECTION USED FOR PRE-PLANNED MAKEUP STRATEGY. SEE FP59989.

PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
31	12/16/13	BCS	JM	DEA	INCORP. EC200337
30	10/11/12	JM	BCS	DEA	INCORP. EC-277135
29	4/14/11	GPS	JM	RJF	INCORP. EC-12725
28	03/17/10	BCS	JM	RJF	INCORP. EC 12725
27	10/29/09	BCS	JM	TAS	INCORP. EC 12368
26	1/31/08	JM	GPS	RJF	INCORP. MMOD 03-504 DCN00 & MSE 07-183 REV 00
25	5/19/03	BCS	JM	MPW	REINCORP. MSE 02-312 REV. 00
24	3/5/03	BCS	JM	MPW	INCORP. MSE 02-312 REV. 00
23	5/12/02	MPW	JM	RRB	PARTIAL INCORP. DCR 02-0002 DCN 00
22	8/08/01	JM	BCS	RRB	INCORP. DCR 98-0048 DCN 00
21	4/05/01	BCS	MPW	RRB	PARTIAL INCORP. DCR 98-0048 DCN 00
20	11/7/00	BCS	MPW	RRB	INCORP. DCR 98-0052 DCN 00
19	11/2/00	MPW	BCS	RPN	INCORP. DCR 99-0018 DCN 00
18	10/18/00	BCS	MPW	WA	INCORP. DCR 99-0036 DCN 00
17	10/13/00	BCS	MPW	JCM	INCORP. MMOD 99-507 DCN 00

REF. DRAWING NO.	REV	TITLE
9763-F-805023	13	CONTAINMENT SPRAY SYSTEM P&ID
9763-F-805010	18	SAFETY INJECTION SYS HIGH HEAD PID
9763-F-805012	20	CVCS CHARGING P & ID

NEXTERA ENERGY
SEABROOK

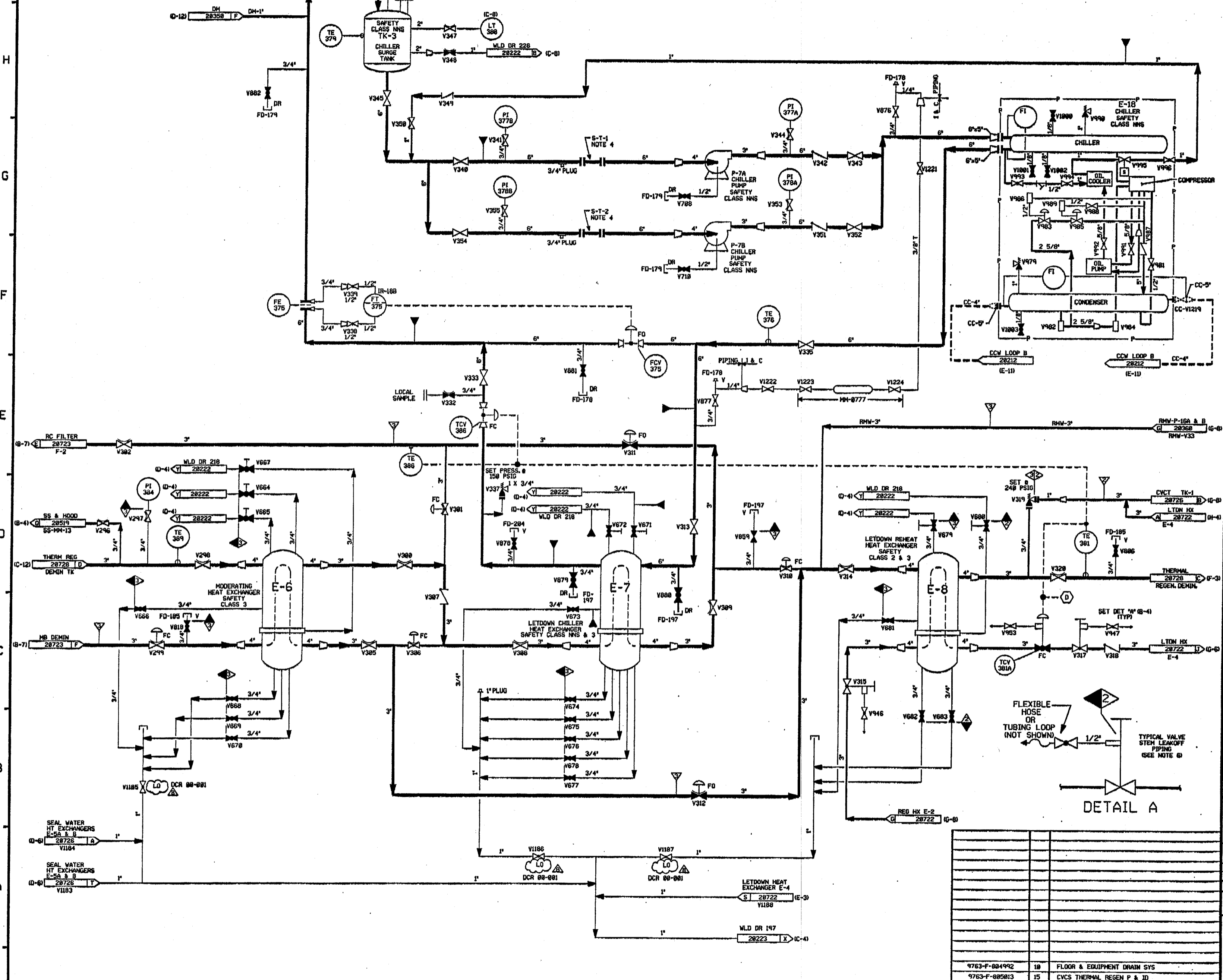
CHEMICAL & VOLUME CONTROL
CHARGING SYSTEM
DETAIL

PID- 1-CS-B20725

SEABROOK STATION

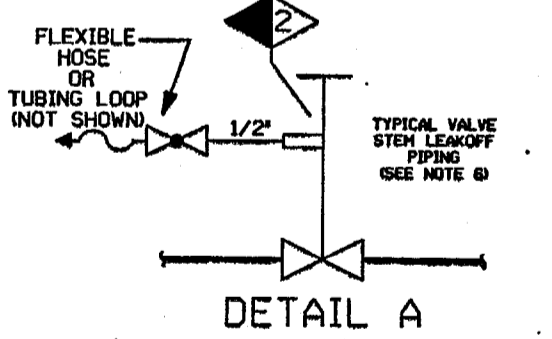
PID-1-CS-B20727

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



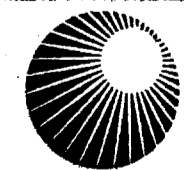
- NOTES:
- 1) WORK THIS DWG WITH DWGS 20720 THRU 20726, 20728 & 20729.
 - 2) ALL LINES, EQUIPMENT, COMPONENTS & INSTRUMENTS HAVE SYSTEM PREFIX 'CS', UNLESS NOTED OTHERWISE.
 - 3) MAIN FLOW SHOWN DURING NOMINATION PHASE.
 - 4) PERMANENT SPOOL PIECE INSTALLATION SHOWN. TEMP. SPOOL PIECE WITH STRAINER, PRESS. INSTR., VENTS & DRAINS INSTALLED ONLY DURING FLUSHING OPERATIONS AND IS REMOVED BEFORE START-UP.
 - 5) VENT AND DRAIN CODE BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER 1-1047-005(1) UNLESS OTHERWISE NOTED.
 - 6) REFER TO DRAWING VSL-20774 FOR VALVE LEAKOFFS.
 - 7) INSTRUMENT REFERENCES:
 - (D) TO CONTROL VALVE TCV-3018 ON DWG. B20722
 - 8) WHEN CHILLER LOOP IS IN DRY LAYUP, NITROGEN IS SUPPLIED THROUGH THE TANK VENT. (SEE PID NO-20130P)

PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED



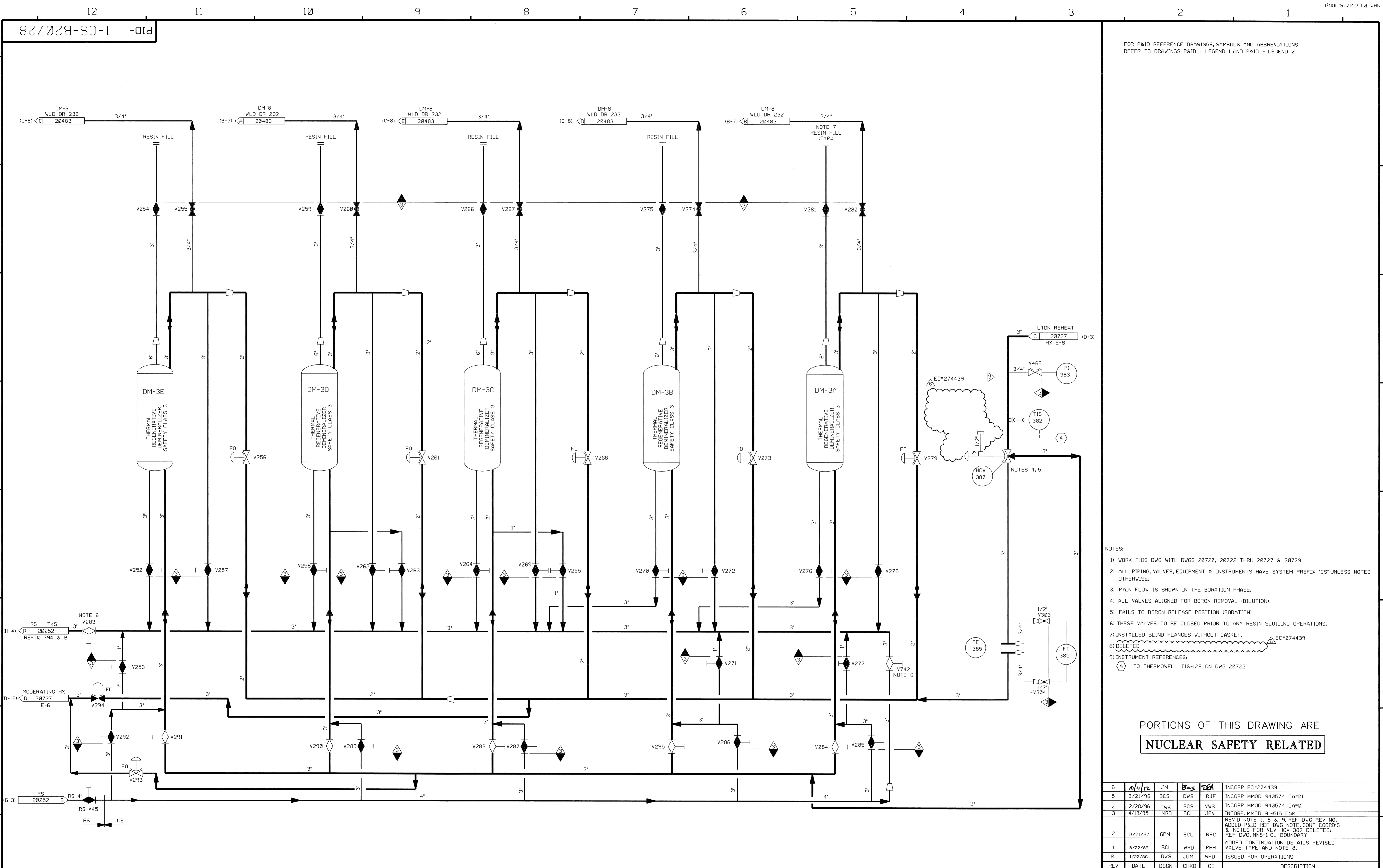
REV	DATE	BY	CHKD	APP'D	DESCRIPTION	
8	9/12/82	BCS			INCORP DCR 00-001 DCH-00	
7	8/6/82	BCS			INCORP HMOO 90-500 DCH-00	
6	12/9/81	HPW			INCORP HMOO 90-545 CAB	
5	3/28/81	HRB			INCORPORATED DCR 00-10 CAN REVISION NOTE 2 & 5 ADDED CONTINUATION COORDINATES.	
4	8/25/80	GPH			INCORP. DCR 87-323 ADDED SET PRESS. FOR V337 PER WESTINGHOUSE 'PRECAUTIONS, LIMITATIONS & SET POINTS'.	
3	10/20/77	GPH			REV'D NOTE 6 & EQUIP. CL. PER IECAC PAID PIPING PER AS INSTALLED CONFIGURATION AND ECA 90/005030. SET 'M' NOTE. CCW PIPING TO E-18, ADDED NOTE FOR CS-V-947, CONT. COORD'S. PAID REF. NOTE, FLGS FOR CS-V-337 & 948. DELETED REF. DWG. TEST BOUNDARY SYMBOL ANS-1 CL. BOUNDARY.	
2	9/12/80	HPW			INCORP. ECA 90/005030 ADDED SKID PIPING & CLOSED VBS'S REV. CONTINUATION, REF. REV. & NOTE 6	
1	6/15/80	YAK			INCORP. ECA 90/005030	
0	1/28/80	DMS			ISSUED FOR OPERATIONS	
REV	DATE	DSGN	DRWN	CHKD	SES	DESCRIPTION

North Atlantic Energy Service Corporation



CHEMICAL VOLUME & CONTROL
SYSTEM THERMAL REGENERATION
DETAIL

SEABROOK STATION PID-1-CS-B20727



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

- NOTES:
- 1) WORK THIS DWG WITH DWGS 20720, 20722 THRU 20727 & 20729.
 - 2) ALL PIPING, VALVES, EQUIPMENT & INSTRUMENTS HAVE SYSTEM PREFIX 'CS' UNLESS NOTED OTHERWISE.
 - 3) MAIN FLOW IS SHOWN IN THE BORATION PHASE.
 - 4) ALL VALVES ALIGNED FOR BORON REMOVAL (DILUTION).
 - 5) FAILS TO BORON RELEASE POSITION (BORATION)
 - 6) THESE VALVES TO BE CLOSED PRIOR TO ANY RESIN SLUICING OPERATIONS.
 - 7) INSTALLED BLIND FLANGES WITHOUT GASKET.
 - 8) DELETED
 - 9) INSTRUMENT REFERENCES:
(A) TO THERMOWELL TIS-129 ON DWG 20722

PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED

6	10/11/12	JM	BCS	DJA	INCORP EC*274439
5	3/21/96	BCS	DWS	RJF	INCORP MMOD 940574 CA*01
4	2/28/96	DWS	BCS	VWS	INCORP MMOD 940574 CA*0
3	4/13/95	MRB	BCL	JEV	INCORP MMOD 91-515 CAB
2	8/21/87	GPM	BCL	RRC	REV'D NOTE 1, 8 & 9, REF DWG REV NO. ADDED P&ID REF DWG NOTE, CONT COORD'S & NOTES FOR VLV HCV 387 DELETED; REF DWG, NNS-1 CL BOUNDARY
1	8/22/86	BCL	WRD	PHH	ADDED CONTINUATION DETAILS, REVISED VALVE TYPE AND NOTE 8.
0	1/20/86	DWS	JDM	WFD	ISSUED FOR OPERATIONS
REV	DATE	DSGN	CHKD	CE	DESCRIPTION

NEXTERA ENERGY
SEABROOK

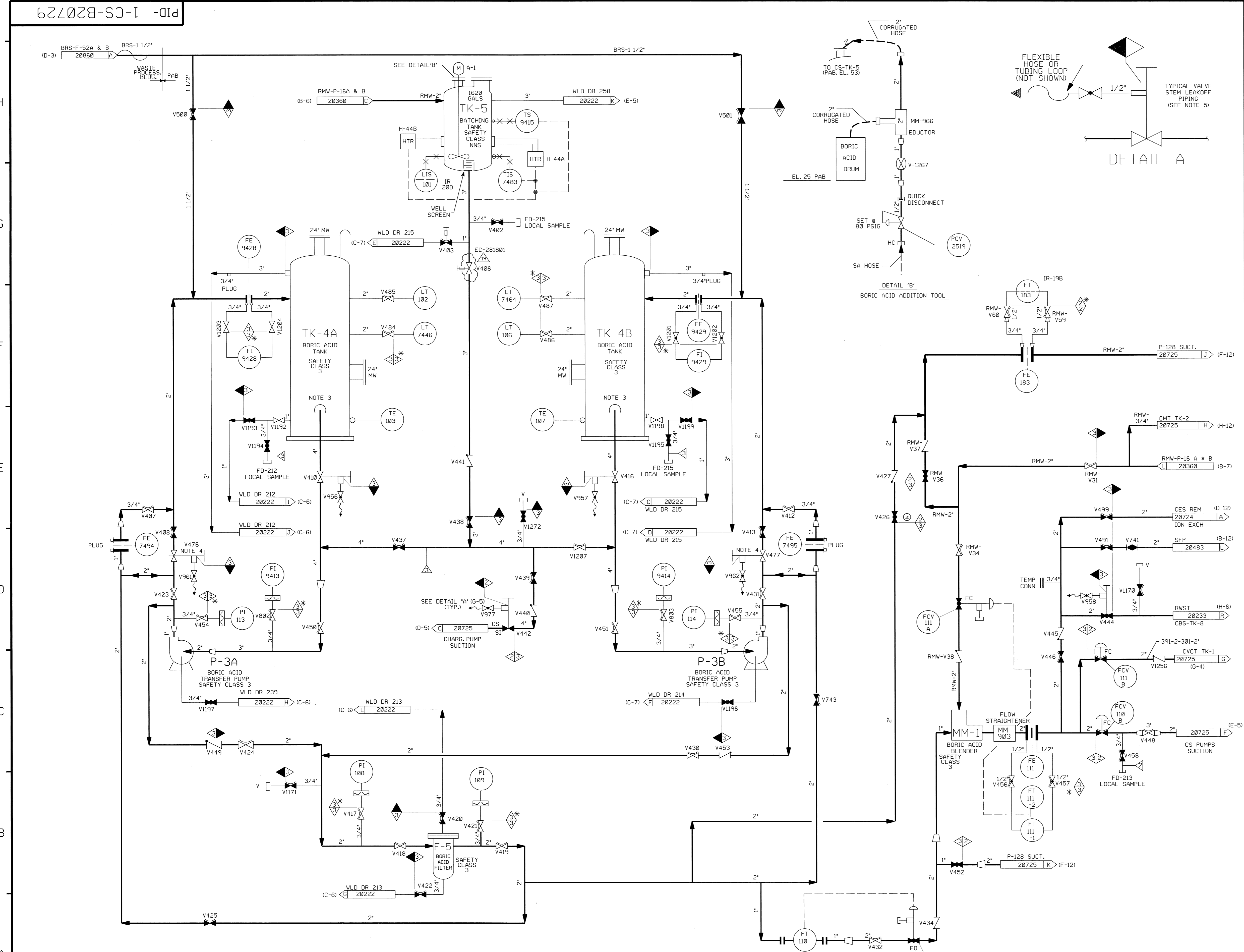


CHEMICAL VOLUME & CONTROL SYS
THERMAL REGENERATION
DETAIL

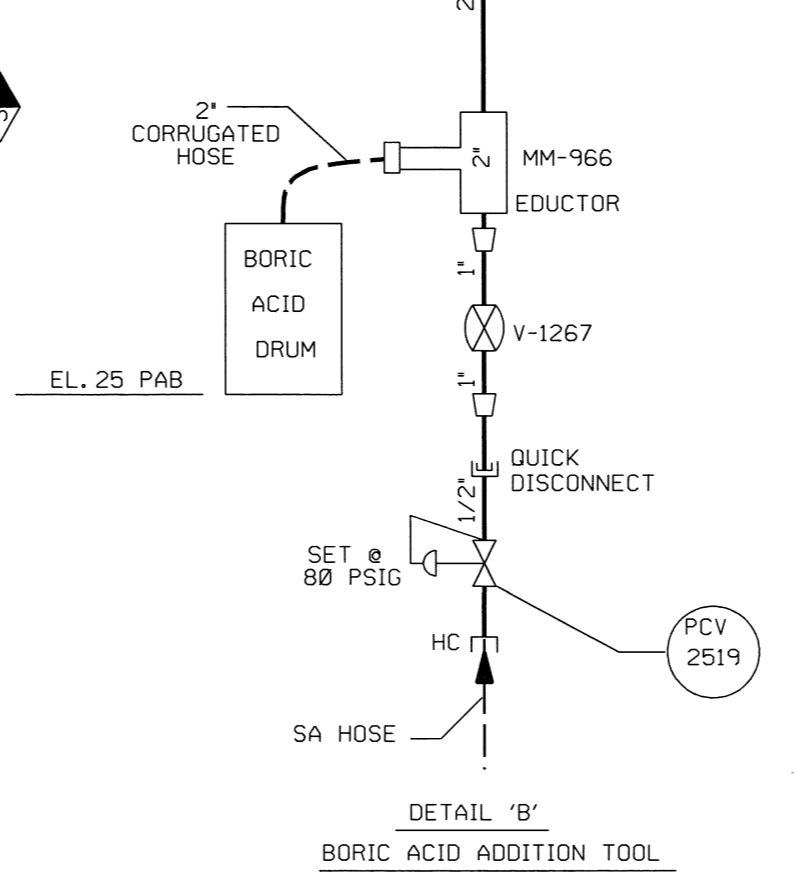
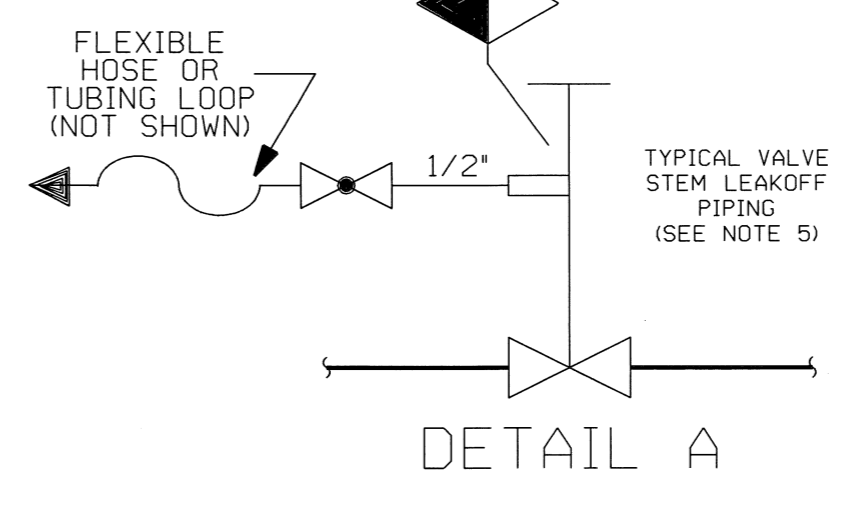
PID- 1-CS-B20728

9763-F-805013	15	CVCS THERMAL REGENERATION P & IO
REF. DRAWING NO.	REV	TITLE

PID-1-CS-B20729



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



- NOTES:
1. WORK THIS DWG WITH 20720 & 20722 THRU 20728.
 2. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX CS, UNLESS NOTED OTHERWISE.
 3. ALL BORIC ACID & BATCHING TANK EQUIP & PIPING SHOWN IS LOCATED IN AREA MAINTAINED AT A CONTROLLED TEMPERATURE.
 4. VALVE IS LOCKED INTO POSITION DURING OPERATIONAL TESTING TO LIMIT PUMP RUNOUT TO 75 GPM WHEN TRANSFERRING BATCHING TANK CONTENTS TO BORIC ACID TANK.
 5. REFER TO DWG VSL-20774 FOR VALVE LEAKOFFS.
 6. DELETED

PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
19	6/11/94	BCS	JM	RM	INCORP EC-281801
18	2/19/14	JM	BCS	CIT	INCORP EC-280958
17	4/27/10	BCS	MW	RJF	PARTIAL INCORP EC 12725
16	11/16/06	JM	BCS	RRB	INCORP MMOD 03-504 DCN 00
15	1/27/05	BCS	JM	RRB	INCORP. CR 05-00034 REV. 00
14	10/16/03	BCS	MPW	RRB	INCORP. DCR 02-013 DCN-00, 01, 02
13	8/27/03	BCS	JM	MR	INCORP. MMOD 03-515 DCN-00
12	5/12/03	JM	MPW	BCS	INCORP. CR 02-07592 REV 00
11	4/22/99	DWS	RWS	GRM	INCORP DCR 980052 DCN*00, DCR 980245 DCN*00 & REINCORPORATED DCR 950038 DCN*03
10	9/16/97	BCS	BAW	MPW	INCORP DCR 95-38 DCN 03
9	6/13/97	MPW	DWS	WNF	INCORP DCR 95-38 DCN 00
8	10/8/92	DWS	MRB	DMP	INCORP DCR 890073 CA*0 & 1
7	4/20/92	MRB	BCL	RRB	INCORP. MMOD 91-515 CA0
6	12/16/91	FCB	RMC	BCL	INCORP. MMOD 91-511 CA01
5	3/16/89	MRB	GPM	MJY	INCORPORATED DCR 88-142 CA0 REVISED; NOTE 2, V483 & V406 OPERATOR SYMBOL
4	12/15/87	GPM	DWS	PAG	REVISED NOTE 5, VALVE NO. ADDED FLG-61 FT110, PLUGS AT 7494 & 7495, NOTE FOR V959, CONT. COORD'S CLASS DESIGNATION. P&ID REF DWG NOTE & U&C P&ID REF. DWG. DELETED REF DWG, NNS-1 L&L BOUNDARY, REDUNDANT SYS DWG, CONT.
3	10/6/86	JDM	MAP	RRC	INCORP ECA'S 08/118317A & 08/118448A
2	8/22/86	BCL	WRD	PHH	REVISED TO REFLECT AS-BUILT CONFIGURATIONS, ADDED HEAT TRACING & CONTINUATION REF. REVISED NOTE 5.
1	6/13/86	JDM	DWS	RRC	UPDATE REF DWG REV NO & REVISE ACCORDINGLY INCORP NCR 82/11795 REVISED RMW SUPPLY TO TK-5, INCORP ECA 99/112818A & ECA 19/800202B.
0	1/22/86	DWS	JDM	WFD	ISSUED FOR OPERATIONS



