

DEFINITIONS OF TERMS USED IN THE DATASHEETS

COLUMN #	ITEMS	DESCRIPTIONS
A	System Identification	System description (System Code)
B	Group Identification	Group # - Group description (Group Code)
C	Part Identification	System Code - Group Code
D	Part Number	Sequential unique number within Group
E	Part Description	Description of the part
F	Part Size	Diameter or width in inches
G	Part Thickness	Pipe or component thickness in inches
H	Material A	A-side of an weld or component material specification (form)
I	Material W	Weld material specification(if available)
J	Material B	B-side of an weld material specification (form)
K	Weld Type	Shop or field weld
L	Operating Temperature	Full power temperature in degree F
M	Operating Pressure	Full power pressure in psi
N	Operating Flow	Full power flow in gpm, or other units
O	Design Temperature	Design temperature in degree F
P	Design Pressure	Design pressure in psi
Q	Design Flow	Design flow in gpm, or other units
R	Inside Environment	Flowing liquid, steam or air
S	Outside Environment	Building or surrounding environment
T	Residual Stress	Estimated residual stress due to welding in ksi (Sy for thicker pipes and 1.3 Sy for thinner pipes)
U	Normal Stress	Actual or estimated (allowable = 1.5 Sm or 1.2 Sy) normal operating stress in ksi
V	Faulted Stress	Actual or estimated (allowable = 3 Sm or 2.4 Sy) faulted condition stress in ksi
W	CUF	40-year cumulative usage factor due to plant transients and cyclic loadings
X	Stress Comments	Comments regarding stress values (in columns T, U, V, and W)
Y	Operating Experience	Industry events associated with this part or similar part(s) in other PWR plants
Z	General Comments	Comments on the data included in columns A through Y

ACRONYMS

RCS	Reactor Coolant System	PZR	Pressurizer
ECCS	Emergency Core Cooling System	HX	Heat Exchanger
SI	Safety Injection	VCT	Volume Control Tank
RHR	Residual Heat Removal	RWST	Refueling Water Storage Tank
CVCS	Chemical Volume Control System	SRV	Safety Relief Valve
MS	Main Steam	PORV	Power Operated Relief Valve
FW	Feedwater	NPS	Nominal Pipe Size
AFW	Auxiliary Feedwater	CS	Carbon steel
SW	Service Water	SS	Stainless steel
SGBD	Steam Generator Blowdown	SMLS	Seamless
RPV	Reactor Pressure Vessel	psi	Pounds per square inch
RVI	Reactor Vessel Internals	ksi	Kilopounds per square inch
RCP	Reactor Coolant Pump	GPM	Gallons per minute
SG	Steam Generator	M#/HR	Million pound per hour
EPIX	INPO Failure History Database	KGPM	Kilogram per minute
LER	NRC's Licensee Event Reports	PWR	Pressurized Water Reactor
		Sy	Material allowable yield stress value at given temperature (column X) used for ASME Class 2 or 3 components
		Sm	Material allowable design stress-intensity value at given temperature (column X) used for ASME Class 1 components

