

JET PUMP	PENETRATION	ROOT VALVE	JET PUMP	PENETRATION	ROOT VALVE
JP1 (UPPER)	X-40B-C	22B	JP11 (UPPER)	X-40D-C	22D
JP1 (LOWER)	X-40B-B	20B	JP11 (LOWER)	X-40D-B	20D
JP2	X-40B-E	30A	JP12	X-40D-E	30J
JP3	X-40B-D	30B	JP13	X-40D-D	30K
JP4	X-40B-F	30C	JP14	X-40D-F	30K
JP5	X-40A-A	30D	JP15	X-40D-A	30L
JP6 (UPPER)	X-40A-C	22A	JP16 (UPPER)	X-40C-C	22C
JP6 (LOWER)	X-40A-B	20A	JP16 (LOWER)	X-40C-B	20C
JP7	X-40A-E	30E	JP17	X-40C-E	30M
JP8	X-40A-D	30F	JP18	X-40C-D	30N
JP9	X-40A-F	30G	JP19	X-40C-F	30P
JP10	X-40A-A	30H	JP20	X-40C-A	30Q

NOTES:

- UNLESS OTHERWISE NOTED ALL INSTRUMENT AND VALVE NUMBERS TO BE PREFIXED BY SYSTEM NUMBER 2-3.
FOR EXAMPLE: FOR INSTRUMENT LT-61
ACTUAL TAGGING SHALL BE: LT-2-3-61
TYPE OF INSTRUMENT
SYSTEM NO.
INSTRUMENT DESIGNATION NO.
- FOR VALVE 12B
ACTUAL TAGGING SHALL BE V2-3-12B
SYSTEM NO.
VALVE DESIGNATION NO.
- INSTRUMENT LINES TO SLOPE MINIMUM 1/2 INCH PER FOOT TOWARDS INSTRUMENT. WATER LINES MUST NOT HAVE AIR TRAPS, AND STEAM LINES MUST NOT HAVE WATER TRAPS.
- LINES TO DIFFERENTIAL PRESSURE TRANSMITTERS SHOULD BE AS SHORT AS PRACTICABLE.
- ALL INSTRUMENT LINES FROM JET PUMPS 1 TO 10 EXIT THRU PENETRATIONS N8A AND X-40A AND B, LINES 11 TO 20 EXIT THRU PENETRATIONS N8B AND X-40C AND D. SEE TABLE THIS DRAWING (A-10).
- INSTRUMENTS ARE CALIBRATED FOR 1005 PSIG REACTOR PRESSURE AND 100°F AMBIENT TEMPERATURE AT THE COLUMN AT 100% LOAD WITH LIQUID LEVEL ABOVE DRYER SKIRT. THE LEVEL INCLUDES 7" WC PA ACROSS DRYER, AND ALLOWANCE FOR 3" STEAM CARRY UNDER THIS BASIS IS ACCOUNTED FOR IN THE ACCIDENT AND TRANSIENT ANALYSES.
INDICATED LEVELS MARKED WITH * ARE TRIP SETTINGS ON THE ASSOCIATED INSTRUMENT LISTED IN "INSTRUMENTS PROVIDING TRIP" COLUMN.
- ALARMS ASSOCIATED WITH THE SYSTEMS INITIATED BY THE REACTOR PROTECTION OR SAFEGUARD SYSTEM LEVEL AND PRESSURE TRANSMITTERS ARE SHOWN ON THE P AND LD FOR THE PARTICULAR SYSTEM.
- ON PLAN "X" JET PUMPS JP-1 THRU JP-10 ARE RELATED TO RECIRC. LOOP B AND JP-11 THRU JP-20 ARE RELATED TO RECIRC. LOOP A.
- DESIGN PRESSURE/TEMPERATURE IS 1750 PSIG/575°F.
- DESIGN PRESSURE/TEMPERATURE IS 1750 PSIG/575°F.
3/8 INCH, 0.049 INCH WALL SS TUBING.
- DESIGN PRESSURE/TEMPERATURE IS 1750 PSIG/281°F.
3/8 INCH, 0.049 INCH WALL SS TUBING.
- DESIGN PRESSURE/TEMPERATURE IS 1750 PSIG/150°F.
3/8 INCH, 0.049 INCH WALL SS TUBING.