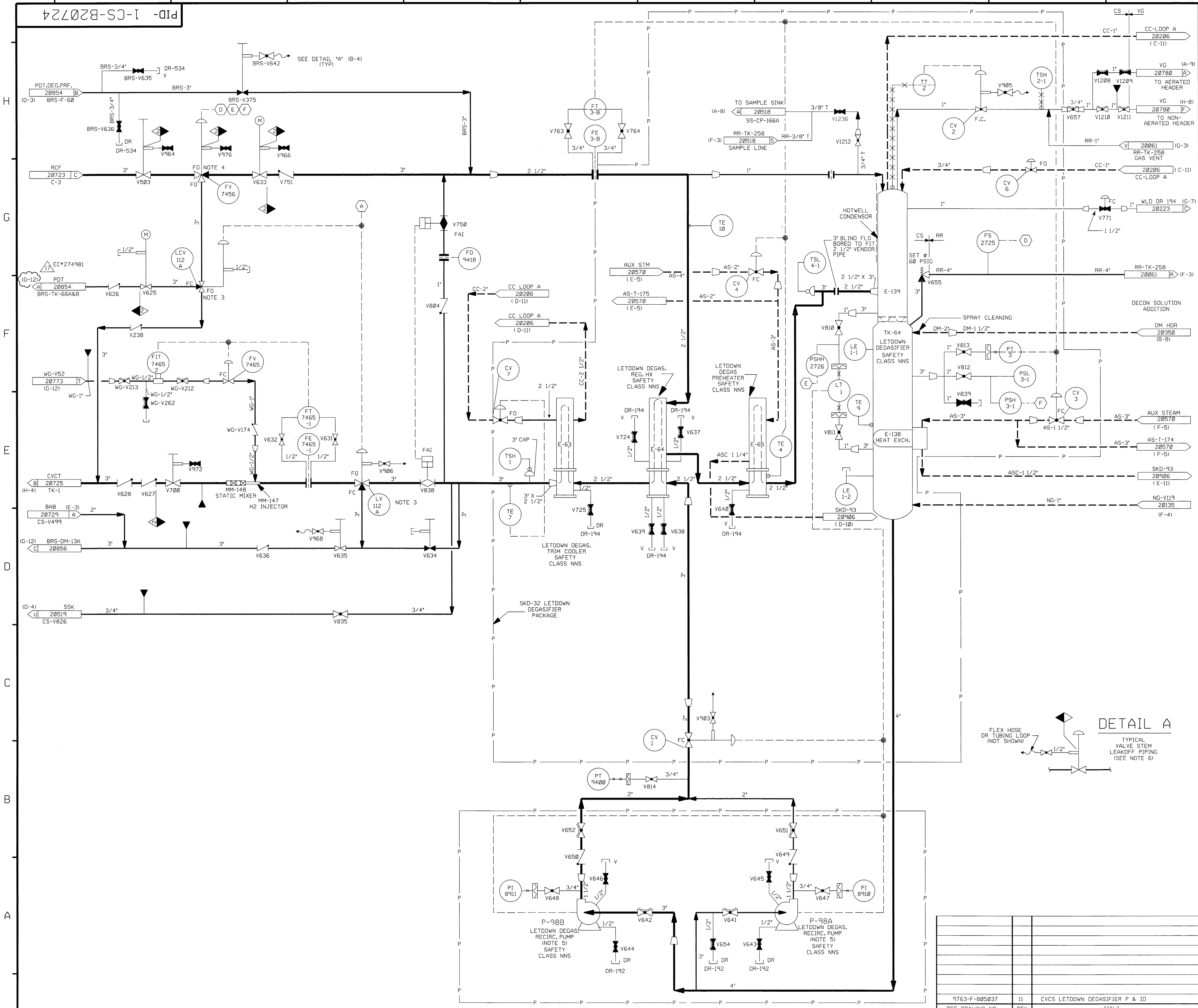
NEXTERA ENERGY
SEABROOK

CHEMICAL & VOLUME CONTROL SYS.
BORIC ACID
DETAIL

PID- 1-CS-B20729

REF. DRAWING NO.	REV	TITLE
9763-F-805017	12	SPENT FUEL POOL COOLING & CLEAN-UP
9763-F-805014	16	CVCS BORIC ACID P & ID

PID-1-CS-B20724

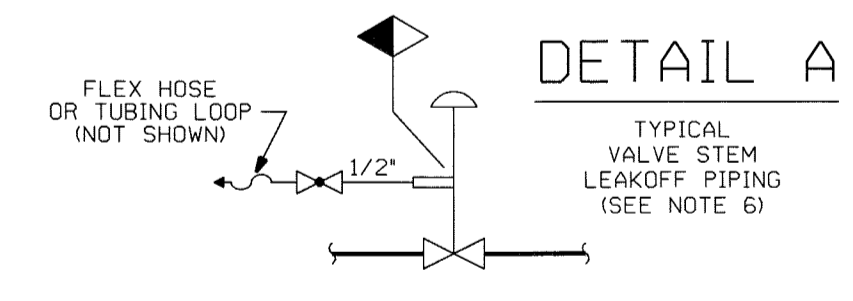


FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LEGEND 1 AND P&ID - LEGEND 2

- NOTES:
- WORK THIS DWG WITH DWGS 20720, 20722, 20723, & 20725 THRU 20729.
 - ALL PIPING, VALVES, EQUIP & INSTRUMENTS HAVE SYSTEM PREFIX 'CS', UNLESS NOTED OTHERWISE.
 - VALVE FAILS WITH FLOW TO CVCT
 - VALVE FAILS WITH FLOW TO LCV-112A
 - SEE DWG 20354 FOR WATER SUPPLY TO PUMP DOUBLE MECHANICAL SEALS.
 - REFER TO DWG VSL-20774 FOR VALVE LEAKOFFS.
 - INSTRUMENTATION REFERENCES
 - (A) CHEM VOL CONTROL TK (CS-TK-1) LEVEL LT-112E & LT-185 ON DWG CS-20725
 - (D E F) TO 1-CS-CV-3, 1-CS-CV-4 (AS-20570), 1-DM-V285 (DM-20350) AND 1-CS-FV-7456 (CS-20724).
 - △ INDICATES REVISION LEVEL

PORTIONS OF THIS DRAWING ARE NUCLEAR SAFETY RELATED

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
17	1/11/12	JM	BCS	DJM	INCCORP EC*274981
16	4/16/08	JM	BCS	TAS	INCCORP DCR 02-002 DCN-12, 15
15	9/28/06	JM	SPF	RRB	INCCORP MMOD 03-504 DCN 00
14	3/21/06	BCS	JM	RRB	INCCORP MSE 05-160, REV. 00
13	2/27/01	BCS	MRB	RCP	INCCORP MMOD 98-641 DCN-00
12	4/23/99	DWS	BCS	GRM	INCCORP DCR 980045 DCN*04
11	3/3/93	BCL	MRB	DJM	INCCORP DCR 880179 CA*16
10	11/02/92	DWS	MRB	DJM	INCCORP DCR 880179 CA*0
9	10/26/92	DWS	BCL	WFZ	INCCORP DCR 890081 CA*0, CHANGE SYS PREFIX ON CS-V52 TO WG-V52 PER WG-20773.
8	4/13/92	MRB	BCL	JEV	INCCORP MMOD 91-515 CA*0
7	12/20/89	MRB	PAL	ES	INCCORP DCR 86-113 CA 1
6	6/30/88	GPM	APL	PAS	REVISED: VALVE SYMBOL V640, 638, 639, 725, 637, 724, 654, 641, 642, 651 & 652 PER FP 53072, ADDED: LINE SIZE & RESTRICTING ORIFICE AND FLANGES TO INLET HOTWELL CONDENSOR PER 53758, FLANGES TO CLARIFY LINE SIZE BOUNDARY FOR INLET TO E-139 FROM E-65. FAI DESIGNATION FOR V750 AND V838 PER NHY DWG 506294 DELETED; FAI DESIGNATION FOR V625 AND V633 PER NHY DWG 506274 AND 506272; FAI DESIGNATION FOR V635 PER UE&C DWG 806937.
5	12/15/87	GPM	DWS	PAS	REVISED: EQUIP. CL. PER UE&C P&ID, REMOVED DUPLICATED PIPING, REV'D NOTE 6, DELETED FLEX HOSE & DESIGNATED VALVES AS CLOSED FOR CS-V907, 964, 965, 966, 976 & 972 PER NCR 86/145A, ADDED NOTE FOR CS-V907 & CAPILLARY SYMBOL.
4	1/23/87	JDM	WRD	RRB	INCCORP DCR 818, REVISED VALVE TYPE PER FP.
3	10/16/86	JDM	WRD	RRB	INCCORP NCR 95/116A & 99/113027A & ECA 19/105527C, ADDED CON REFS NOTE 8, REMOVED DUPLICATED PIPING SHOWN ON NG PID, ADDED SYSTEM PREFIX TO CV-3, CORRECTED VALVE TYPES PER UE&C P&ID, REVISED CONTINUATIONS.
2	8/22/86	MPW	WRD	PHH	DESIGN CHG1 RESOLVED PER F-805037-R11 & 2 RESOLVED PER ECA 19/104469A. REMOVED CS-SKD-93, DM-V285, DM-VENTIV234 & DM-TN (V382) FROM DWG, ADDED BRS, AS, ASC, CONT. INCCORP ECA 05/106302B & ECA 19/106828C.
1	6/16/86	DWS	DWS	RRB	ISSUED FOR OPERATION, ECA 19/104469A
0	1/22/86	DWS	JDM	WFD	ISSUED FOR OPERATION, ECA 19/104469A



REF. DRAWING NO.	REV	TITLE
9763-F-805037	11	CVCS LETDOWN DEGASIFIER P & ID

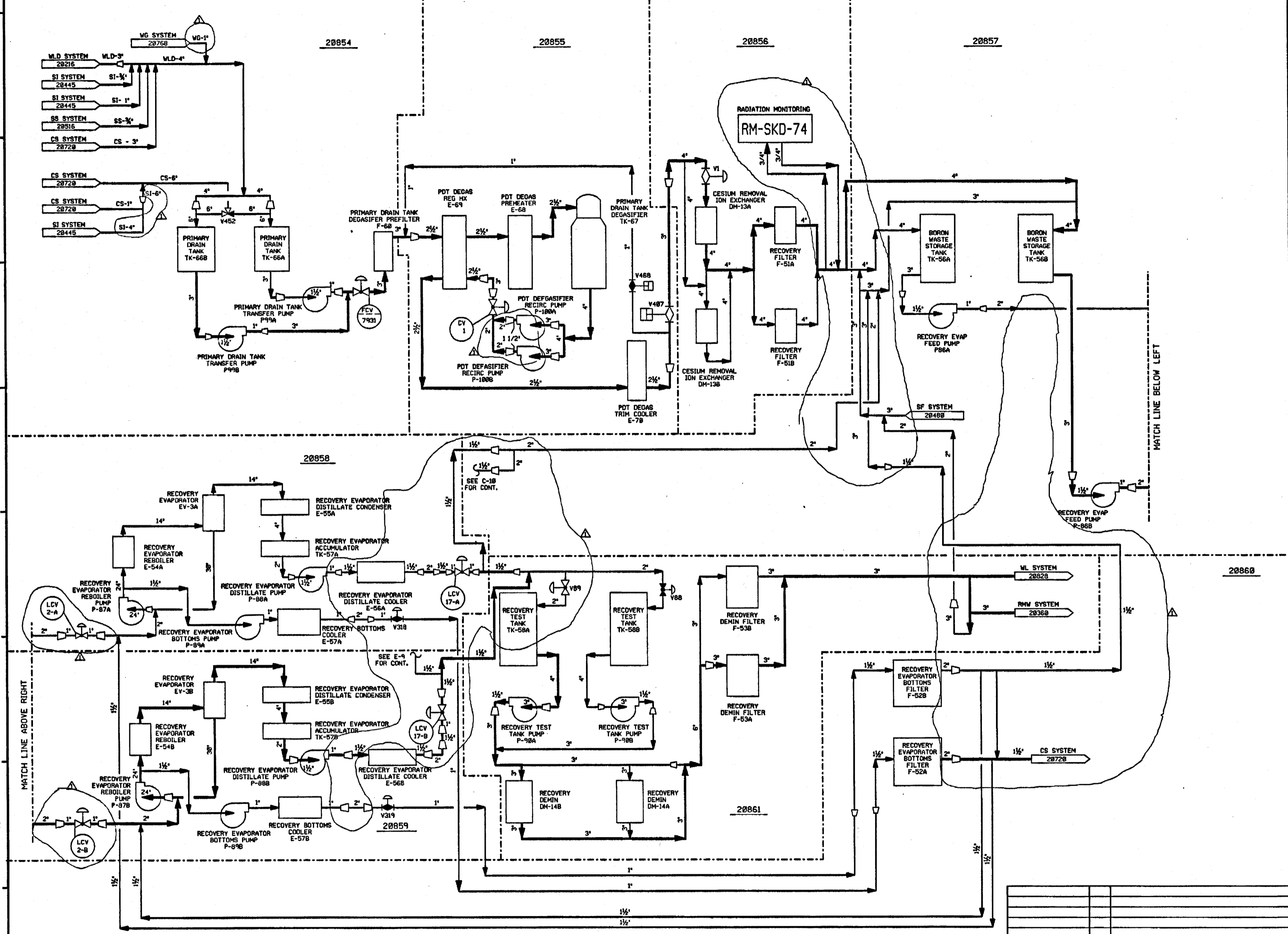
NEXTERA ENERGY
SEABROOK

CHEMICAL & VOLUME CONTROL SYS.
LETDOWN DEGASIFIER
DETAIL

PID- 1-CS-B20724

SEABROOK STATION

INCOMPLETE ITEMS	ITEM NUMBER



- NOTES:
- ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX 'BRS' UNLESS NOTED OTHERWISE.
 - WORK THIS DWG WITH DWG'S 20854, 20855, 20856, 20857, 20858, 20859, 20860 & 20861
 - △ INDICATES REVISION LEVEL.

REV	DATE	DSGN	DRWN	CHKD	CE	LDE	ADDED NOTE 3. REVISED PER LATEST SYSTEM DRAWINGS
1	1/13/96	NPV	OPD	WJL	ECL	VJL	ISSUED FOR OPERATIONS
2	1/13/96	GD	SKN	JDM	ASK	WFD	DESCRIPTION

