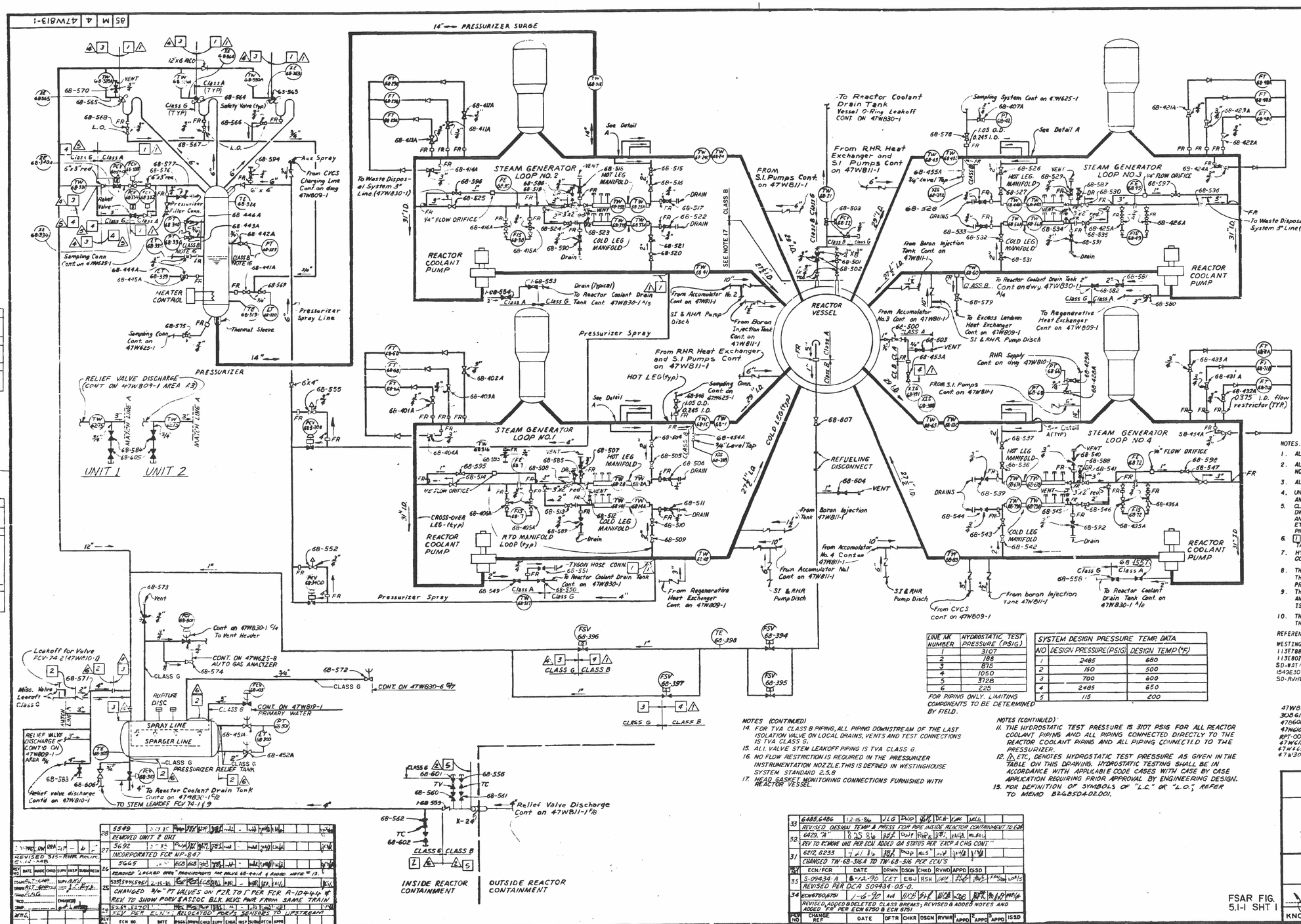

FIRST NO. USED
500
OPEN NOS.
599, 600
LAST NO. USED
607

FIRST NO. USED
401A
OPEN NOS.
408A - 410A 417A - 420A 427A, 430A 437A - 440A 447A - 450A
LAST NO. USED
455 A

NOTES:

1. ALL VALVES ARE THE SAME SIZE AS PIPING UNLESS OTHERWISE NOTED.
2. ALL INSTRUMENT ROOT VALVES ARE 3/4" GLOBE UNLESS OTHERWISE NOTED.
3. ALL VALVE NUMBERS SHALL BE PREFIXED WITH THE UNIT NUMBER.
4. UNLESS OTHERWISE NOTED, ALL TVA SUPPLIED PIPING LARGER THAN 3/4" IS CLASS A AND ALL PIPING 3/4" AND SMALLER IS CLASS B/USE 3/8" FLOW RESTRICTOR [FR]
5. CLASS A B B, ETC. REFERS TO TVA PIPING CLASSIFICATION AS LISTED ON DWG. 47B21-1 FOR TVA SUPPLIED PIPING ONLY. WESTINGHOUSE SUPPLIED PIPING AND COMPONENTS MEET THE REQUIREMENTS FOR USE IN TVA CLASS A B B, ETC. SYSTEMS AS APPLICABLE. FOR SCOPE OF SUPPLY, REFER TO THE PIPING DRAWING SERIES 47W465 AND 47W304
6. ▽ ETC. DENOTES DESIGN PRESSURE & TEMPERATURE AS GIVEN IN THE TABLE ON THIS DRAWING.
7. HYDROSTATIC TESTING SHALL BE IN ACCORDANCE WITH THE APPLICABLE CODES.
8. THE DESIGN PRESSURE & TEMPERATURE OF ALL DRAIN AND VENT LINES THROUGH THE LAST ISOLATION VALVE SHALL BE THE SAME AS THE PROCESS LINE.
9. THE DESIGN PRESSURE & TEMPERATURE OF THE REACTOR COOLANT PIPING AND ALL PIPING CONNECTED DIRECTLY TO THE REACTOR COOLANT PIPING IS 2485 PSIG & 650° F UNLESS OTHERWISE NOTED.
10. THE DESIGN PRESSURE & TEMP OF ALL PIPING CONNECTED DIRECTLY TO THE PRESSURIZER IS 2485 PSIG & 650° F UNLESS OTHERWISE NOTED

REFERENCE DRAWINGS & DOCUMENTS:

WESTINGHOUSE
113E788 - SH 1,2 REACTOR COOLANT SYSTEM FLOW DIAGRAM
113E807 - RTD BY-PASS REACTOR COOLANT SYSTEM FLOW DIAGRAM
SD-WAT-WBT-281/4 - REACTOR COOLANT SYSTEM
1549E30 - REACTOR VESSEL VENT & WATER LEVEL FLOW DIAGRAM.
SD-RVHVS - REACTOR VESSEL HEAD VENT SYSTEM

47W800-1-------FLOW DIAGRAM-GENERAL PLANT SYSTEMS
3035613 SERIES---INSTRUMENTATION SYMBOLS AND IDENTIFICATION
47B660-68-1-20 INSTRUMENT TABULATION
47W600-68-1,2-3 CONTROL DIAGRAM
RPT-003 & 010---MECH COMPUTER PROGRAM FOR VALVE MARKER TAGS.
47W611-68-------LOGIC DIAGRAM
47W465 SERIES---REACTOR COOLANT AUX & MISC PIPING
47W304 SERIES---REACTOR COOLANT PIPING

LINE NR NUMBER	HYDROSTATIC TEST PRESSURE (PSIG)
1	3107
2	188
3	875
4	1050
5	3128
6	225

FOR PIPING ONLY. LIMITING COMPONENTS TO BE DETERMINED BY FIELD.