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in °F	Operating Pressure in psi	Operating Flow	Design Temperature in °F	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Reactor Coolant System (RCS)	Group 1 - RCS Cold Leg Piping (CL)	RCS-CL-	1	RCP DISCHARGE NOZZLE - 27.5" CL PIPE	27.5	2.21"MW	SA351 GR.CF8 (CASTING)	SS TP 308	SA376 GR.TP304N (SMLS PIPE)	Field	556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	18.2	10.5	32.77		Stress= pressure+ deadweight + thermal. Note, stainless steel weld metals also susceptible to thermal aging, but will not age as badly as high ferrite number static casting.		304 SST CASTING ALL WELD FILLER MATERIAL TP 308 (W-LR REPORT,PG. 57)
Reactor Coolant System (RCS)	Group 1 - RCS Cold Leg Piping (CL)	RCS-CL-	2	27.5" CL PIPE	27.5	2.21"MW	SA376 GR.TP304N (SMLS PIPE)		Not Applicable		556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air		24.6	24.6		SAME AS PART 19; Note in some Westinghouse plants this could be a cast stainless pipe. CF8A pipe is less susceptible to thermal aging than CF8M used in some other Westinghouse plants.		IN 86-108 BORIC ACID CORROSION IN A Carbon steel NOZZLE WELDED TO RCS PIPING. Also, EPIX-245; leak in the base metal of the outer radius of a 1 1/2 inch 60 degree elbow due to thermal fatigue
Reactor Coolant System (RCS)	Group 1 - RCS Cold Leg Piping (CL)	RCS-CL-	3	27.5" CL PIPE - 2" SWEEPOLET	2	0.344"	SA376 GR.TP304N (SMLS PIPE)	SS TP 308	SA182 GR.F316N	Shop	556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	23.66	24.6	24.6				
Reactor Coolant System (RCS)	Group 1 - RCS Cold Leg Piping (CL)	RCS-CL-	4	BRANCH CONNECTION - THERMOWELL	2	0.375"	SA182 GR.F316N	SS TP 308	SA479 GR.TP316 (BAR?)		556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	24.44	25.5	25.5				
Reactor Coolant System (RCS)	Group 1 - RCS Cold Leg Piping (CL)	RCS-CL-	5	27.5" CL PIPE - 2.5" OD THERMOWELL BOSS	2.5	0.375"	SA376 GR.TP304N (SMLS PIPE)	SS TP 308	SA182 GR.F316N		556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	18.2	24.6	24.6			NOT IN ISI LIST FOR CL. THIS WELD IS IDENTIFIED AS 2" SWEEPOLET IN HL FOR LOOP 3.	
Reactor Coolant System (RCS)	Group 1 - RCS Cold Leg Piping (CL)	RCS-CL-	6	27.5" CL PIPE - 2.5" OD THERMOWELL BOSS	2.5	0.375"	SA376 GR.TP304N (SMLS PIPE)	SS TP 308	SA182 GR.F316N	Shop	556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	18.2	24.6	24.6				
Reactor Coolant System (RCS)	Group 1 - RCS Cold Leg Piping (CL)	RCS-CL-	7	BRANCH CONNECTION - THERMOWELL	2.5	0.375"	SA182 GR.F316N	SS TP 308	SA479 GR.TP316 (BAR?)		556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	24.44	25.5	25.5				
Reactor Coolant System (RCS)	Group 1 - RCS Cold Leg Piping (CL)	RCS-CL-	8	27.5" CL PIPE - STOP VALVE 1RC8002A	27.5	2.21"MW	SA376 GR.TP304N (SMLS PIPE)	SS TP 308	SA351 GR.CF8M (CASTING)	Field	556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	18.2	10.3	30.51			304 SST CASTING	
Reactor Coolant System (RCS)	Group 1 - RCS Cold Leg Piping (CL)	RCS-CL-	9	STOP VALVE BODY	27.5		SA351 GR.CF8M (CASTING)		Not Applicable		556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air		25.5	25.5			304 SST CASTING	
Reactor Coolant System (RCS)	Group 1 - RCS Cold Leg Piping (CL)	RCS-CL-	10	STOP VALVE 8" BYPASS NOZZLE (PART OF VALVE BODY)	8	0.906"	SA376 GR.TP304N (SMLS PIPE)		Not Applicable		556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air		24.6	24.6			Seamless pipe is correct. This nozzle part material is different from the valve body. Still do not know how this part id connected to the valve body.	304 SST CASTING
Reactor Coolant System (RCS)	Group 1 - RCS Cold Leg Piping (CL)	RCS-CL-	11	STOP VALVE 1RC8002A - 27.5" CL PIPE	27.5	2.21"MW	SA351 GR.CF8M (CASTING)	SS TP 308	SA376 GR.TP304N (SMLS PIPE)	Field	556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	18.8	9.1	24.27			304 SST CASTING	
Reactor Coolant System (RCS)	Group 1 - RCS Cold Leg Piping (CL)	RCS-CL-	12	27.5" CL PIPE - 3" NOZZLE BRANCH CONNECTION	3	0.438"	SA376 GR.TP304N (SMLS PIPE)	SS TP 308	SA182 GR.F316N		556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	18.2	24.6	24.6			ALTERNATE CHARGING (LOOP 1); NORMAL CHARGING (LOOP 2); LETDOWN (LOOP3)	
Reactor Coolant System (RCS)	Group 1 - RCS Cold Leg Piping (CL)	RCS-CL-	13	27.5" CL PIPE - 4" BRANCH SPRAY NOZZLE (LOOPS 3/4)	4	2.21"MW	SA376 GR.TP304N (SMLS PIPE)	SS TP 308	SA182 GR.F316N	Shop	556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	18.2	24.6	24.6				
Reactor Coolant System (RCS)	Group 1 - RCS Cold Leg Piping (CL)	RCS-CL-	14	27.5" CL PIPE - 3" NOZZLE BRANCH CONNECTION	3	0.438"	SA376 GR.TP304N (SMLS PIPE)	SS TP 308	SA182 GR.F316N	Shop	556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	18.2	24.6	24.6	3.37 / 5.06			
Reactor Coolant System (RCS)	Group 1 - RCS Cold Leg Piping (CL)	RCS-CL-	15	3" BRANCH NOZZLE - 3"X1.5" REDUCER	3	0.438"	SA182 GR.F316N	SS TP 308	SA403 GR.WP316 (FITTING)	Shop	556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	30.29	31.5	31.5				
Reactor Coolant System (RCS)	Group 1 - RCS Cold Leg Piping (CL)	RCS-CL-	16	27.5" CL PIPE - 10" BRANCH ACCUMULATOR NOZZLE	10	2.21"MW	SA376 GR.TP304N (SMLS PIPE)	SS TP 308	SA351 GR.CF8A (CASTING)	Shop	556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	18.2	24.6	24.6				
Reactor Coolant System (RCS)	Group 1 - RCS Cold Leg Piping (CL)	RCS-CL-	17	27.5" CL PIPE - 3" NOZZLE BRANCH CONNECTION	3	0.438"	SA376 GR.TP304N (SMLS PIPE)	SS TP 308	SA182 GR.F316N	Shop	556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	23.66	24.6	24.6				
Reactor Coolant System (RCS)	Group 1 - RCS Cold Leg Piping (CL)	RCS-CL-	18	3" BRANCH NOZZLE - 3"X1.5" REDUCER FROM BIT	3	0.438"	SA182 GR.F316N	SS TP 308	SA403 GR.WP316 (FITTING)	Shop	556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	23.3	31.5	31.5				
Reactor Coolant System (RCS)	Group 1 - RCS Cold Leg Piping (CL)	RCS-CL-	19	27.5" CL PIPE	27.5	2.21"MW	SA376 GR.TP304N (SMLS PIPE)		Not Applicable		556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air		24.6	24.6			SAME AS PART 2. Note, in some Westinghouse plants this could be a cast stainless pipe. CF8A pipe is less susceptible to thermal aging than CF8M used in some other Westinghouse plants.	
Reactor Coolant System (RCS)	Group 1 - RCS Cold Leg Piping (CL)	RCS-CL-	20	LARGE BORE PIPE BRANCH NOZZLE (3" AND LARGER)	3 AND LARGER		SA182 GR.F316N		Not Applicable		556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air		31.5	31.5				
Reactor Coolant System (RCS)	Group 1 - RCS Cold Leg Piping (CL)	RCS-CL-	21	SMALL BORE PIPE BRANCH NOZZLE (<3")	<3		SA182 GR.F316N		Not Applicable		556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air		31.5	31.5				
Reactor Coolant System (RCS)	Group 1 - RCS Cold Leg Piping (CL)	RCS-CL-	22	ACCUMULATOR 45-DEGREE ANGLE NOZZLE (10")	10		SA351 GR.CF8A (CASTING)		Not Applicable		556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air		25.5	25.5			Probably a CF8A static casting, which is more susceptible to thermal aging than centrifugally cast pipe.	
Reactor Coolant System (RCS)	Group 1 - RCS Cold Leg Piping (CL)	RCS-CL-	23	3"X1-1/2" REDUCER	3		SA403 GR.WP316 (FITTING)		Not Applicable		556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air		25.5	25.5				
Reactor Coolant System (RCS)	Group 1 - RCS Cold Leg Piping (CL)	RCS-CL-	24	27.5" CL PIPE - ELBOW (<90)	27.5	2.21"MW	SA376 GR.TP304N (SMLS PIPE)	SS TP 308	SA351 GR.CF8A (CASTING)	Shop	556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	18.2	9.94	20.12			304 SST CASTING	