PSNH PUBLIC SERVICE OF NEW HAMPSHIRE

SEABROOK STATION		BORON RECOVERY SYSTEM OVERVIEW	
		PID-1-BRS-B20853	

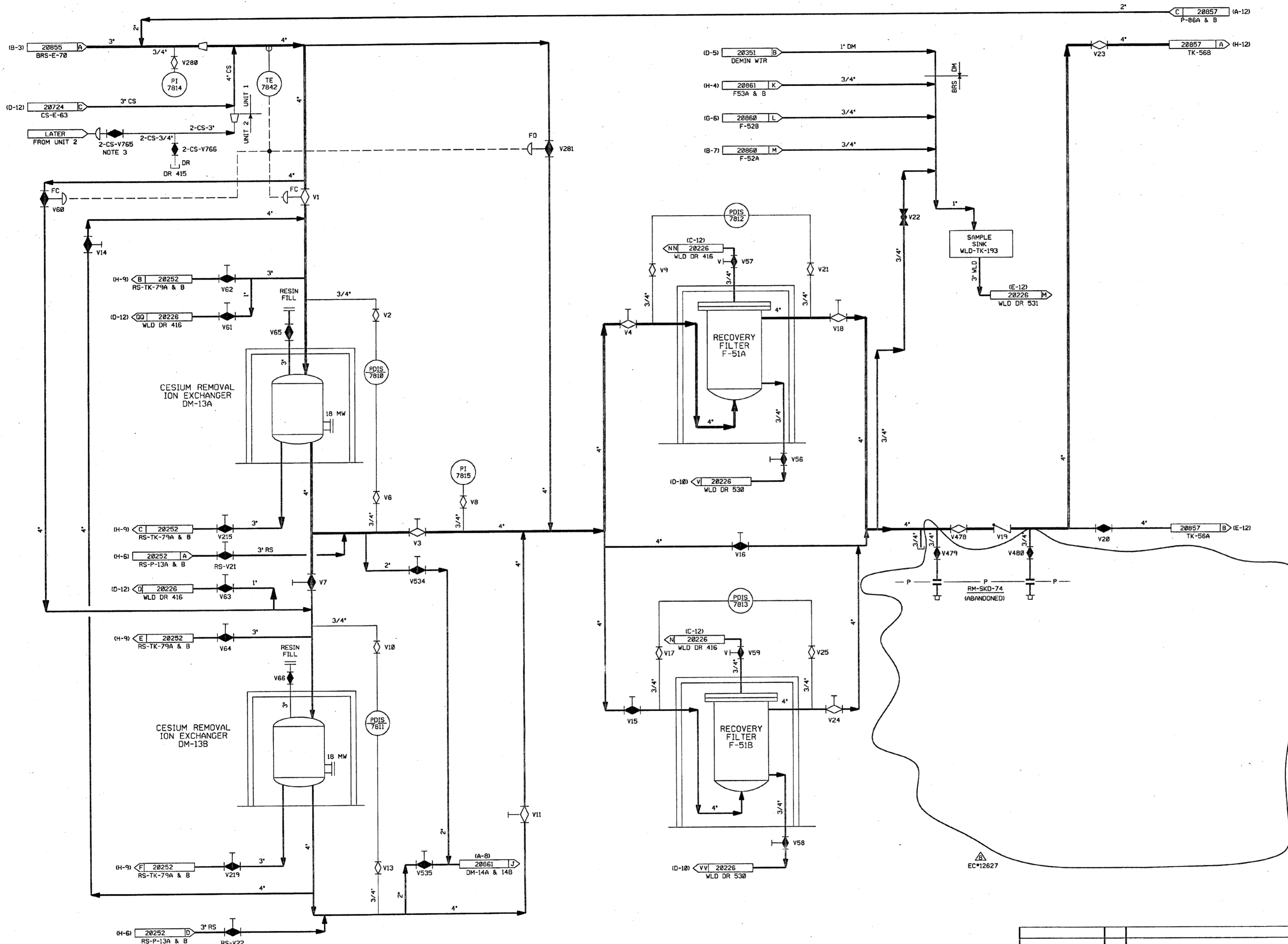
REF. DRAWING NO.	REV	TITLE
9763-F-805614	10	BORON RECOVERY SYSTEM FILTRATION & STORAGE
9763-F-805615	11	BORON RECOVERY SYSTEM EVAPORATOR EV-3A P&ID
9763-F-805616	9	BORON RECOVERY SYSTEM EVAPORATOR EV-3B P&ID
9763-F-805618	10	BORON RECOVERY SYSTEM PRIMARY DRAIN TANK
9763-F-805623	6	BORON RECOVERY SYSTEM EVAPORATOR BOTTOM
9763-F-805624	8	BORON RECOVERY SYS TESTING & DENIMERALIZATION
9763-F-805626	11	BORON RECOVERY SYSTEM-PRIMARY DRAIN TANKS P&ID

PID-1-BRS-B20856

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

H
G
F
E
D
C
B
A

H
G
F
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D
C
B
A



- NOTES:
1. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX 'BRS' UNLESS NOTED OTHERWISE.
 2. WORK THIS DWG WITH DWG'S 20853, 20854, 20855, 20857, 20858, 20859, 20860 & 20861
 3. VALVE IS CLOSED DURING UNIT 2 CONSTRUCTION
 4. Δ INDICATES REVISION LEVEL
 5. ALL LINES, EQUIPMENT, COMPONENTS AND INSTR. ARE SAFETY CLASS NNS UNLESS NOTED OTHERWISE.
 6. DELETED.

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
8	3/17/09	JM	Bes	DTM	INCRP. EC*12627
7	10/8/91	MRB	JM	ES	INCRP. MMDD 91-625 CA0
6	9/18/91	GPM	JM	MAC	INCRP. DCR 90-14 CA01
5	2/26/91	MRB	RMC	BCL	INCRP. MMDD 90-648 CA01
4	10/29/90	MRB	JM	BCL	INCRP. MMDD 90-601 CA00 ADDED: NOTE 5 FOR INFORMATION
3	12/12/86	MPW	PAL	RRC	ADDED CONT REF LOC'S, VALVE RM V8122 PER PP-71282 AND NOTE 4.
2	9/26/86	MAP	JDM	RRC	ADDED VALVING & INSTRUMENT INFO FOR RM-SKD-74 PER PP-71200. REVISED DWG CONTINUATION, DELETED REF DWGS N/A.
1	6/23/86	GD	DWS	RRC	INCRP. ECA 19/116012A & 99/080000CHANGE ITEM #1 RESOLVED PER ECA 13/002019A
0	1/13/86	GD	JDM	WFD	ISSUED FOR OPERATIONS

REF. DRAWING NO.	REV	TITLE
9763-F-805614	10	BORON RECOVERY SYS FILTR & STOR P&ID

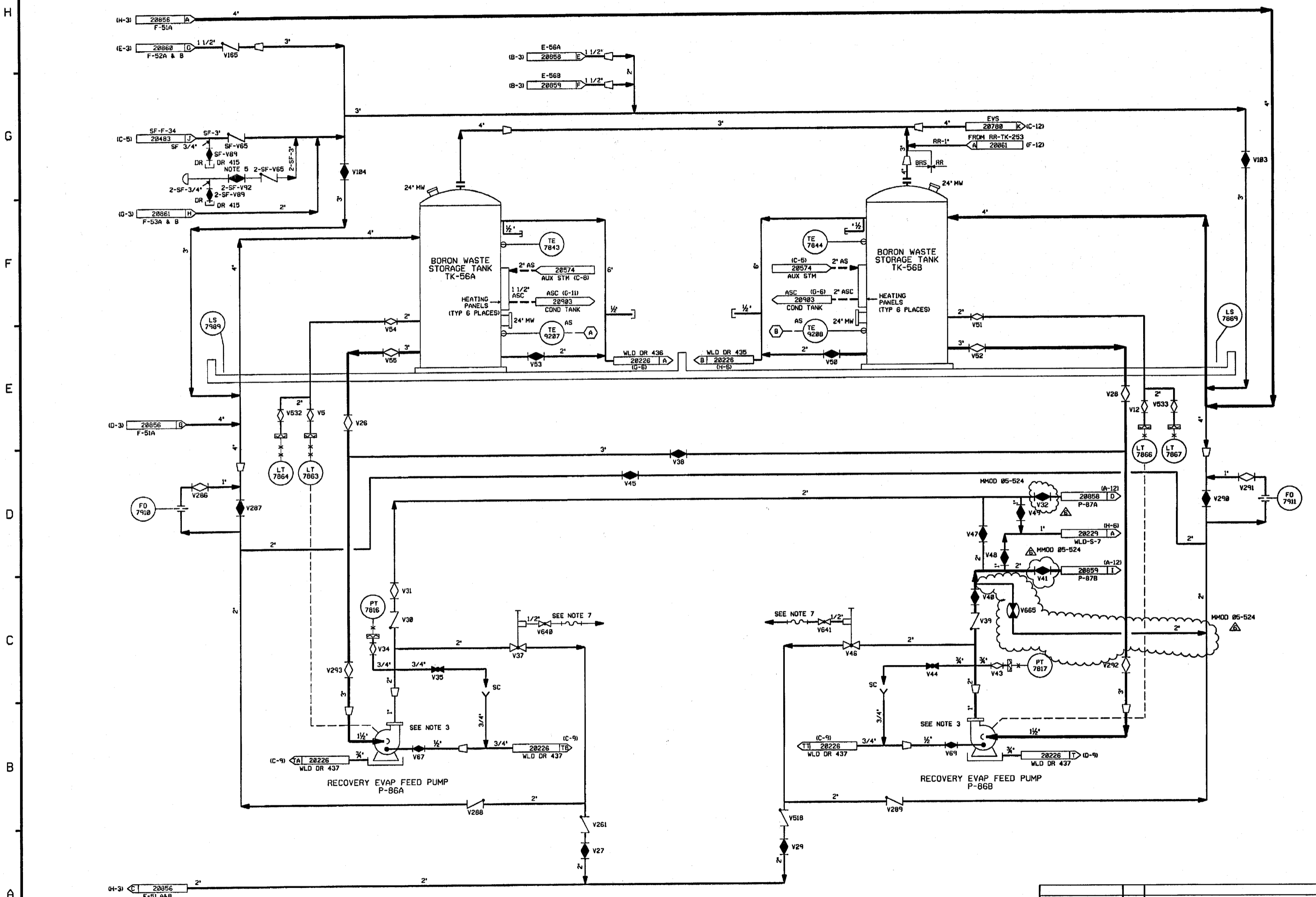
FPL ENERGY Seabrook Station

BORON RECOVERY SYSTEM
FILTRATION
DETAIL

PID- 1-BRS-B20856

PID-1-BRS-B20857

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



- NOTES:
1. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX "BRS" UNLESS NOTED OTHERWISE.
 2. WORK THIS DWG WITH DWG'S 28053, 28054, 28055, 28056, 28059, 28060 & 28061.
 3. SEE DRAWING DM-28353 FOR WATER SUPPLY TO PUMP DOUBLE MECHANICAL SEALS.
 4. INSTRUMENT REFERENCES:
 (A) TO TV-9287 ON DWG AS-28574 (I-11)
 (B) TO TV-9288 ON DWG AS-28574 (E-18)
 5. VALVE IS CLOSED DURING UNIT 2 CONSTRUCTION
 6. Δ INDICATES REVISION LEVEL
 7. REFER TO DRAWING VSL-28774 FOR VALVE LEAKOFFS.
 8. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS ARE SAFETY CLASS MMS, UNLESS NOTED OTHERWISE.

REV	DATE	DSGN	CHWD	CE	DESCRIPTION
6	6/13/04	BCS	JJA	DJM	INCRP. M400 85-524 DCH-88, 83
5	11/7/92	MRB	BCL	DJM	INCRP. DCR 87-84 CAB REVISED NOTE 4, VALVE SYMBOL PER NOTE 5. ADDED FLOW ARROWS, NOTE 6, DWG LDC COORDS. DELETED MMS-1 SYMBOL.
4	5/28/92	MRB	MPW	DMS	INCRP. M400 91-511 CAB
3	6/18/87	GPH	BCL	VWS	REVISED TO CLARIFY DUPLICATION OF ASSOC. SYS. REF LETTER FOR CONT. DWG(S) ADDED NOTE 7, CONT. COORDS DELETED REF DWG(S).
2	9/12/86	MPW	BCL	RRC	ADDED CONTAINERS & REV LOCATION OF PT-7815, 7817, 7863, 7864, 7866 & 7867 PER SECTION 100'S 7814 VAL-COON.
1	8/17/86	GD	JMCS	RRC	REVISION DWG ITEMS 1 & 2 PER REF DWG 88814-REV 10, INCRP. ECA 19/35890 & ECA 19/110240, REV VALVE TAG
0	1/13/86	GD	ASK	WFD	ISSUED FOR OPERATIONS

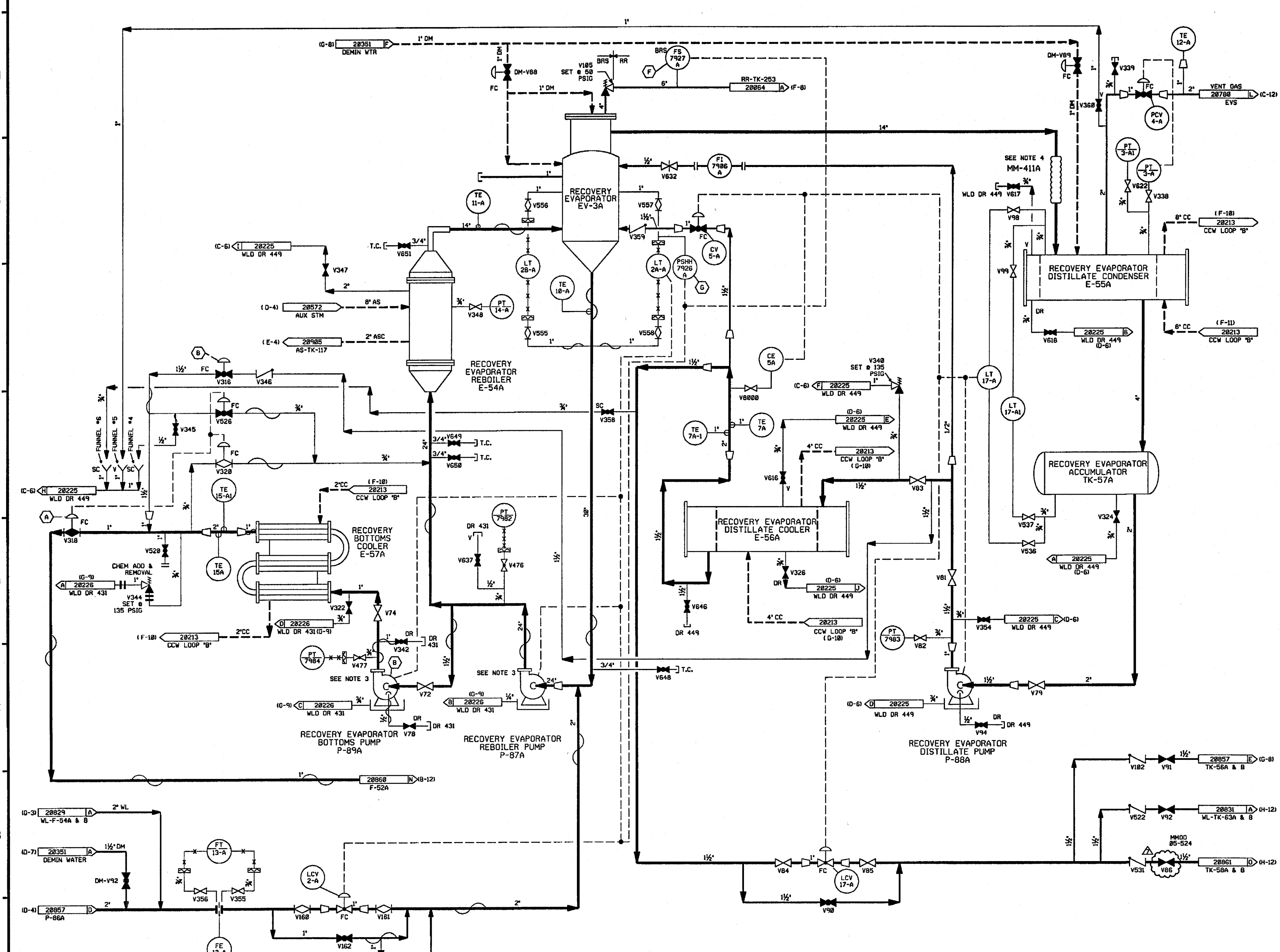
FPL ENERGY Seabrook Station

BORON RECOVERY SYSTEM STORAGE DETAIL

PID- 1-BRS-B20857

REF. DRAWING NO.	REV	TITLE
9763-F-885614	18	BORON RECOVERY SYS-FILTRA & STORG P&ID

PID-1-BRS-B20858



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

- NOTES:
- 1) ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX "BRS" UNLESS NOTED OTHERWISE.
 - 2) WORK THIS DWG WITH DWG'S 20853, 20854, 20855, 20856, 20857, 20859, 20868 & 20861.
 - 3) SEE DWG DM-28353 FOR WATER SUPPLY TO PUMP DOUBLE MECHANICAL SEALS.
 - 4) ENTIRE LINE IS FLEX CONN.
 - 5) INSTRUMENT REFERENCES:
 - (A) HIGH E-57A OUTLET TEMP, HIGH WS-TX-76 LEVEL AND LOW EV-3B LEVEL WS-TX-76 TRANSFER VALVE INTERLOCK.
 - (B) BRS-P-89A, DISTILLATE FLUSH V316 INTERLOCK.
 - (F) TO 1-DM-V88 ON DWG DM-28351 (F-7) & 1-BRS-FCV-1A ON DWG AS-20872 (D-6).
 - (G) TO 1-DM-V88 ON DWG DM-28351 (F-7) & 1-BRS-FCV-1A ON DWG AS-20872 (D-6).
 - 6) Δ INDICATES REVISION LEVEL.
 - 7) ALL LINES, EQUIPMENT COMPONENTS AND INSTRUMENTS ARE SAFETY CLASS INHS UNLESS NOTED OTHERWISE.