SYSTEM DESIGN PRESSURE TEMP. DATA		
NO	DESIGN PRESSURE (PSIG)	DESIGN TEMP (°F)
1	2485	680
2	150	500
3	700	600
4	2485	650
5	118	200

NOTES (CONTINUED)

14. FOR TVA CLASS B PIPING, ALL PIPING DOWNSTREAM OF THE LAST ISOLATION VALVE ON LOCAL DRAINS, VENTS AND TEST CONNECTIONS IS TVA CLASS G.
15. ALL VALVE STEM LEAKOFF PIPING IS TVA CLASS G.
16. NO FLOW RESTRICTION IS REQUIRED IN THE PRESSURIZER INSTRUMENTATION NOZZLE. THIS IS DEFINED IN WESTINGHOUSE SYSTEM STANDARD 2.5.8
17. HEAD GASKET MONITORING CONNECTIONS FURNISHED WITH REACTOR VESSEL.

NOTES (CONTINUED):

11. THE HYDROSTATIC TEST PRESSURE IS 3107 PSIG FOR ALL REACTOR COOLANT PIPING AND ALL PIPING CONNECTED DIRECTLY TO THE REACTOR COOLANT PIPING AND ALL PIPING CONNECTED TO THE PRESSURIZER.
12. △ ETC. DENOTES HYDROSTATIC TEST PRESSURE AS GIVEN IN THE TABLE ON THIS DRAWING. HYDROSTATIC TESTING SHALL BE IN ACCORDANCE WITH APPLICABLE CODE CASES WITH CASE BY CASE APPLICATION REQUIRING PRIOR APPROVAL BY ENGINEERING DESIGN.
13. FOR DEFINITION OF SYMBOLS OF "L.C." OR "L.O." REFER TO MEMO B2-G050400001.

REV NO.	ECN NO.	DATE	DSGN	DRWN	CHKD	SUPV	ENGR	INSP	SUBM	RECD	APPD
28	5549										
	REMOVED UNIT 2 UNIT										
27	5692										
	INCORPORATED FCR NP-847										
26	5665										
	REMOVED "LOCKED OPEN" REQUIREMENTS FOR VALVE 68-401A & ADDED NOTE "13."										
25	5395, 5396, 5065	2-15-86									
	CHANGED 3/4" PT VALVES ON F2R TO 1" PER FCR A-104444 & REV TO SHOW PORV & ASSOC BLK. VLVS. PWR FROM SAME TRAIN										
24	5269, 5270										
	REV PER ECN'S RELOCATED PRESS SENSORS TO UPSTREAM										

REV NO.	CHANGE REF	DATE	DFTR	CHKR	DSGN	RVWR	APPD	APPD	APPD	ISSD
33	6485, 6486	12-15-86	JLG	DSP						
	REVISED DESIGN TEMP & PRESS FOR PIPE INSIDE REACTOR CONTAINMENT TO 650									
32	6429, "A"	8-25-86								
	REV TO REMOVE UNIT PER ECN ADDED QA STATUS PER EXCP A CHG CONT"									
31	6212, 6233	7-21-86		DSP						
	CHANGED TW-68-316A TO TW-68-316 PER ECN'S									
35	ECN/FCR	DATE	DRWN	DSGN	CHKD	RVWD	APPD	ISSD		
	S-09434-A	8-12-90	LET	ESJ	RSH					
	REVISED PER DCA S09434-05-0.									
34	ECN 6750, 6751	1-6-90								
	REVISED, ADDED & DELETED CLASS BREAKS; REVISED & ADDED NOTES AND ADDED "FR" PER ECN 6750 & ECN 6751									

THIS DRAWING IS UNDER CONFIGURATION CONTROL

FSAR FIG. 5.1-1 SHT 1

POWERHOUSE UNITS 1 & 2

FLOW DIAGRAM REACTOR COOLANT SYSTEM

WATTS BAR NUCLEAR PLANT
TENNESSEE VALLEY AUTHORITY
DIVISION OF ENGINEERING DESIGN

Q

SUBMITTED: J. L. Gilliland
RECOMMENDED: D. B. Weaver
APPROVED: [illegible]

KNOXVILLE 4-14-72 | 85 M 4 47W813-1 R35

BY CORP. DRAWING AS CONSTRUCTED

E. 4-21-72
F. 12-18-72

D-15