



- NOTES
1. ALL COMPONENT MARK NUMBERS PREFIXED 02-3 UNLESS OTHERWISE NOTED.
 2. ALL MANUAL VALVES PREFIXED NBI UNLESS OTHERWISE NOTED.
 3. ALL EQUIPMENT INSIDE RX VESSEL IS SYSTEM 02.1.
 4. INITIATES: RHC (REF. 11 & 14), HPCI (REF. 9 & 12).
 5. SELECTS: RHR LOOP (REF. 13).
 6. VALVE OPENING PERMISSIVE: RHR, CORESPRAY (REF. 1, 10, 13, 16).
 7. SCRAM (REF. 17).
 8. INITIATES: RPI & ARI.
 9. INITIATES: MSIV CLOSURES (REF. 15).
 10. CONTRIBUTES TO: AUTO BLOW DOWN (REF. 2 & 15).
 11. STARTS: EDG'S (REF. 16).
 12. TRIP: HPCI (REF. 12 & 13).
 13. PERMISSIVE: AUTO BLOWDOWN LOW LEVEL (REF. 2 & 15).
 14. INTERLOCK: RHR (REF. 13).
 15. POIS ISOLATION EXCEPT MSIV'S (REF. 15 & 17).
 16. FEEDWATER CONTROL (REF. 5).
 17. INIP: RHC HIGH IN-VOL.
 18. AHS TRANSMITTER (REF. 20).
 19. INITIATES SRV ELECTRIC LIFT (REF. 21)

REFERENCE DWGS.

SYSTEM	DWG. NO.	S & W FILE NO.
1. CORE SPRAY P & ID	148F976BD	-16.14-11
2. NUCLEAR BOILER P & ID	719E415BA	-16.02-41
3. FLOW DIAGRAM SYMBOLS	FM 14A	
4. REACTOR VESSEL (HELMHOLZ) P & ID	9190689B3P1	-16.01-16
5. FEED WATER CONTROL ID	719E596BA	-16.06-13
6. NEUTRON MONITORING ID	729E2230A	-16.07-30 & 32
7. STANDBY LIQUID CONTROL P & ID	719E3446B	-16.11-21
8. REACTOR ASSEMBLY DRAWING	197R584P1	-16.13-15 & 136
9. HPCI P & ID	729E261BB	-16.23-41 & 136
10. RHR P & ID	729E1283A	-16.10-36
11. RHC P & ID	719E361BB	-16.13-29 & 33
12. HPCI FCD	729E589BA	16.23 38.39 & 40
13. RHR FCD	730E140BA	16.10 24.25 & 37
14. RHC FCD	729E517BA	-16.13-19.20.22 & 31
15. NUCLEAR BOILER MISC. FCD	730E149BA	-16.04-20 & 21
16. CORE SPRAY FCD	729E402	-16.14-4
17. REACTOR PROTECTION ID	729E2220A	-16.09-12 & 3
18. R CIRCULATION FLOW CONTROL ID	729E2220A	-16.09-12 & 47
19. JET PUMP INST. SYS.	791E450	-1.76-16
20. ANALOG TRANSMITTER TRIP SYS.	865E365	-1.60-25, 26
21. SRV ELECTRIC LIFT	ESK-11AAQ THRU 11AAX	
22. ARI DIAG.	ESK 7FA	

- SYSTEM INTENDED FUNCTION BOUNDARY
- COMPONENTS SUBJECT TO AMR
- PRIMARY CONTAINMENT PENETRATIONS AMM-17
 - REACTOR COOLANT SYSTEM PRESSURE BOUNDARY AMM-33
 - REACTOR VESSEL AMM-31

QA CAT. I, M, II, III

NUCLEAR SAFETY RELATED

James A. Fitzpatrick
Nuclear Power Plant

FLOW DIAGRAM
NUCLEAR BOILER VESSEL
INSTRUMENTS
SYSTEM 02-3

DATE: 10/10/98

SCAF: NONE

DWG. NO: FM-47A

REV: 46

REF: ISI-FM-47A

REV	NO	DATE	DESCRIPTION	BY	CHK	APP
46	10/10/98	AS BUILT PER DCR-02-290		KMB	JB	JA
45	10/10/98	AS BUILT PER MOD NO. M1-97-070		PJD	KMB	MM SKK
44	10/10/98	AS BUILT PER MOD NO. M1-97-087		PJD	PJD	MM SKK
43	10/10/98	AS BUILT PER DCR 98 510		KMB	WJD	PJD SKK
42	6/18/98	AS BUILT PER DCR-98-194		KMB	HVS	KJ DKH
41	1/22/98	AS BUILT PER DCR-98-175		RVB	JB	KF SKK
40	1/16/98	AS BUILT PER DCR-97-481		KMB	RVR	KF SKK
REV	NO	DATE	DESCRIPTION	DWN	CHK	RE VFX APP

0 4-02-06

NO. DATE DESCRIPTION BY ENG CHK APP

REVISIONS

LRA-FM-47A-0

NO. DATE DESCRIPTION BY ENG CHK APP

REVISIONS

LRA-FM-47A-46.DGN

NO. DATE DESCRIPTION BY ENG CHK APP

REVISIONS

FM-47A-46.CAL