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
7	6/13/06	BCS	JM-4	DJM	INCRP MMDD 85-524 DCN-83
6	12/7/92	MRB	DWS	DJM	INCRP DCR 87-84 CA 28
5	11/7/92	MRB	BCL	DJM	INCRP DCR 87-84 CA8
4	12/18/91	MRB	JM	GRM	INCRP: DCR 86-634 CA8 REVISED VALVE POSITION PER NHY PID DM-28351 ADDED LINE SIZE FOR CLARITY DELETED REDUNDANT INTERFACE INFO. & VALVE DIAPHRAGM SYMBOL PER UE&C PID 9763-F-885615
3	9/18/87	JDM	BCL	RRC	INCRP DCR 86-587, CORRECTED DRAFTING ERRORS, REVISED NOTE 7.
2	10/3/86	MRJ	BCL	RRC	RE-INCRP: ECA 86/116967A, ADDED V8800B CONTINUATION FLAG REF'S & NOTE 6, REVISED TUBING SYMBOL FOR PT-7982 PER UE&C P&ID AND CONTINUATION FLAG REF. ADDED P&ID LEGEND NOTE.
1	6/24/88	JDM	JNK	RRC	INCRP: ECA 86/116967A & 19/116983C ADDED REDUCER & FLGS. CHANGE ITEM Δ RESOLVED PER LATEST UE&C P&ID
0	1/13/86	DD	JDM	WFD	ISSUED FOR OPERATIONS
REV	DATE	DSGN	CHKD	CE	DESCRIPTION

FPL ENERGY Seabrook Station

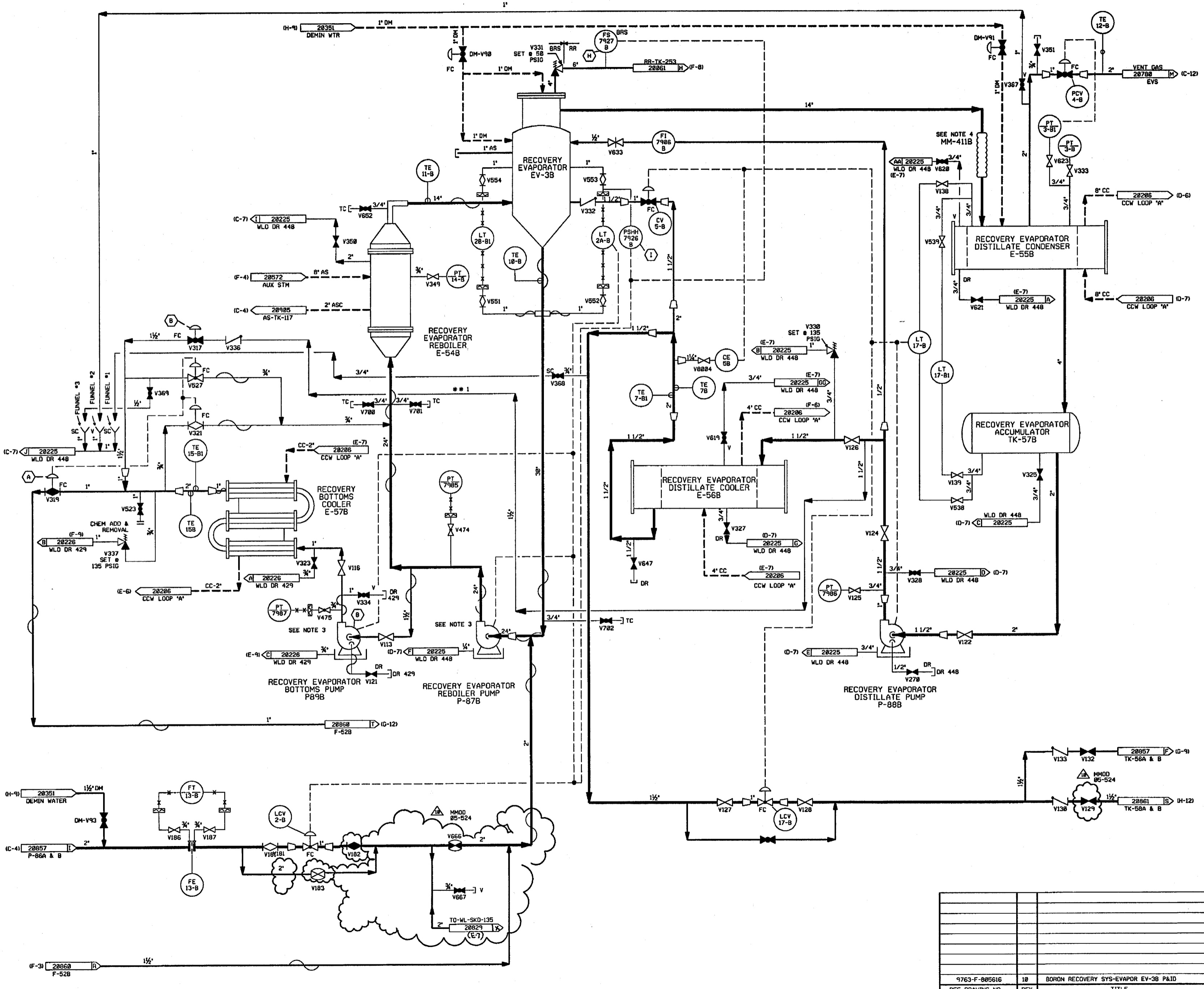
BORON RECOVERY SYSTEM
EVAPORATION
DETAIL

PID-1-BRS-B20858

REF. DRAWING NO.	REV	TITLE
9763-F-885615	13	BORON RECOVERY SYS-EVAPOR EV-3A P&ID

PID-1-BRS-B20859

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



- NOTES:
- 1) ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX "BRS" UNLESS NOTED OTHERWISE.
 - 2) WORK THIS DWG WITH DWG'S 28853, 28854, 28855, 28856, 28857, 28858, 28859 & 28861.
 - 3) SEE DWG DM-28353 FOR WATER SUPPLY TO PUMP DOUBLE MECHANICAL SEALS.
 - 4) ENTIRE LINE IS FLEX CONN.
 - 5) INSTRUMENT REFERENCES:
 - (A) HIGH E-57B OUTLET TEMP, HIGH WS-TK-76 LEVEL AND LOW EV-3B LEVEL WS-TK-76 TRANSFER VALVE INTERLOCK.
 - (B) BRS-P-89B, DISTILLATE FLUSH V317 INTERLOCK.
 - (C) TO I-DM-V98 ON DWG DM-28351 (4-9) & I-BRS-FCV-18 ON DWG AS-28572 (G-6).
 - (D) TO I-DM-V98 ON DWG DM-28351 (4-9) & I-BRS-FCV-18 ON DWG AS-28572 (G-6).
 - 6) Δ INDICATES REVISION LEVEL
 - 7) DELETED
 - 8) ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS ARE SAFETY CLASS NNS, UNLESS NOTED OTHERWISE.

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
10	1/13/06	BCS	JJM	DJM	INCCP, MMDD 85-524 DCN 08, 03
9	8/18/97	MPM	BCS	VWS	INCCP, MMDD 96-558 DCN 01
8	12/7/92	MRB	DWS	DJM	INCCP, DCR 87-84 CA 28
7	11/7/92	MRB	BCL	DJM	INCCP, DCR 87-84 CA8
6	12/18/91	MRB	JM	GRM	INCCP, DCR 86-634 CA8
5	5/25/88	GPH	APL	DJM	INCCP, DCR 88-883 REVISED PIPING TO CLARIFY DUPLICATION OF ASSOCIATED SYSTEMS, NOTE 8. ADDED HEAT TRACE SYMBOL PER LINE LIST, LINE SIZE PER IFC & C, ISD F-11852 DELETED CHANGE ITEM 1 PER DCR 88-883.
4	9/16/87	JDM	BCL	RRC	INCCP, DCR 86-587, ADDED V-8884 PER EXISTING FIELD CONFIG. DELETED NOTE 7, CORRECTED DRAFTING ERRORS, REVISED TO CLARIFY DUPLICATION OF ASSOCIATED SYSTEMS. ADDED NOTE 8 PER 885616, CHG. ITEM 1
3	2/18/87	JDM	WRD	VWS	APPROVED CHANGE ITEM #1 PER COMPLETION OF MR#86010018.
2	12/22/86	FJR	WRD	RRC	INCCP, ECA 19/882818A, ADDED & REV'D CONT. FLAG COORD'S, CORRECTED DRAFTING ERRORS PER UEAC P&ID, REV. REF. DWG LIST, ADDED & REV. CONT. FLAG REF. DWGS, ADDED NOTES 6 & 7.
1	6/28/86	GO	BCL	RRC	INCCP, ECA 19/116888A, ECA 88/882817C & ECA 19/114273A, CHANGE ITEM 11 RESOLVED PER LATEST UEAC P&ID, CHANGE ITEM 12 RESOLVED PER ECA 19/881285A.
0	1/13/86	GD	JDM	WFD	ISSUED FOR OPERATIONS

FPL ENERGY Seabrook Station

BORON RECOVERY SYSTEM EVAPORATION DETAIL

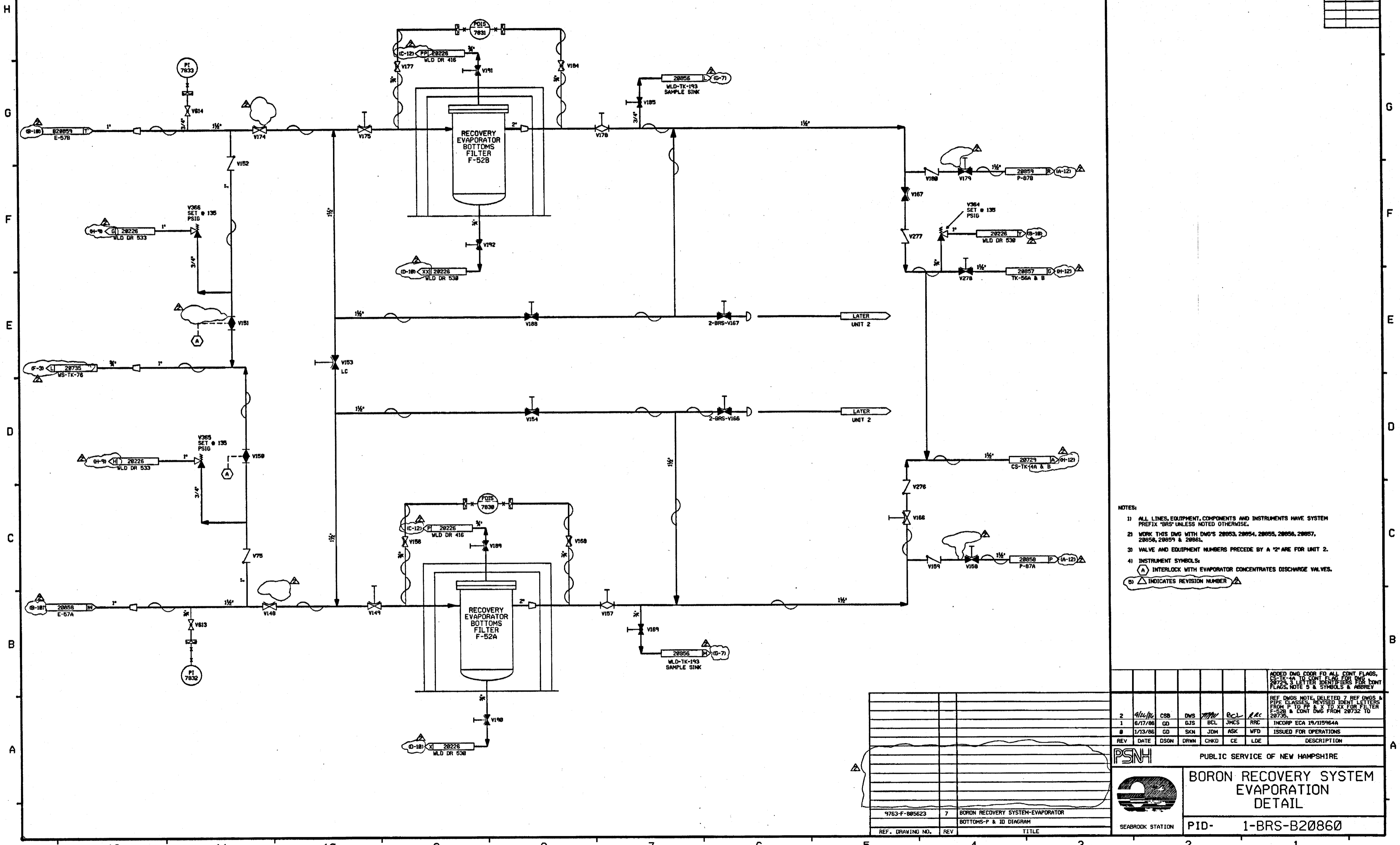
PID-1-BRS-B20859

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
9763-F-885616	10	BORON RECOVERY SYS-EVAPOR EV-3B P&ID			
REF. DRAWING NO.	REV	TITLE			

