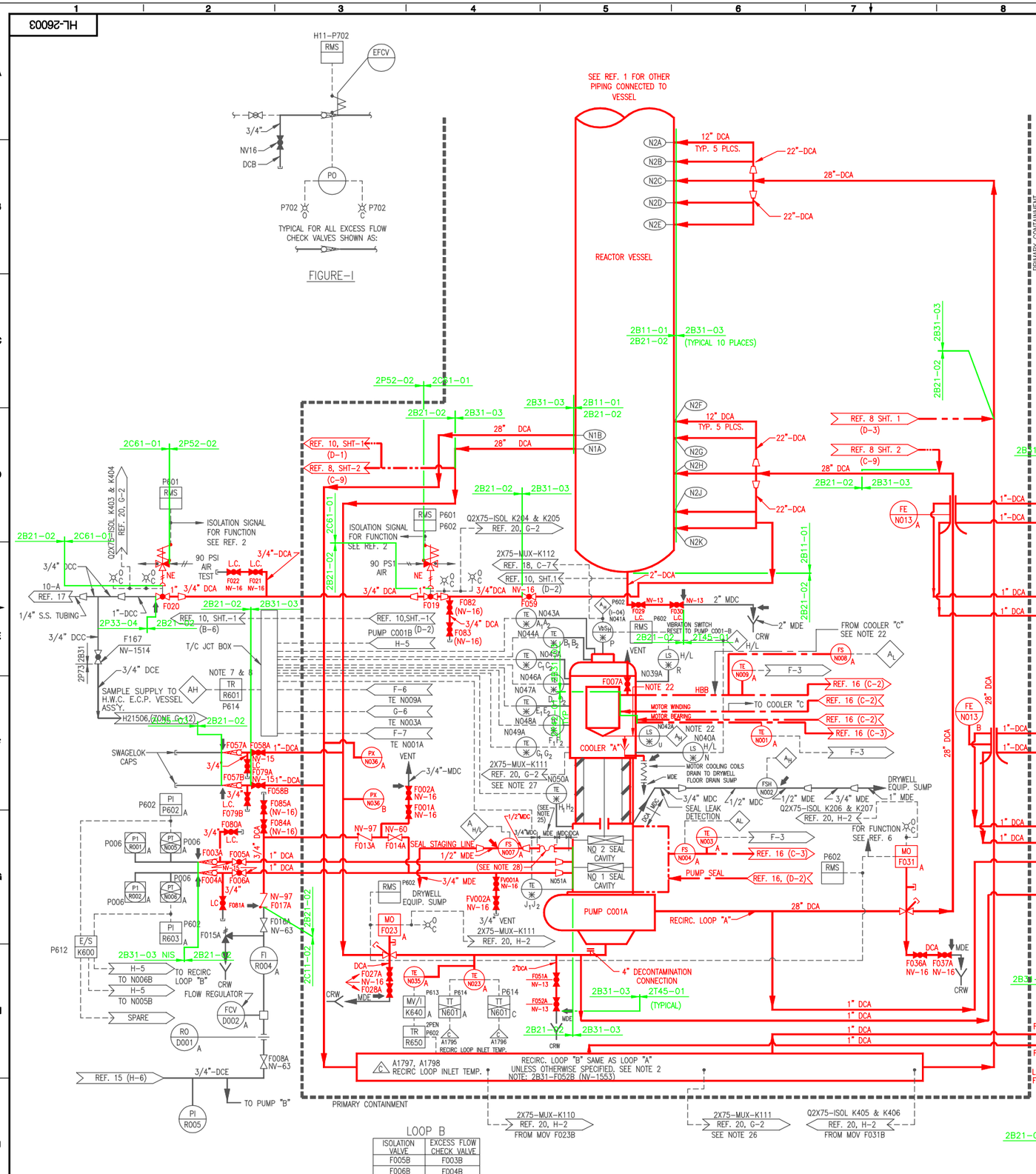
HL-26003



LOOP B

ISOLATION VALVE	EXCESS FLOW CHECK VALVE
F005B	F003B
F006B	F004B

REFERENCES:

