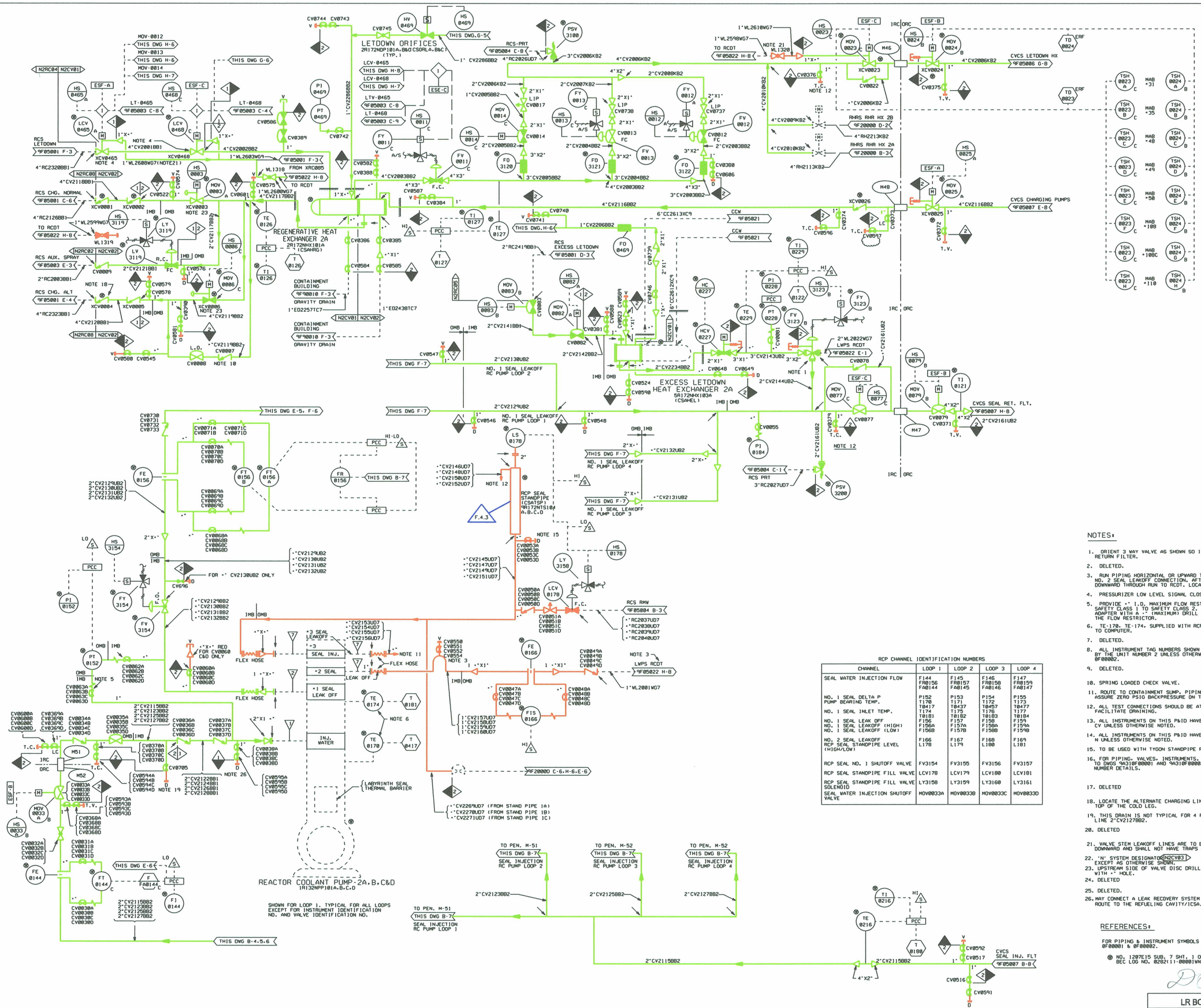

RCP CHANNEL IDENTIFICATION NUMBERS

CHANNEL	LOOP 1	LOOP 2	LOOP 3	LOOP 4
SEAL WATER INJECTION FLOW	F144 FA0156 FA0144	F145 FA0157 FA0145	F146 FA0158 FA0146	F147 FA0159 FA0147
ND. 1 SEAL DELTA P PUMP BEARING TEMP.	P152 T170	P153 T171	P154 T172	P155 T173
ND. 1 SEAL INLET TEMP.	T174 T0181	T175 T0182	T176 T0183	T177 T0184
ND. 1 SEAL LEAK OFF	F156	F157	F158	F159
ND. 1 SEAL LEAKOFF (HIGH)	F156A	F157A	F158A	F159A
ND. 1 SEAL LEAKOFF (LOW)	F156B	F157B	F158B	F159B
ND. 2 SEAL LEAKOFF	F166	F167	F168	F169
RCP SEAL STANDPIPE LEVEL (HIGH/LOW)	L178	L179	L180	L181
RCP SEAL NO. 1 SHUTOFF VALVE	FV3154	FV3155	FV3156	FV3157
RCP SEAL STANDPIPE FILL VALVE	LCV178	LCV179	LCV180	LCV181
RCP SEAL STANDPIPE FILL VALVE SOLENOID	LY3158	LY3159	LY3160	LY3161
SEAL WATER INJECTION SHUTOFF VALVE	MOV0033A	MOV0033B	MOV0033C	MOV0033D