PID-1-BRS-B20860

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

INCOMPLETE ITEMS	
ITEM	NUMBER



- NOTES:
- 1) ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX "BRS" UNLESS NOTED OTHERWISE.
 - 2) WORK THIS DWG WITH DWG'S 28053, 28054, 28055, 28056, 28057, 28058, 28059 & 28060.
 - 3) VALVE AND EQUIPMENT NUMBERS PRECEDE BY A "2" ARE FOR UNIT 2.
 - 4) INSTRUMENT SYMBOLS:
 - (A) INTERLOCK WITH EVAPORATOR CONCENTRATES DISCHARGE VALVES.
 - (B) INDICATES REVISION NUMBER

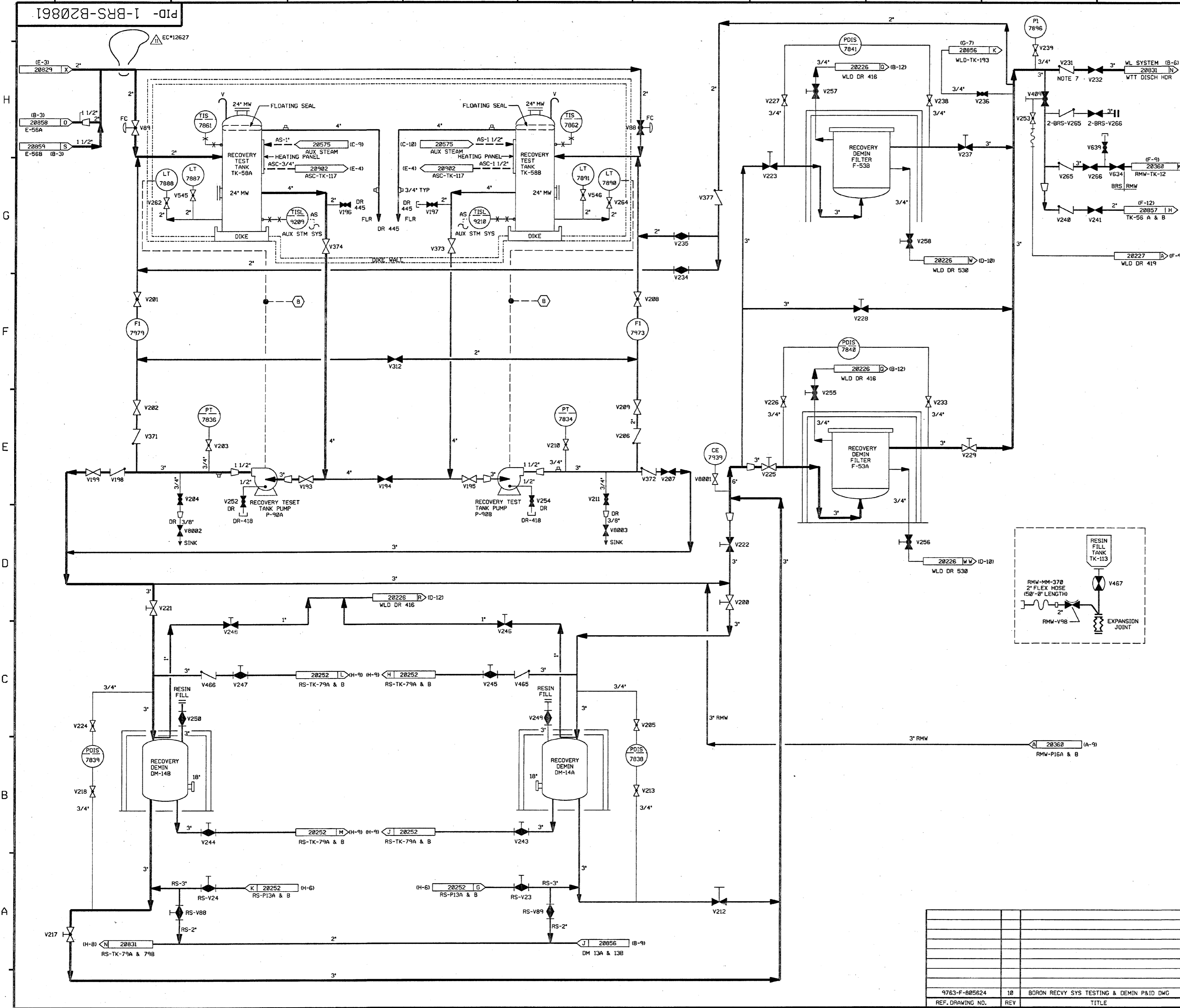
REV	DATE	DSGN	DRWN	CHKD	CE	LDE	DESCRIPTION
2	4/24/86	CSB	DWS	WMM	RCL	RRC	ADDED DWG CORR FOR ALL CONT FLAGS, CS-TK-193 TO CONT FLAG FOR DWG 28725, 3 LETTER IDENTIFIERS FOR CONT FLAGS, NOTE 5 & SYMBOLS & ABBREV
1	6/17/86	GD	GJS	BCL	JMCS	RRC	REF DWGS NOTE, DELETED 7 REF DWGS A PIPE CLASSES, REVISED TIGHT LETTERS FROM P TO PR & X TO XX FOR FILTER F-52B & CONT DWG FROM 28732 TO 28733
0	1/13/86	GD	SKN	JDM	ASK	WFD	INCORP ECA 19/115964A ISSUED FOR OPERATIONS

PSNH PUBLIC SERVICE OF NEW HAMPSHIRE
 SEABROOK STATION

**BORON RECOVERY SYSTEM
 EVAPORATION
 DETAIL**

PID- 1-BRS-B20860

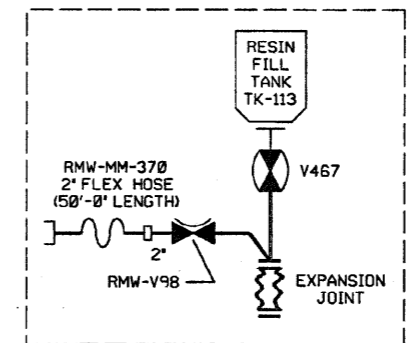
PID-1-BRS-B20861



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

NOTES:

1. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX 'BRS' UNLESS OTHERWISE NOTED.
2. WORK THIS DWG WITH DWGS 20853, 20854, 20855, 20856, 20857, 20858, 20859 & 20860.
3. VALVE & EQUIPMENT NUMBERS PRECEDED BY A '2' ARE FOR UNIT 2.
4. Δ INDICATES REVISION LEVEL.
5. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS ARE SAFETY CLASS NNS UNLESS OTHERWISE NOTED.
6. INSTRUMENT REFERENCES \square TO WL-FCV-1450-1 & 2, DRAWING WL-20831.
7. INTERNALS OF CHECK VALVE BRS-V231 HAVE BEEN REMOVED.



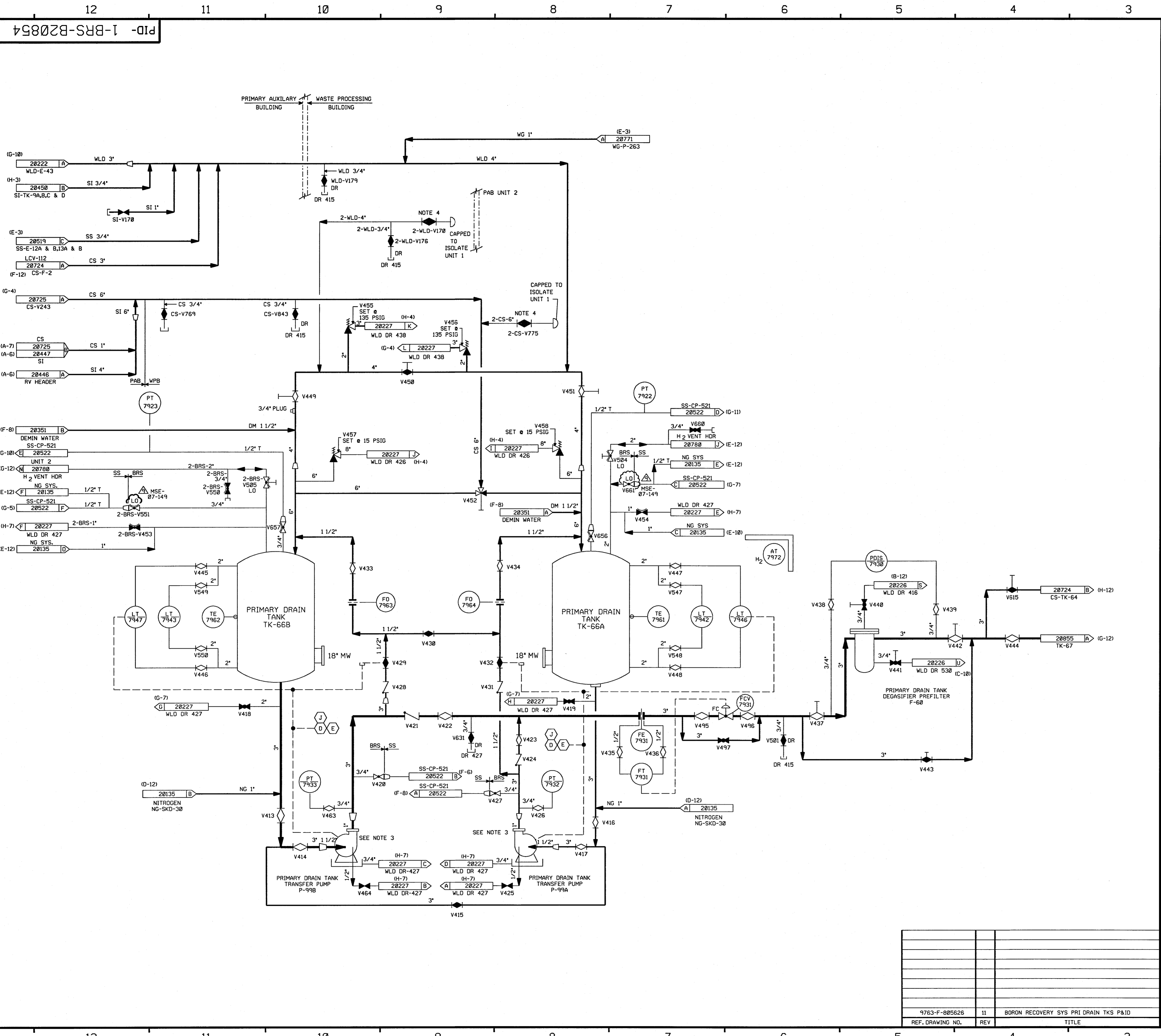
REV	DATE	DSGN	CHKD	CE	DESCRIPTION
11	3/17/09	JM	BSS	DJM	INCORPORATED EC*12627
10	6/13/86	BCS	JM	DJM	INCORP. MMOD 05-524 DCN-00, 02
9	9/25/83	BCS	JM	JET	INCORPORATED MSE 03-133 REV. 00
8	11/17/98	BCS	MPW	JCM	INCORPORATED DCR 98-029 DCN-01
7	10/21/98	BCS	DWS	DJM	INCORPORATED DCR 98-029 DCN-00
6	7/24/94	BCL	MPW	VWS	INCORPORATED MMOD 95-506 CA-0
5	3/28/89	MRB	FAL	MJY	INCORPORATED DCR 86-185 CA 3
4	5/25/88	GPH	APL	DJM	INCORP. DCR 88-003 REVISED INLETS TO DM-14A & B PER I.E. & C ISO, V8002.3 SYMBOL PER AS BUILT CONDITION, PIPING TO CLARIFY ASSOCIATED SYSTEMS. ADDED NOTE 5 PER I.E. & C P & ID 885624, DWG CONT LETTERS.
3	1/7/87	MRJ	WRD	RRC	RESOLVED CHANGE ITEM 1 PER AS-BUILT COND., CORRECTED INCORP. OF ECA 19/115964B, DELETED NOTE 5.
2	10/17/86	CSB	MAP	RRC	INCORP. ECA'S 99/11127A & 19/115964B. ADDED DWG COOR TO FDMT FLGS, DIKE WALL BOUNDARY, REF DWG NOTE 8. NOTE FOR DWG REV LEVEL, CHANGED V277 TO V227, REVISED P-90A & B DISCH HDR DRAIN VALVE & PIPING FOR DEMIN TK'S DM-TK-14A & B.
1	6/18/86	DWS	DWS	RRC	CORRECTED V194 TO GATE, REVISED CONTINUATION, RESOLVED CHNG. ITEM NO.1 INC. 885624 REV. 10
0	1/13/86	GD	JDM	WFO	INCORPORATE ECA 08/188833 ISSUED FOR OPERATION

FPL ENERGY Seabrook Station

BORON RECOVERY SYSTEM TESTING & DEMINERALIZATION DETAIL

PID- 1-BRS-B20861

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
9763-F-805624	10	BORON RECVY SYS TESTING & DEMIN P&ID DWG			
REF. DRAWING NO.	REV	TITLE			

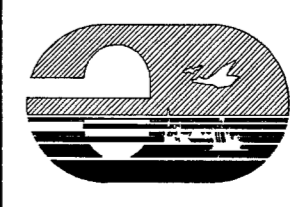


FOR P&ID REFERENCES DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LEGEND 1 AND P&ID - LEGEND 2.