LEGEND

△ - ERFIS COMPUTER DATA SYSTEM

REFERENCE DRAWINGS:

- PIPING AND INSTRUMENT SYMBOLS - G-191155
- FLOW DIAGRAM - NUCLEAR BOILER - G-191167
- FLOW DIAGRAM - CORE SPRAY SYSTEM - G-191168
- FLOW DIAGRAM - HIGH PRESSURE COOLANT INJECTION SYSTEM SHEET 1 & 2 - G-191169
- FLOW DIAGRAM - CONTROL ROD HYDRAULIC SYSTEM - G-191170
- FLOW DIAGRAM - STANDBY LIQUID CONTROL SYSTEM - G-191171
- FLOW DIAGRAM - RESIDUAL HEAT REMOVAL SYSTEM - G-191172
- FLOW DIAGRAM - REACTOR CORE ISOLATION COOLING SYSTEMS SHEET 1 & 2 - G-191174
- I.E.D. - FEEDWATER CONTROL SYSTEM - EBASCO F.F.* 5920-204
- I.E.D. - NEUTRON MONITORING SYSTEM - EBASCO F.F.* 5920-270 & 271
- I.E.D. - REACTOR PROTECTION SYSTEM - EBASCO F.F.* 5920-272,273 & 274
- FUNCTIONAL CONTROL DIAGRAM HIGH PRESSURE COOLANT INJECTION SYSTEM - EBASCO F.F.* 5920-38,39, & 44
- FUNCTIONAL CONTROL DIAGRAM - RESIDUAL HEAT REMOVAL SYSTEM - EBASCO F.F.* 5920-27,28 & 29
- FUNCTIONAL CONTROL DIAGRAM - REACTOR CORE ISOLATION COOLING SYSTEM - EBASCO F.F.* 5920-25,26 & 490
- FUNCTIONAL CONTROL DIAGRAM - NUCLEAR BOILER MISC. SYSTEMS - EBASCO F.F.* 5920-611 & 612
- FUNCTIONAL CONTROL DIAGRAM - CORE SPRAY SYSTEM - EBASCO F.F.* 5920-37
- FUNCTIONAL CONTROL DIAGRAM - RECIRCULATION FLOW CONTROL SYSTEM - EBASCO F.F.* 5920-1472,1468 & 1816
- REACTOR VESSEL (THERMOCOUPLE PAD) - EBASCO F.F.* 5920-22
- REACTOR ASSEMBLY DRAWING - EBASCO F.F.* 5920-3773 & 3774

REV	DESCRIPTION	BY	CHKD.	APPD.
3	REVISED PER C.U. 98-71	WTT	PMR	GH
5	REVISED PER ER 2000-1074	WTT	ADP	JWA
4	REVISED PER J.O. 99-0089	MAC	TLM	JWA

YANKEE ATOMIC ELECTRIC COMPANY
580 MAIN STREET BOLTON, MA.