NOTES:

1. ORIENT 3 WAY VALVE AS SHOWN SO IT FAILS WITH FLOW TO SEAL WATER RETURN FILTER.
2. DELETED.
3. RUN PIPING HORIZONTAL OR UPWARD TO LOOP RISING 6 IN. ABOVE RCP NO. 2 SEAL LEAKOFF CONNECTION. AFTER LOOP RUN PIPING DOWNWARD THROUGH RUN TO RCDT. LOCATE CHECK VALVE AT LEVEL OF RCDT.
4. PRESSURIZER LOW LEVEL SIGNAL CLOSES VALVES.
5. PROVIDE .* I.D. MAXIMUM FLOW RESTRICTOR TO CHANGE FROM SAFETY CLASS 1 TO SAFETY CLASS 2. A PIPE TO TUBE ADAPTER WITH A .* (MAXIMUM) DRILL THRU MAY BE USED FOR THE FLOW RESTRICTOR.
6. TE-170, TE-174, SUPPLIED WITH RCP AND ARE DIRECTLY CONNECTED TO COMPUTER.
7. DELETED.
8. ALL INSTRUMENT TAG NUMBERS SHOWN ON THIS DIAGRAM ARE PREFIXED BY THE UNIT NUMBER 2 UNLESS OTHERWISE NOTED. SEE GENERAL NOTE D ON 0F00002.
9. DELETED.
10. SPRING LOADED CHECK VALVE.
11. ROUTE TO CONTAINMENT SUMP. PIPING SHOULD BE SLOPED DOWNWARD TO ASSURE ZERO PSIG BACKPRESSURE ON THE NO. 3 SEAL.
12. ALL TEST CONNECTIONS SHOULD BE ATTACHED TO BOTTOM OF LINE TO FACILITATE DRAINING.
13. ALL INSTRUMENTS ON THIS P&ID HAVE SYSTEM DESIGNATOR CV UNLESS OTHERWISE NOTED.
14. ALL INSTRUMENTS ON THIS P&ID HAVE SEPARATION GROUP N UNLESS OTHERWISE NOTED.
15. TO BE USED WITH TYGON STANDPIPE FOR LEVEL SWITCH CALIBRATION.
16. FOR PIPING, VALVES, INSTRUMENTS, EQUIPMENT, ETC. REFER TO DWGS 9A310F00001 AND 9A310F00002 FOR IDENTIFICATION NUMBER DETAILS.
17. DELETED
18. LOCATE THE ALTERNATE CHARGING LINE CHECK VALVE BELOW THE TOP OF THE COLD LEG.
19. THIS DRAIN IS NOT TYPICAL FOR 4 PUMPS. IT IS ONLY FOR LINE 2"CV2127BB2.
20. DELETED
21. VALVE STEM LEAKOFF LINES ARE TO BE SLOPED DOWNWARD AND SHALL NOT HAVE TRAPS OR LOOPS.
22. 'N' SYSTEM DESIGNATOR (N2CV03) EXCEPT AS OTHERWISE SHOWN.
23. UPSTREAM SIDE OF VALVE DISC DRILLED WITH .* HOLE.
24. DELETED
25. DELETED.
26. MAY CONNECT A LEAK RECOVERY SYSTEM AND ROUTE TO THE REFUELING CAVITY/ICSA.

REFERENCES:

FOR PIPING & INSTRUMENT SYMBOLS SEE DRAWINGS 0F00001 & 0F00002.

Ⓜ NO. 1207E15 SUB. 7 SHT. 1 OF 4 BEC LOG NO. 0202(1)-00001WN

D057

LR BOUNDARY DRAWING NO.	REV.
LR-STP-CV-5R179F05005#2	0A

NO.	ISSUE DATE	REVISION	ORIG	CKR	RE	DV	SE
26		REVISED PER CR 07-2493	JGL				
25	11-20-02	REVISED PER CR 02-12090	JGL	ON FILE			
0-24	4-21-83	ISSUED FOR CONSTRUCTION.	SIGNATURES ON FILE				

NO.	ISSUE DATE	REVISION	ORIG	CKR	RE	DV	SE

SOUTH TEXAS PROJECT NUCLEAR OPERATING COMPANY

PIPING & INSTRUMENTATION DIAGRAM CHEMICAL AND VOLUME CONTROL SYSTEM

PRIORITY	CADD FILE NO.	FSUG. NO.	STI. NO.	SCALE	DWG. NO.	SHT.	REV.
1	FJA590.261	D070928		NONE	5R179F05005#2		26

ESEED.DGN

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