		MPL No.	S.S.I. No.
1. NUCLEAR BOILER SYSTEM P&ID	SHT 1	2B21-1010	H-26061
	SHT 2		H-16063
2. NUCLEAR BOILER SYSTEM FCD		2B21-1030	S25154
3. RESIDUAL HEAT REMOVAL SYSTEM FCD,	SHT. 2	2E11-1030	S26095
4. FEEDWATER CONTROL SYSTEM IED		2C32-1010	S25398
5. NEUTRON MONITORING SYSTEM IED		2C51-1010	S25204/S25205
6. REACTOR RECIRCULATION SYSTEM FCD		2B31-1020	
7. REACTOR RECIRCULATION SYSTEM DES. SPEC.		2B31-4010	S25215
8. RESIDUAL HEAT REMOVAL SYSTEM P&ID	SHT. 1	2E11-1010	H-26014
	SHT. 2		H-26015
9. REACTOR RECIRC SYSTEM P&ID		2B31-1040	
10. REACTOR WATER CLEAN-UP SYSTEM P&ID	SHT. 1	2G31-1010	H-26036
	SHT. 2		H-26037
11. PIPING AND INSTRUMENT SYMBOLS		A42-1010	S15051
12. PRESSURE INTEGRITY OF PIPING AND EQUIP. PRESSURE PARTS DES. SPEC.		2A61-4030	S25112
13. PROCESS INSTRUMENT OF PIPING AND TUBING INSTALLATION SPECIFICATION		2A61-4070	S25323
14. RADWASTE SYSTEM P&ID	SHTS 1-7	2G11-1010	H-26026
			H-26032
15. CRD SYSTEM P&ID	SHTS 2	2C11-1010	H-26006
	SHTS 2		H-26007
16. REAC. BLDG. C.C.W. SYS. P&ID	SHTS 2	2P42-1010	H-26055
17. SAMPLING SYS., P&ID & P.F.D.		2P33-2010	H-26038
18. ANNUNCIATOR SIGNALS TO T.S.C. IE.D.		2X75-1010	H-26159
19. DATA ACQUISITION CHART. ERF ANALOG SIGNALS-GIT SIGNAL CONDITIONING SHEET 6 OF 8.		2X75-P601	S-41966
20. DIGITAL INPUT SIGNALS TO THE ERF COMPUTER SYSTEM I.E.D. SHEET 1 OF 15		2X75-1010	H-26163
21. P&ID - H.W.C. SYSTEM - ELECTRO CHEMICAL POTENTIAL SYSTEM		2P73	H-21506

NOTES:

