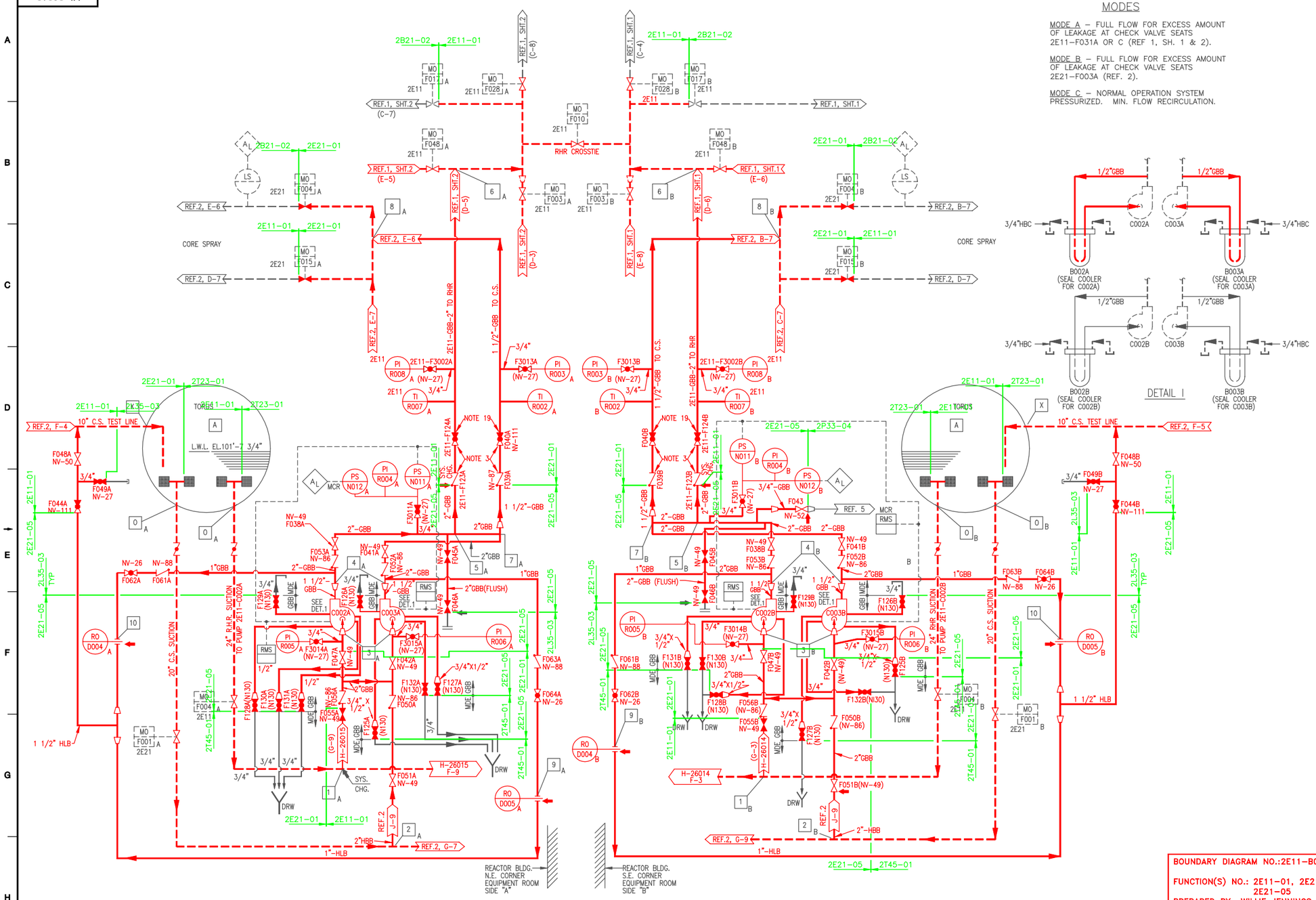
HL-26019



MODES

MODE A – FULL FLOW FOR EXCESS AMOUNT OF LEAKAGE AT CHECK VALVE SEATS 2E11–F031A OR C (REF 1, SH. 1 & 2).

MODE B – FULL FLOW FOR EXCESS AMOUNT OF LEAKAGE AT CHECK VALVE SEATS 2E21–F003A (REF. 2).

MODE C – NORMAL OPERATION SYSTEM PRESSURIZED. MIN. FLOW RECIRCULATION.

DETAIL I

GENERAL NOTES

1. ALL EQUIPMENT AND INSTRUMENT NUMBERS ARE TO BE PRECEDED BY MPL –2E21 UNLESS OTHERWISE NOTED. EX. 2E21–C002A.
2. FOR WEIGHT AND MATERIAL OF PIPE, VALVES AND FITTINGS, SEE REF. 6.
3. ALL CHECK AND GLOBE STOP CHECK VALVES MUST BE LOCATED CLOSE TO CROSS CONNECT HEADER.
4. JOCKEY PUMP DRAINS AND VENTS TO DRW.
5. PUMP C002A AND C002B ARE OPERATING AND PUMPS C003A AND C003B ARE ON STANDBY.
6. PIPING HIGH POINT VENTS AND LOW POINT DRAINS ARE TO BE ADDED AT ALL SUCH POINTS NOT SERVED BY EQUIPMENT VENT AND DRAINS.
7. JOCKEY PUMPS OPERATE ON EMERGENCY AC POWER.
8. PS N011 STARTS THE JOCKEY PUMP
9. 2E21–PI–R005A, B AND R006A, B ARE ASHCROFT TYPE 1379A GAUGES; PURCHASE ORDER S–8937.