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in °F	Operating Pressure in psi	Operating Flow	Design Temperature in °F	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Reactor Coolant System (RCS)	Group 1 - RCS Cold Leg Piping (CL)	RCS-CL	25	27.5" CL ELBOW	27.5	2.21"MW	SA351 GR.CF8A (CASTING)		Not Applicable		556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air		25.5	25.5		Cast stainless steel elbow, where in some Westinghouse plants can have very high ferritic numbers and be highly susceptible to thermal aging - material close to being brittle in fully aged condition at operating temperature. CF8A not as bad as CF8M.		304 SST CASTING
Reactor Coolant System (RCS)	Group 1 - RCS Cold Leg Piping (CL)	RCS-CL	26	ELBOW - CL RPV INLET NOZZLE SAFE END	27.5	2.21"MW	SA351 GR.CF8A (CASTING)	SS TP 308	SA182 GR.F316 (FORG.)		556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	18.8	25.5	25.5				
Reactor Coolant System (RCS)	Group 1 - RCS Cold Leg Piping (CL)	RCS-CL	27	CL RPV INLET NOZZLE SAFE END	27.5	2.21"MW	SA182 GR.F316 (FORG.)		Not Applicable		556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air		31.5	31.5				304 SST CASTING
Reactor Coolant System (RCS)	Group 1 - RCS Cold Leg Piping (CL)	RCS-CL	28	SAFE END - CL RPV INLET NOZZLE (67 DEG.)		2.810"	SA182 GR.F316 (FORG.)	SS TP 308	SA508 CL.2 (FORG.)		556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	23.3	9.38	19.93		Bimetallic weld -- in some Westinghouse plants were either stainless welds (oldest plants), Inconel buttered and stainless filled welds, or Inconel buttered and Inconel filled welds (newest plants). Inconel welds not stress relieved, but buttering could		