- NOTES:
- ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX 'BRS' UNLESS NOTED OTHERWISE.
 - WORK THIS DWG WITH DWG'S 20853, 20855, 20856, 20857, 20858, 20859, 20860 & 20861.
 - SEE DRAWING DM-20353 FOR WATER SUPPLY TO PUMP DOUBLE MECHANICAL SEALS.
 - VALVE IS CLOSED DURING UNIT 2 CONSTRUCTION.
 - △ INDICATES REVISION LEVEL.
 - ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS ARE SAFETY CLASS NNS, UNLESS NOTED OTHERWISE.
 - INSTRUMENT REFERENCES:
 - (D) FROM 1-BRS-FS-7925 ON DWG BRS-20855 (F-7)
 - (E) FROM 1-BRS-PSHH-7924 ON DWG BRS-20855 (F-7)
 - (J) FROM 1-BRS-PSH-3-1 ON DWG BRS-20855 (F-5)

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
9	9/17/07	JM	BGS	FFB	INCRP MSE 07-149 REV. 0
8	5/30/08	BCS	DWS	WFZ	INCRP MSE 00-124 REV. 0
7	6/6/99	DWS	RWS	DJM	INCRP MMD 970618 DCN#00
6	11/7/92	DWS	BCL	DJM	INCRP DCR 870004 CA#0 & 5
5	4-23-92	MRB	MPW	JEV	REMOVED REF. TO UNIT 2 (LATER) INCRP MMD'S '91-511 CAB & '91-515 CAB
4	5/26/89	MRB	PAL	IW	INCRP DCR 87-110 CA 11 REVISED; CONT. COORD. ADDED; NOTE 6
3	1/6/88	MPW	DWS	MJY	INCRP DCR 87-314 & ECA 19/10/1717A UNIT 2 VALVES SHOWN CLOSED PER NOTE 4; REVISED; FLOW ON BYPASS LINE, CONT. COORDINATES ADDED; FLOW ARROW TO TK-66A.
2	10/3/86	CSB	BCL	RRC	REV'D WG 1" LINE (FROM WG-P-263) TO AGREE WITH P&ID 20222 & REV'D CONT FLAG (20771) AND P&ID BOUNDARY, CONT FLAG IDENT LETTER 'C' (20519) & 'A' (20855) ADDED; FLOW-124" TO CONT FLAG (20724); ADDED NOTE 5.
1	6/19/86	JDM	DWS	RRC	REMOVED CHANGE ITEMS 1 & 2, INCRP ECA'S 19/24898, 19/116021A, 19/116172A, AND 085626 REV. 11
0	1/13/86	GD	JDM	WFD	ISSUED FOR OPERATIONS

FPL ENERGY Seabrook Station

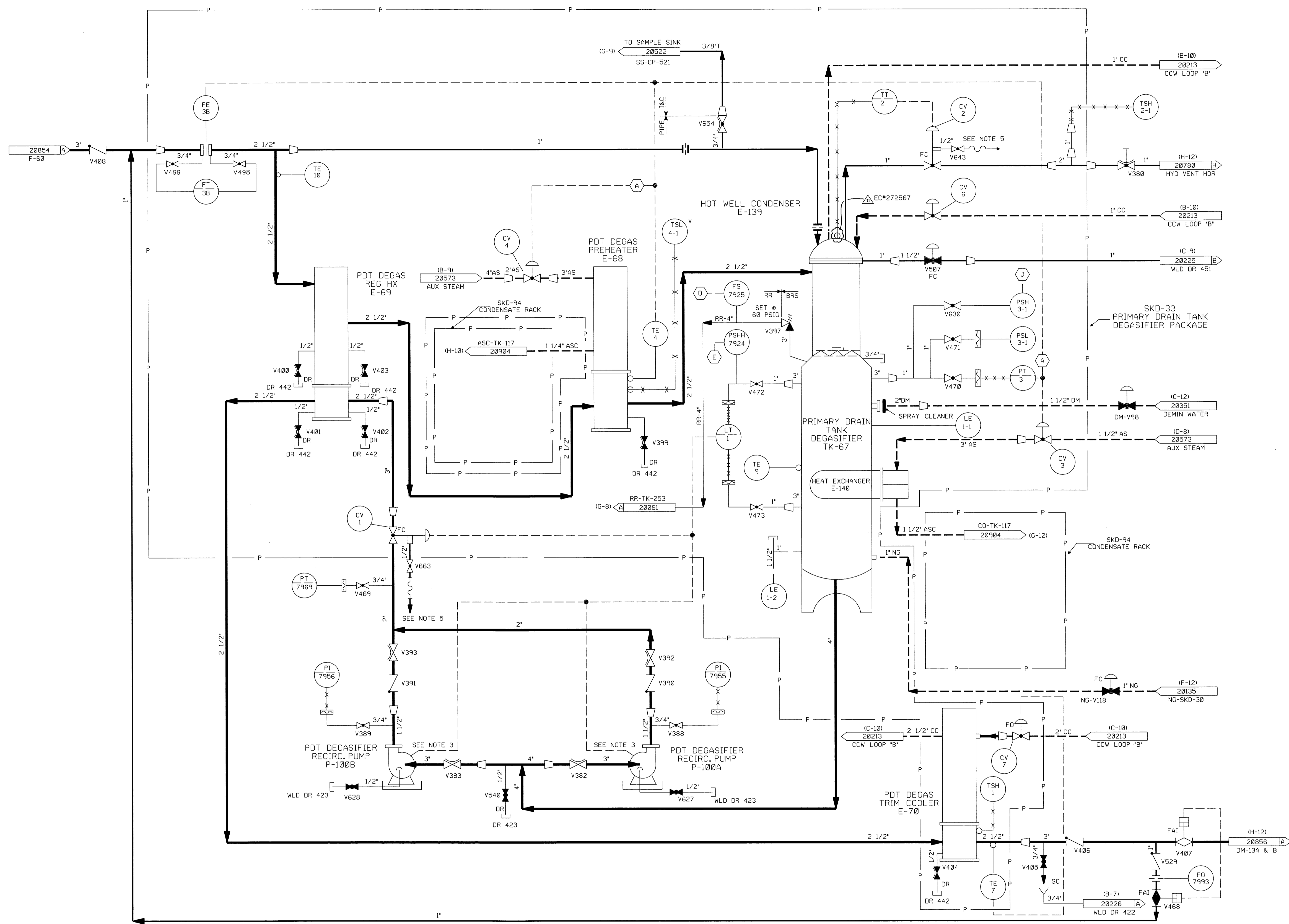


BORON RECOVERY SYSTEM
DEGASIFICATION
DETAIL

PID- 1-BRS-B20854

REF. DRAWING NO.	REV	TITLE
9763-F-805626	11	BORON RECOVERY SYS PRI DRAIN TKS P&ID

PID-1-BRS-B20855



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

- NOTES:
- ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX 'BRS' UNLESS NOTED OTHERWISE.
 - WORK THIS DWG WITH DWG'S 20853, 20854, 20856, 20857, 20858, 20859, 20861 & 20861.
 - SEE DWG DM-20354 FOR WATER SUPPLY TO PUMP DOUBLE MECHANICAL SEALS.
 - △ INDICATES REVISION LEVEL
 - REFER TO DRAWING VSL-20774 FOR VALVE LEAKOFF.
 - ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS ARE SAFETY CLASS NNS UNLESS NOTED OTHERWISE.
 - INSTRUMENT REFERENCES:
 (A) TO 1-BRS-CV-3 & 4 ON DWG AS-20573 IO-10.
 (D)(E)(J) TO 1-AS-CV-3, 1-AS-CV-4 ON DWG AS-20573 IO-9.
 TO 1-BRS-P-99A & B ON DWG BRS-20854 (C-8)(C-10).
 TO 1-DM-V98 ON DWG DM-20351 (C-12)

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
11	6/1/11	JM	Bas	JWB	INCRP. EC*272567
10	12/8/04	BCS	JM	RRB	INCRP CR 04-09401 REV. 00
9	8/30/00	BCS	MPW	RCP	INCRP MMD 98-641 DCN-00
8	12/7/92	MRB	DWS	DJM	INCRP DCR 87-84 CA 28
7	11/7/92	MRB	BCL	DJM	INCRP DCR 87-84 CA#0, 5 & 25 ADDED NOTE 14 & INSTR. REFERENCE REMOVED FLANGES FROM B P&ID
6	12/20/89	MRB	PAL	ES	INCRP DCR 86-113 CA01.
5	5/25/88	GPM	APL	DJM	INCRP DCR 88-003 REVISED: V382, 383, 393, 397, 399, 400, 481, 482, 483, & 484 VALVE SYMBOL PER FP 53578. ADDED RESTRICTING ORIFICE SYMBOL TO INLET E-139 PER FP 53758, NOTE 6 PER UE & C P & ID 805618.
4	8/14/87	GPM	MPW	RRC	INCRP ECA 19/107*9808 REV'D. TO CLARIFY DUPLICATION OF ASSOC SYSTEM & NOTE 3. ADDED: NOTE 5, CONT COOR'D, LINE SIZE & FLC'S
3	1/23/87	JDM	WRD	RRC	INCRP DCR-618
2	9/26/86	MPW	MAP	RRC	REMOVED NONAPPLICABLE REF DWGS. INCRP NCR 95/116A ECA 19/117127A SYSTEM CHANGED TO BRS ON VALVES CV-3, CV-4, CV-6 & CV-7 - WAS AS AND 'CC' IN ERROR, ADDED CONTINUATIONS.
1	6/16/86	DWS	JDM	RRC	INCRP D ECA 99/114788A
0	1/13/86	GD	JDM	WFD	ISSUED FOR OPERATIONS

REF. DRAWING NO.	REV	TITLE
9763-F-805618	10	BORON RECOV SYS-PRIM DRAIN TK DEGAS P&ID

NEXTERA ENERGY
SEABROOK

BORON RECOVERY SYSTEM
DEGASIFICATION
DETAIL

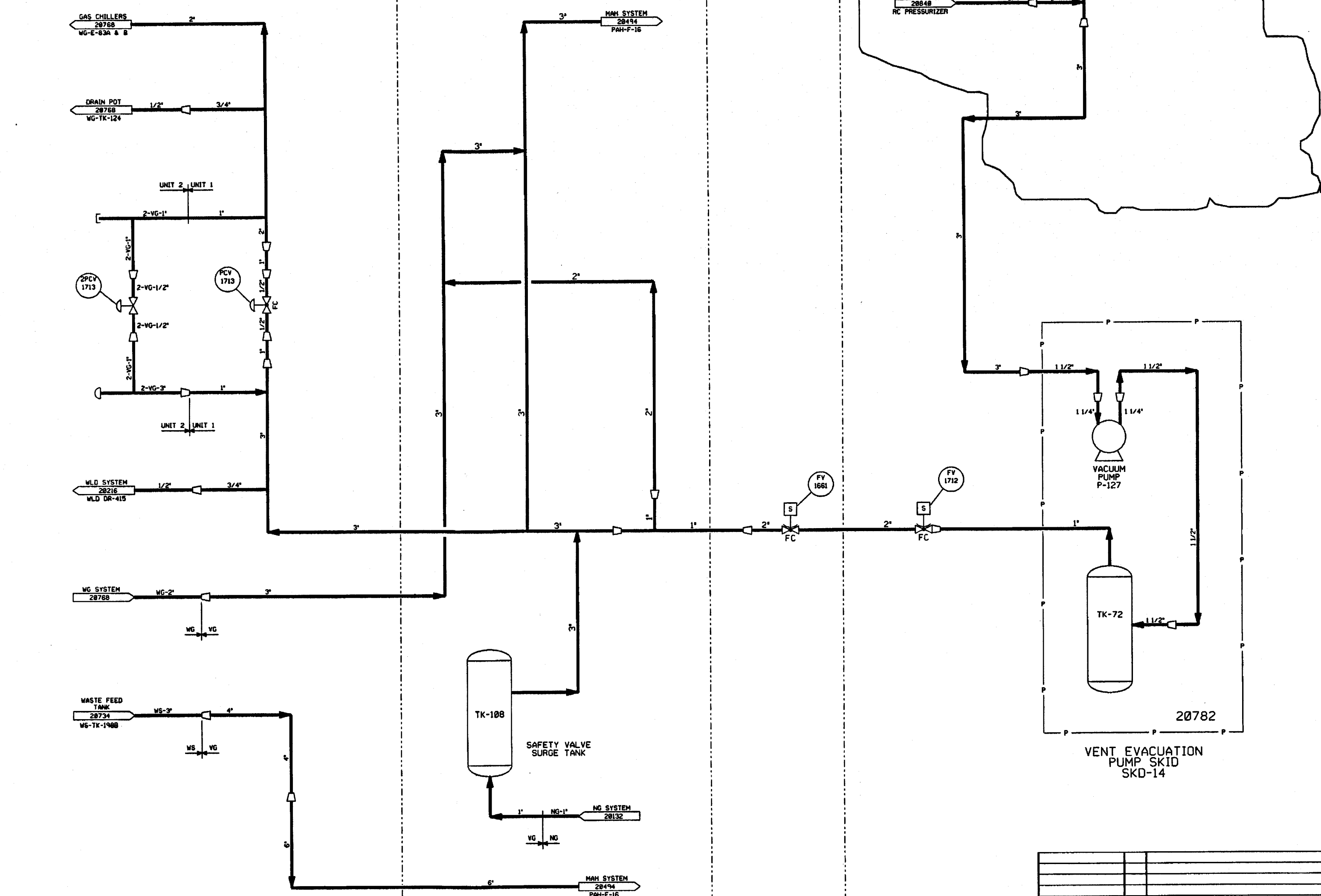
PID- 1-BRS-B20855

PID-1-VG-B20779

20780

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

- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 20780 & 20782.
 2. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX 'NG' UNLESS NOTED OTHERWISE.
 3. Δ - INDICATES REVISION LEVEL.