NUCLEAR SERVICES DIVISION

VERMONT YANKEE NUCLEAR POWER STATION
VERNON, VERMONT

DRAWING TITLE: FLOW DIAGRAM NUCLEAR BOILER VESSEL INSTRUMENTATION

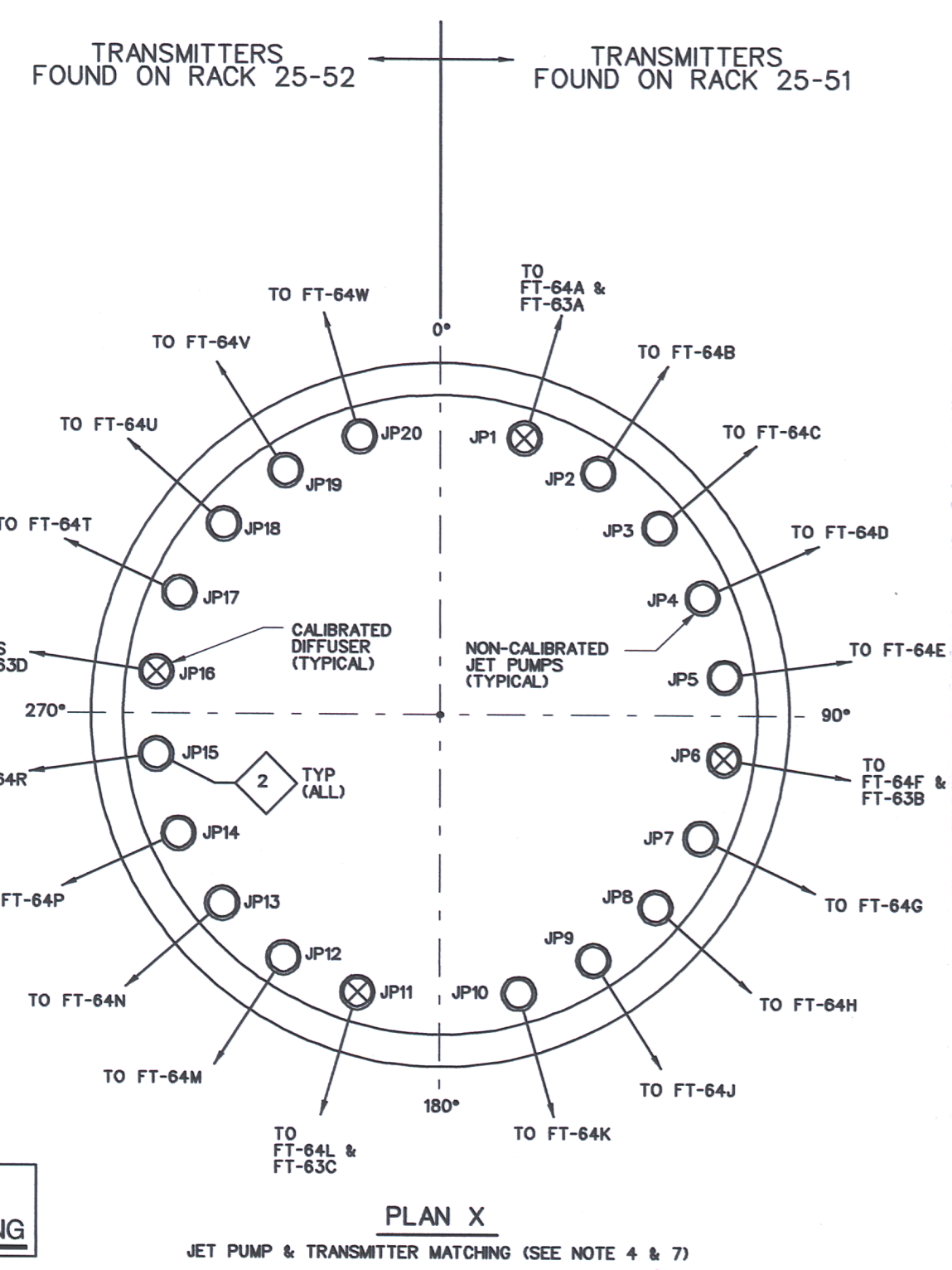
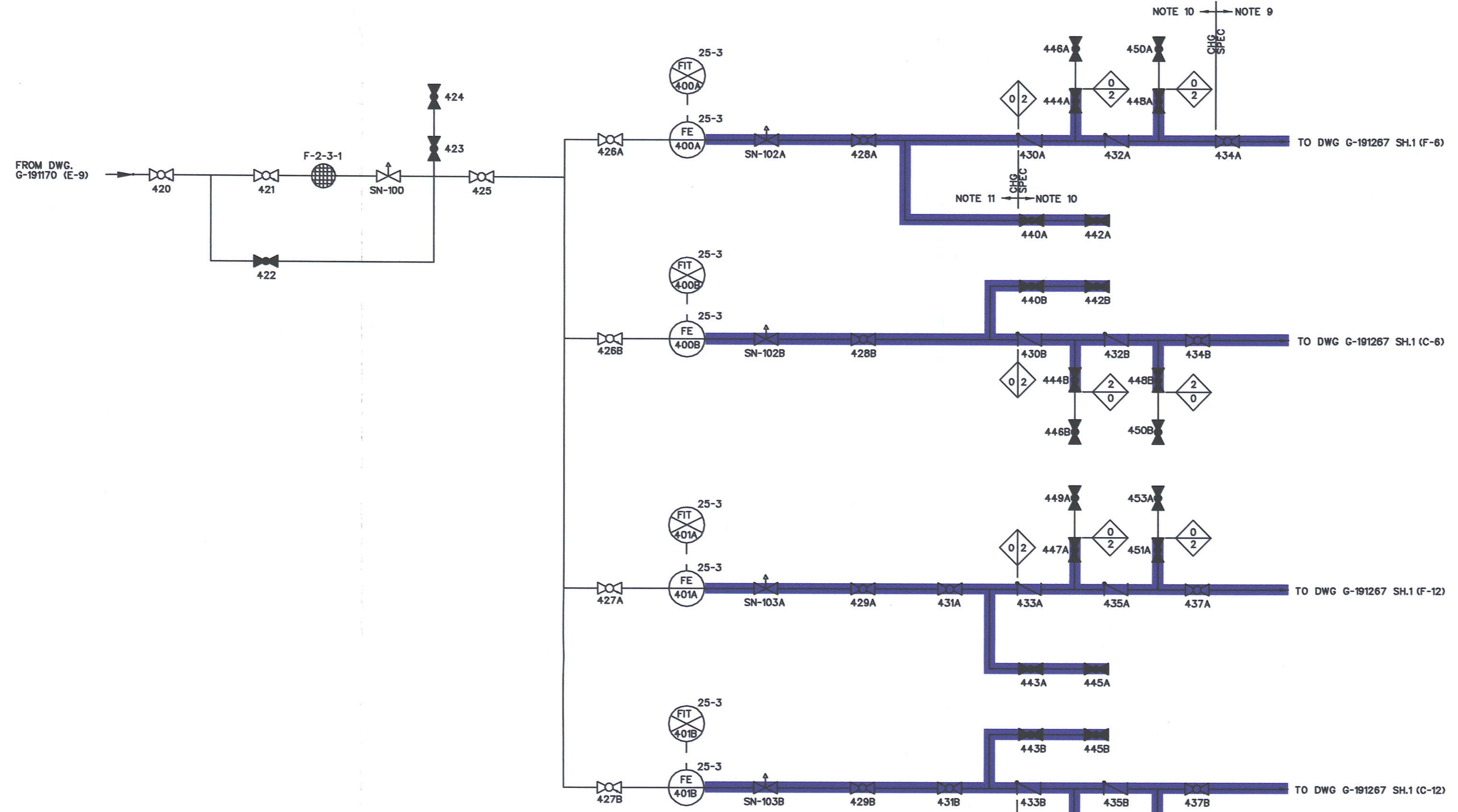
JOB NO. EDR 93-404 DRAWING NO. G-191267 SH.2