1. ALL EQUIPMENT AND INSTRUMENTS ARE PREFIXED BY SYSTEM No. 2B31 UNLESS OTHERWISE NOTED.
2. RECIRCULATION LOOP ENCLOSED IN BOX SHALL HAVE PART NUMBERS CORRESPONDING TO ITS RESPECTIVE LINE OR LOOP NUMBER UNLESS OTHERWISE NOTED.
   EXAMPLE: XXXB IS ON LINE B.
3. INSTRUMENT LINE VALVING MUST COMPLY WITH INSTRUMENT PIPING STANDARDS REF. 13.
4. DELETED
5. WHERE GV-NUMBERS ARE USED, THE VALVES WILL BE TAGGED WITH THESE NUMBERS. WHERE GV-NUMBERS ARE NOT USED, THE VALVES WILL BE TAGGED WITH THE MPL NUMBERS.
6. CLOSED COOLING WATER SYSTEM TO AND FROM THE RECIRCULATION PUMP SHALL BE CAPABLE OF CONTINUOUS OPERATION DURING PERIODS OF DRYWELL ISOLATION.
7. WHERE THERMOCOUPLES FOR PUMP & MOTORS ARE DESIGNATED A'1~, A'2~, ETC. A'2~ IS A SPARE ELEMENT.
8. LIST OF PUMP & MOTOR AUXILIARY INSTRUMENTATION (FOR MG SET TE'S SEE TABULATION ON SHT. 2,(A-10))
   TE/A'1~, A-2-THRUST BEARING, UPPER FACE
   TE/B'1~, B-2-HRUST BEARING, LOWER FACE
   TE/C'1~, C-2-UPPER GUIDE BEARING
   TE/D'1~, D-2-MOTOR WINDING "A"
   TE/E'1~, E-2-MOTOR WINDING "B"
   TE/F'1~, F-2-MOTOR WINDING "C"
   TE/G'1~, G-2-LOWER GUIDE BEARING
   TE/H'1~, H-2-No. 2 SEAL CAVITY
   TE/J'1~, J-2-No. 1 SEAL CAVITY
   TE N001 - MOTOR BEARING OIL COOLING WATER DISCHARGE
   TE N003 - SEAL CAVITY COOLING WATER DISCHARGE
   LS"L/N~ - MOTOR LOWER BEARING OIL LOW LEVEL SWITCH
   VBS"H/P~ - MOTOR VIBRATION SWITCH
   LS"H/R~ - MOTOR UPPER BEARING OIL HIGH LEVEL SWITCH
   LS"L/S~ - MOTOR UPPER BEARING OIL LOW LEVEL SWITCH
   FS N004 - PUMP SEAL COOLING WATER LOW FLOW SWITCH
   TE N009 - MOTOR WINDING COOLING WATER.
   ALL THERMOCOUPLES ARE TO BE WIRED OUT THROUGH DRYWELL TO T/C JUNCTION BOX.
9. ALL MOTOR OPERATED AND AIR OPERATED GLOBE VALVES ARE AC UNLESS OTHERWISE NOTED.
10. THESE DEVICES SHALL BE PART OF AND MOUNTED ON PANEL PART No. P003 (PROTECTION & AUX. RELAY CUBICAL).
11. MG SET DRIVE MOTOR PROTECTIVE RELAYS & METERING SHALL BE FURNISHED BY OTHERS AND MOUNTED ON THE MOTOR SWITCHGEAR CUBICLE.
12. VOLTAGE REGULATORS SHALL BE SUPPLIED AS PART OF PART No. S001 BUT SHALL BE INSTALLED, AS PART OF PART No. P002.
13. THIS TYPE OF BLOCK REPRESENTS A PERMISSIVE CONDITION WHEN THE CONDITIONS INSIDE THEM ARE SATISFIED.
14. THIS LIMITER BYPASS IS FOR PUMP NPSH PROTECTION. BOTH OPENING & CLOSING THIS BYPASS SHALL BE TIMED DELAYED 15 SECONDS.
15. THE MASTER CONTROLLER SWITCHES THIS SIGNAL SO THAT AUTOMATIC SET POINT ADJUSTMENT (FOR FAST INITIAL RESPONSE TO LOAD CHANGE), IN THE TURBINE CONTROL CAN FUNCTION ONLY WHEN THE MASTER CONTROLLER IS IN THE AUTOMATIC MODE.
16. DELETED.
17. THESE SPEED LIMITERS REDUCE RECIRCULATION FLOW, IF ANY FEEDWATER PUMP IS NOT RUNNING AND THE LEVEL IN THE REACTOR VESSEL IS BELOW THE LOW LEVEL ALARM POINT.
18. FOR LOCATION AND IDENTIFICATION OF INSTRUMENTS SEE INSTRUMENT DATA SHEET LISTED IN MPL FOR EACH INSTRUMENT.
19. THE DESIGN PRESSURE AND TEMPERATURE RATINGS FOR THE RECIRC. PIPING AND EQUIP. ARE SHOWN IN APPLICABLE PROCESS DATA OF REF. 9.
20. DELETED
21. LOCATE BRANCH CONNECTION AS CLOSE AS POSSIBLE AFTER THE GLOBE VALVES. THE EXCESS FLOW CHECK VALVES ARE TO BE INSTALLED AS CLOSE AS POSSIBLE AFTER THE BRANCH CONNECTION.
22. A LEVEL SWITCH IS SUPPLIED WITH EACH COOLER TO DETECT COOLING WATER LEAKAGE OR CONDENSATE BUILD-UP IN THE COOLER HOUSING.
23. CLOSED COOLING WATER TO MOTOR BEARING IS TO SERVE BOTH UPPER MOTOR BEARING AND LOWER MOTOR BEARING. THE RETURN FLOWS ARE JOINED UPSTREAM OF THE TEMPERATURE ELEMENT.
24. SPECIFICATION CHANGE AT TOP OF REDUCER (NEAR HUB) TO AGREE WITH EMBEDDED PIPE.
25. PER KELLOGG ISOS. 2B31-F25 THRU F28, THE MDE PORTION OF SEAL LEAK DETECTION PIPING WAS DESIGNED UNDER MDC SPECIFICATION AND INSTALLED PER SEISMIC CLASS I CRITERIA.
26. NUMBERS WITHIN ◯ INDICATE ANALOG INPUT NUMBERS AS DESCRIBED IN THE FUNCTIONAL DESIGN CRITERIA FOR ERF. TABLE "D" UNIT 2 ANALOG INPUT SIGNALS TO THE SPDS/ ERF COMPUTER SYSTEMS.
27. FOR PUMP C001A THE DIGITAL "ON-OFF" SIGNAL INPUT TO THE ERF COMPUTER IS TAKEN FROM PANEL 2R22-S001, FR. 5. FOR PUMP C002B THE DIGITAL "ON-OFF" SIGNAL INPUT TO THE ERF COMPUTER IS TAKEN FROM PANEL 2R22-S002, FR. 5.
28. SEAL STAGING LINE FLEX HOSE ON PUMP "B" CHANGE FROM 3/4" MDE TO 1" MEE.
29. ◯ DENOTES FIBER OPTIC CONNECTIONS.