PROCESS FLOW NOTES

11. FOR PUMP NPSH $_{AVAIL.}$ CALCULATIONS: MAX. TORUS WATER TEMP. = 200°F TORUS PRESSURE = 14.7 PSIA.
12. MIN. NPSH $_{AVAIL.}$ CALCULATED ≅ 18 FEET.
13. DESIGN OF THE PUMPS BASED ON NPSH $_{AVAIL.}$ = 4 FT.
14. WHEN THE CORE SPRAY SYSTEM IS AT TEST MODE, THEN SUCTION TO JOCKEY PUMPS WILL BE THROUGH

$\boxed{0}_A$ $\boxed{1}_A$ $\boxed{3}_A$ $\boxed{4}_A$

16. THE JOCKEY PUMPS ARE TO PROVIDE A MINIMUM OF 10 PSIG PRESSURE IN THE MAIN PUMP DISCH. LEGS IN ADDITION TO HEAD PRESSURE FROM WATER COLUMN.
17. THE RESTRICTING ORIFICES ARE DESIGNED TO DROP THE DISCH. HEAD TO A LOW TORUS PRESSURE. (~ 15.7 P.S.I.A.)
18. CALCULATIONS SHOWN ARE FOR SIDE "A", SIDE "A" AND SIDE "B" ARE IDENTICAL.
19. THROTTLE DISCHARGE STOP CHECK VALVES TO MAINTAIN 0 PSIG AT PUMP SUCTION AT RUNOUT.

REFERENCES

REFERENCE	MPL. NO.	S.S.I. NO.
1. R.H.R. SYS. P&ID	2E11–1010 SH. 1 SH. 2	H–26014 H–26015
2. CORE SPRAY SYS. P&ID	2E21–1010	H–26018
3. R.H.R. SYS. P.F.D.	2E11–1020	S–25140 S–25141
4. CORE SPRAY SYS. P.F.D.	2E21–1020	S–25178
5. SAMPLING SYS. P&ID & P.F.D.	2P33–1010	H–26038
6. FURN., TAB., DEL., & ERECT. PIPING & SETTING OF MECH. EQUIPMENT	—	SS–21091–1
7. PIPING & INSTRUMENT SYMBOLS.	A42–1010	S–15051
8. REACTOR BUILDING–PLANT SERVICE WATER P&ID	2P41–1010 SH. 1 SH. 2	H–26050 H–26051

LEGEND

- - - - - - - - - - EXISTING PIPING FOR 2E11–1010 AND/OR 2E21–1010.
———————— PIPING FOR JOCKEY PUMP SYSTEM.

MODE A – FULL FLOW TO R.H.R. PUMPS DISCHARGE LEG SIDE "A"

POSITION	A	0_A	1_A	0_A	2_A	3_A	4_A	5_A	6_A	7_A	9_A	10_A	X
FLOW–GPM	–	40 / 0	40 / 0	0 / 40	0 / 40	40	40	30	30	0	10 / 0	0 / 10	10
PRESSURE–PSIA	14.7												
TEMP.–°F (MAX)	200°												
MAX. PRESSURE DROP–FEET						REQ'D TDH=135 FT.							

MODE B – FULL FLOW TO C.S. PUMPS DISCHARGE LEG SIDE "A"

POSITION	A	0_A	1_A	0_A	2_A	3_A	4_A	5_A	7_A	8_A	9_A	10_A	X
FLOW–GPM		40 / 0	40 / 0	0 / 40	0 / 40	40	40	30	30	30	10 / 0	0 / 10	10
PRESSURE–PSIA	14.7												
TEMP.–°F (MAX)	200°												
MAX. PRESSURE DROP–FEET						REQ'D TDH≅120 FT.							

MODE C – RECIRC. TO TORUS (NO FLOW TO PUMP DISCH. LEGS)

POSITION	A	0_A	1_A	0_A	2_A	3_A	4_A	5_A	7_A	9_A	10_A	X
FLOW–GPM		10 / 0	10 / 0	0 / 10	0 / 10	10	10	0	0	10 / 0	0 / 10	10
PRESSURE–PSIA	14.7											15.7
TEMP.–°F (MAX)	200°											
MAX. PRESSURE DROP–FEET						TDH≅200 FT.						

BOUNDARY DIAGRAM NO.:2E11–B01–04

FUNCTION(S) NO.: 2E11–01, 2E21–01, 2E21–05

PREPARED BY: WILLIE JENNINGS
DATE: 8/20/98
REVIEWED BY: WILLIAM P EVANS
DATE: 10/5/98

LICENSE RENEWAL DOCUMENT

MPL NO. 2E21-1050 | ACAD14 | HL26019

SOUTHERN COMPANY

LICENSE RENEWAL SCREENING FOR INFORMATION ONLY

Revision: A | Date: 11-08-99

APPROVED. ISSUED PER LICENSE RENEWAL BOUNDARY PACKAGES. DRAWING CREATED FROM H-26019, REV.16; BY TRM.

BY	CHK'D	APPR.1
TRM	RLM	ASK

EDWIN I. HATCH NUCLEAR PLANT UNIT No. 2
JOCKEY PUMP SYSTEM P & ID AND PROCESS FLOW DIAGRAM FOR THE R.H.R. AND CORE SPRAY SYSTEMS

DRAWN	DESIGNED	LOCATION	DOCUMENT NUMBER	REVISION
TRM	LCF	10-502	HL-26019	A
DATE	SCALE: None			