REV	DATE	DSGN	DRWN	CHKD	CDE	SES	DESCRIPTION
1	12/27/97	MPW		QAS	PLS	PLS	ISSUED FOR OPERATIONS
2	2/3/97	MPW	TAK	PLC	BCL	WVS	ISSUED FOR OPERATIONS

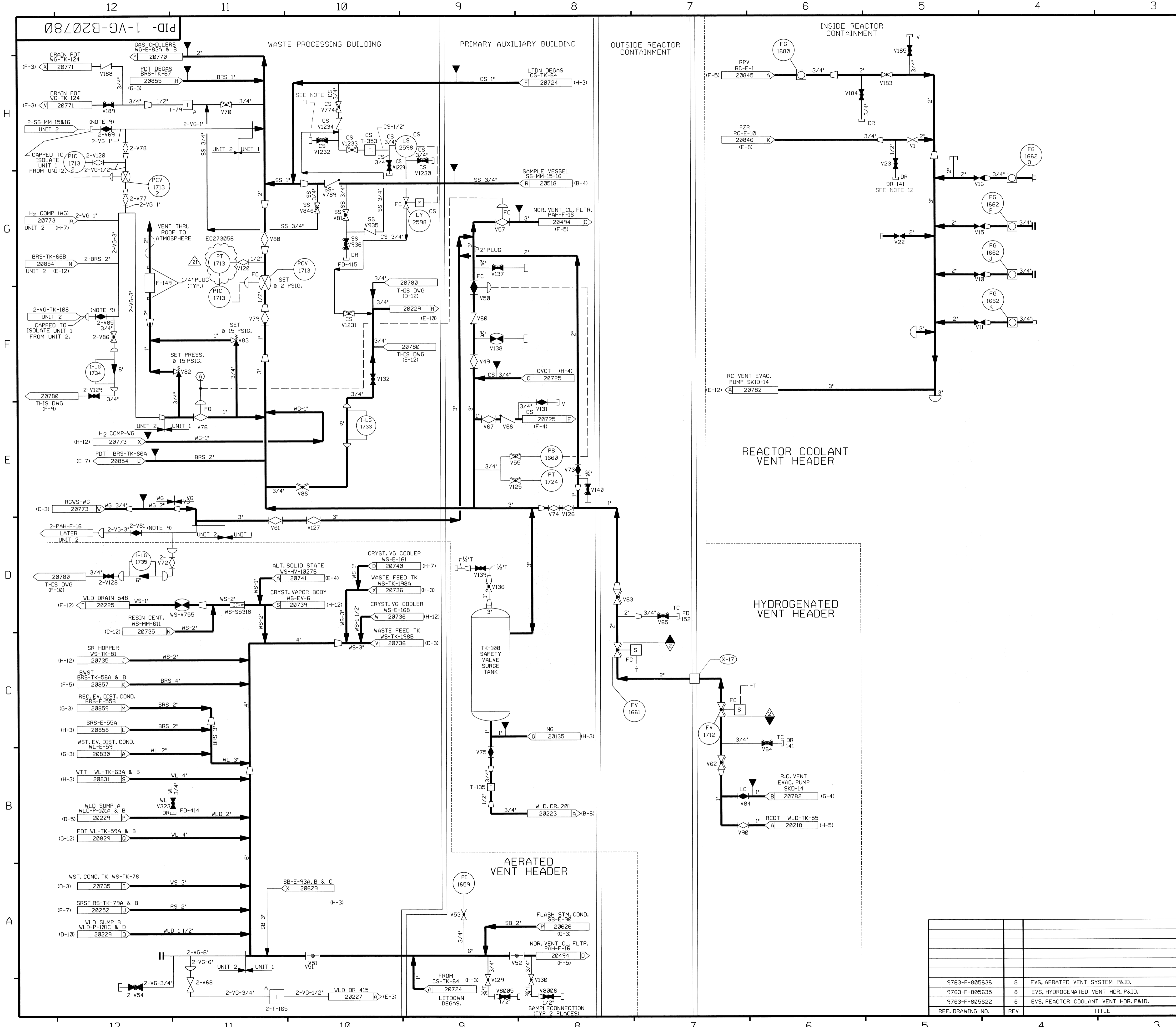
1	12/27/97	MPW		QAS	PLS	PLS	INCORP. DCR 88-116 CA & DCR 98-83 CA & DCR 97-16 DCR 98 & 84
2	2/3/97	MPW	TAK	PLC	BCL	WVS	ISSUED FOR OPERATIONS



North Atlantic Energy Service Corporation

VENT GAS SYSTEM OVERVIEW

PID- 1-VG-B20779



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

- NOTES:
1. WORK THIS DRAWING WITH DRAWING 20779 & 20782.
 2. DELETED
 3. ALL LINES, VALVES, EQUIPMENT AND INSTRUMENTS HAVE SYSTEM PREFIX VG UNLESS NOTED OTHERWISE.
 4. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS ARE SAFETY CLASS UNLS UNLESS NOTED OTHERWISE.
 5. DELETED
 6. DELETED
 7. DELETED
 8. Δ INDICATES REVISION LEVEL
 9. 2-3'-VG-V61, 2-1'-VG-V69 AND 2-3'-VG-V85 SHOULD BE CLOSED AND LOCKED DURING CONSTRUCTION OF UNIT NO 2.
 10. \textcircled{A} TO 2-3'-VG-V57 UNIT 2) VG-V76 SHALL BE ADMINISTRATIVELY MAINTAINED OPEN BY ISOLATING THE AIR SUPPLY VALVE TO THE ACTUATOR DURING UNIT 2 CONSTRUCTION.
 11. INSTALL THREADED CAP WHEN HOSE CONN. IS NOT INSTALLED.
 12. QUICK DISCONNECTS MAY BE INSTALLED UPSTREAM OF PIPE CAPS AS DEEMED NECESSARY BY STATION STAFF TO FACILITATE VENT AND DRAIN OPERATIONS.

PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
21	12/13/13	BCS	TJM	PLM	PARTIAL INCORP EC273056
20	5/30/08	BCS	DWS	MIE	INCORP DCR 97-37 DCN#00
19	12/18/97	DWS	MPW	ETM	INCORP DCR 970016 DCN#0 & 4
18	6/12/97	MPW	DWS	RRC	INCORP MMOD 96-531 DCN #0
17	5/14/97	MPW	DWS	WFZ	PARTIAL INCORP DCR 97-16 CA0
16	11/12/95	MPW	BCS	MHO	INCORP DCR 92-37 CA0
15	3/9/95	BCL	MPW	DMQ	INCORP MMOD 92-590 CA0
14	8/1/94	BCL	DWS	GRM	INCORP DCR 89-001 CA0
13	6/19/93	MRB	BCL	VWS	INCORP DCR 91-32 CA0
12	11/3/92	DWS	BCL	WFZ	INCORP DCR 90-3 CA0 & ECA 19/115755A
11	10/26/92	BCL	DWS	DJM	INCORP DCR S 90-19 CA0, 1 & 88-82 CA0, PARTIAL INCORP DCR 89-1 CA0, 2
10	4/23/92	MRB	BCL	JEV	INCORP MMOD 91-515 CA0
9	10/9/91	GPM	FCB	RSQ	INCORP DCR 89-67 CA0
8	10/29/90	MRB	JM	BCL	INCORP MMOD 90-601 CA00 DELETED OPEN ITEM REFERENCE PER CHANGE DOCUMENT TRACKING SYS. (CDT)
7	12/28/89	MRB	PAL	MAC	INCORP DCR 86-113 CA & 86-113 CA 1 REVISED CONTINUATION TAG LETTER
6	6/17/88	GPM	APL	PAS	INCORP DCR 88-57 REVISED NOTE 4 ADDED NOTE 9 REFERENCE FOR 2-V69 PER UE & C DWG 805635 DELETED NOTE 9 REFERENCE FOR 2-V129 PER UE & C DWG 805635
5	1/6/88	MPW	DWS	MJY	INCORPORATED DCR 87-314. ADDED NOTE 10 AND LINE SIZE, REINCORP. 87-012, MOVED 3" WLD LINE TO P & ID WS-20735, REVISED I&C TUBING @ SAMPLE CONN'S NOTE 4, AND SYSTEM PREFIX.
4	4/7/87	WDS	JDM	VWS	INCORP DCR 87-0012, REVISED REF DWG REVISIONS, INCORP DCR 87-0013, ADDED NOTE 9.
3	12/3/86	MAP	DWRD	RRC	INCORP DR 82/276B, ECA'S 08/116000B 19/116154A & 19/116154B, REVISED PER UE&C PIPING ERECTION ISOS & P&ID'S, DELTD NOTE 5, ADDED DWG LOC COORD'S, AND NOTE 8, INCORP'D ECA 08/1163030
2	6/25/86	JDM	DWS	RRC	UPDATE CONTINUATIONS ADDED UNIT 2 PIPING TO SHOW CAPS TO ISOLATE UNIT 1. UPDATE REF DWG INCORP. ECA'S 19/116154A, 99/115140B & 74/114774A, 19/115322B ECA 05/108083A
1	2/25/86	DM	DWS	WFD	ISSUED FOR OPERATIONS
0	3/19/85	DS	DWS	WFD	ISSUED FOR FIELD VERIFICATION

NEXTERA ENERGY
SEABROOK

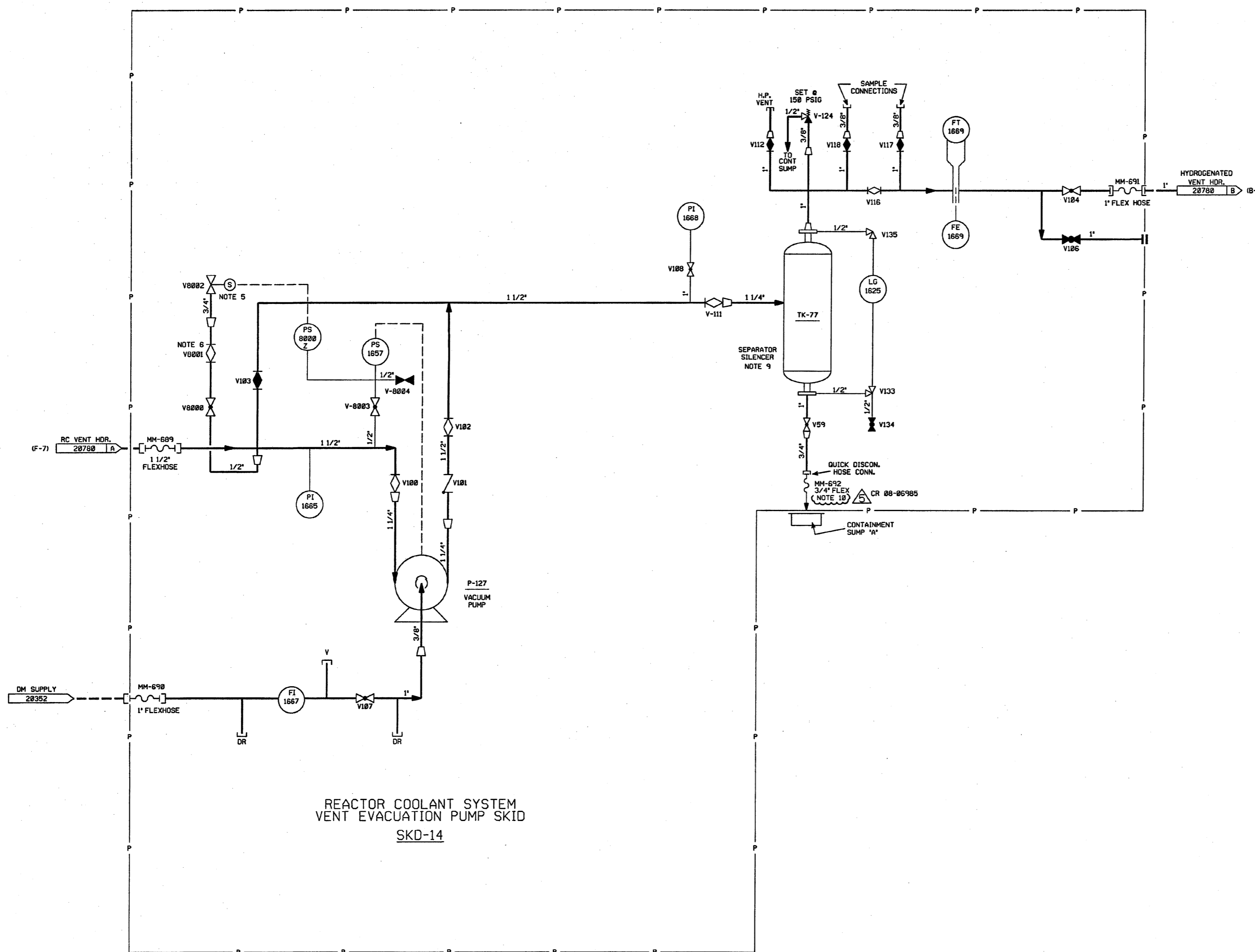
VENT GAS SYSTEM

PID- 1-VG-B20780

REF. DRAWING NO.	REV	TITLE
9763-F-805636	8	EVS, AERATED VENT SYSTEM P&ID.
9763-F-805635	8	EVS, HYDROGENATED VENT HDR, P&ID.
9763-F-805622	6	EVS, REACTOR COOLANT VENT HDR, P&ID.

PID-1-VG-B20782

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



REACTOR COOLANT SYSTEM
VENT EVACUATION PUMP SKID
SKD-14

- NOTES:
1. WORK THIS DRAWING WITH 20780.
 2. SYSTEM DESCRIPTION NO IS 34.
 3. SYSTEM PREFIX IS "VG" UNLESS OTHERWISE NOTED.
 4. SYSTEM DESIGN PRESSURE (EXCLUDING PUMP) = 150 PSIG. PUMP DESIGN PRESSURE = 15 PSIG. SYSTEM DESIGN TEMPERATURE = 160° F
 5. VACUUM BREAKER ASSEMBLY CONSISTING OF V-8000, V-8001, V-8002, AND PS-8002-SET AT 20 IN. HG VAC.
 6. VALVE V-8001 IS SET TO METER FLOW TO MAINTAIN 1 1/2 IN. HG VAC.
 7. ALL PIPING AND INSTRUMENTS ARE SAFETY CLASS NMS UNLESS NOTED OTHERWISE.
 8. Δ INDICATES REVISION LEVEL.
 9. DURING PERIODS OF PRESSURIZER PURGING, 1-VG-SKD-143 MAY BE INSTALLED IN PLACE OF 1-VG-TK-77, REF. DCR 97-16.
 10. FLEX HOSE MM-692 IS STORED LOCALLY AND INSTALLED AS NEEDED FOR SYSTEM OPERATION. CAP INSTALLED WHEN NOT IN USE. Δ CR 88-86985

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
5	05/15/06	JM	BCS	VWS	INCRP CR 88-86985 REV 00
4	12/10/97	MPM	BCS	ETM	INCRP, DCR 97-16 DCM 00 & 04, REMOVED LAYER CONTINUATION
3	9/24/90	MRB	JM	BCL	INCRP, MMOD 90-516 CA 0
2	11/18/86	JDM	WRD	RRC	INCRP, ECA 88/116796B, REV'D VALVE TYPES & POSITION PER UE&C P&ID, REV'D REVISION BLOCK & ADDED NOTE B, DWG. LOC. LOGS.
1	6/16/86	BCL	JDM	RRC	ISSUED FOR OPERATIONS, ADDED TAG NUMBERS
0	2/28/85	MOB	JNM	WFD	INITIAL ISSUE

FPL ENERGY Seabrook Station



VENT GAS SYSTEM
RCS AIR EVACUATION SKID
P & I DIAGRAM

PID- 1-VG-B20782

REF. DRAWING NO.	REV	TITLE
9763-F-885622	6	EVS, REACTOR COOLANT VENT HDR, P & ID