BOUNDARY DIAGRAM NO.:2B21-B02-04
FUNCTION(S) NO.: 2B21-02,04 C61-01
PREPARED BY: WILLIE JENNINGS
DATE: 7/9/98
REVIEWED BY: WILLIAM P EVANS
DATE: 7/9/98

BOUNDARY DIAGRAM NO.:2P42-B01-02
FUNCTION(S) NO.: 2P42-01
PREPARED BY: WAYNE LUNCEFORD
DATE: 8/6/98
REVIEWED BY: WILLIAM P EVANS
DATE: 10/14/98

BOUNDARY DIAGRAM NO.:2B11-01-03
FUNCTION(S) NO.: 2B11-01
PREPARED BY: William P. Evans
DATE: 07/01/98
REVIEWED BY: Willie J. Jennings
DATE: 07/07/98

BOUNDARY DIAGRAM NO.:2B31-B02-01
FUNCTION(S) NO.: 2B31-03
PREPARED BY: WILLIE JENNINGS
DATE: 7/6/98
REVIEWED BY: WILLIAM P EVANS
DATE: 7/7/98

LICENSE RENEWAL DOCUMENT

MPL No. 2B31-1010 | ACAD14 | HL26003

SOUTHERN COMPANY

LICENSE RENEWAL SCREENING FOR INFORMATION ONLY

Revision: A | Date: 11-16-99

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EDWIN I. HATCH NUCLEAR PLANT UNIT No.2
REACTOR RECIRCULATION SYSTEM P&ID
SHEET No.1

BY	CHK'D	APPR.1
ECB	RLM	ASK

DRAWN	DESIGNED	LOCATION	DOCUMENT NUMBER	REVISION
TRM	LCF	10-502	HL-26003	A
DATE	SCALE None			