SYSTEM INTENDED FUNCTION BOUNDARY

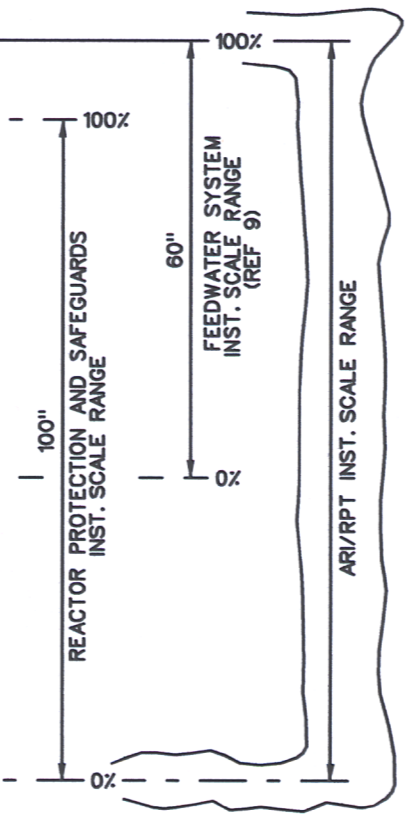
COMPONENTS SUBJECT TO AMR

REACTOR COOLANT SYSTEM PRESSURE BOUNDARY AMRM-33

NO.	DATE	DESCRIPTION	BY	ENG	CHK	APP
REVISIONS						
LRA-G-191267-SH-02-0						
COP FILE LRA-G-191267-SH-02_05.DGN						
MASTER FILE N/A						



REFERENCE	INCHES ABOVE VESSEL ZERO	TRIPS DESCRIPTION	INSTRUMENT(S) PROVIDING TRIP (NOTE 5)	LOAD CONDITION	INDICATED LEVEL & TRIP SETTINGS (NOTE 5)	FEEDWATER LRS-6-96
NOZZLE N 11A,B	542					187
FEEDWATER 100% FS	538 1/2					
REACTOR PROTECTION & SAFEGUARDS INST (-) 100% FULL SCALE	528 1/2					
		CLOSE MAIN TURBINE STOP VALVES		100% LOAD	177	
		TRIP RCIC & HPCI TURBINES	LT 2-3-72A,B		528 1/2	
		HIGH LEVEL ALARM	LRS-6-96 (REF 9)	100% LOAD	185	
		RESTORE FW SYS FROM FLOW CONTROL TO LEVEL CONTROL	6-125 ALARM UNIT	0-100% LOAD	516.5	
		NORMAL WATER LEVEL	FEEDWATER LEVEL CONTROL SYSTEM (REF 9)			
		LOW LEVEL ALARM	LRS-6-96 (REF 9)	100% LOAD	155	
		SCRAM & CLOSE PRIMARY SYS ISOLATION VALVES EXCEPT MAIN STEAM LINES	LT 2-3-57A,B LT 2-3-58A,B	100% LOAD	127 478.5	
		TRIP RECIRC PUMPS, CLOSE MAIN STEAM ISOLATION VALVES	LT 2-3-57A,B LT 2-3-58A,B			
		INITIATE HPCI, RHR, RCIC & CORE SPRAY SYSTEM CONTRIBUTE TO AUTO BLOWDOWN, START STANDBY DIESEL	LT 2-3-72A,B,C,D	10% TO 100% LOAD	82.5 434	
		ALTERNATE ROD INJECTION, RECIRCULATION PUMP TRIP (10 SEC. DELAY)	LT 2-3-88A,B,C,D			
REACTOR PROTECTION & SAFEGUARDS INSTRUMENT 0% FS	428 1/2					
NOZZLE N12A,B	422					
TOP OF ENRICHED FUEL, FDWR INST. & PROT. & SAFEGUARDS INSTR. ZERO	35 1/2					
2/3 OF CORE HT. LEVEL	303 1/2	NOT PERMISSIVE TO OPERATE CONTROL SPRAY	LT 2-3-73A,B			
						297 1/2



THIS IS AN INSTRUMENT DRAWING

Handwritten initials and notes, including 'D-45'.