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in °F	Operating Pressure in psi	Operating Flow	Design Temperature in °F	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments	
Reactor Coolant System (RCS)	Group 2 - RCS Crossover Leg Piping (XL)	RCS-XL-1		SG OUTLET NOZZLE - ELBOW (<90)		2.48"MW	SA216 GR.WCC (CASTING)	SS TP 308	SA351 GR.CF8A (CASTING)	Field	556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	30.7	29.1	38.8		Stress= pressure+ deadweight + thermal. Note, stainless steel weld metals also susceptible to thermal aging, but will not age as badly as high ferrite number static casting.		ALL WELD FILLER MATERIAL TP 308 (W-LR REPORT, PG. 57). NOT CLEAR OF THIS CONNECTION ?	
Reactor Coolant System (RCS)	Group 2 - RCS Crossover Leg Piping (XL)	RCS-XL-2		SG OUTLET NOZZLE - SAFE END		3.688"	SA508 CL.3 (FORG.)	SS TP 308	SA366 GR.F316/LN	BWI	556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	42.1	40.05	40.05		Bimetallic weld -- in some Westinghouse plants were either stainless welds (oldest plants), Inconel buttered and stainless filled welds, or Inconel buttered and Inconel filled welds (newest plants). Inconel welds not stress relieved, but buttering could			
Reactor Coolant System (RCS)	Group 2 - RCS Crossover Leg Piping (XL)	RCS-XL-3		SG OUTLET NOZZLE SAFE END	31	3.688"	SA366 GR.F316/LN		Not Applicable		556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air		6.66	17.17					
Reactor Coolant System (RCS)	Group 2 - RCS Crossover Leg Piping (XL)	RCS-XL-4		SG OUTLET NOZZLE SAFE END - ELBOW (<90)	31	3.688"	SA366 GR.F316/LN	SS TP 308	SA351 GR.CF8A (CASTING)	Field	556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	42.1	40.05	40.05				304 SST CASTING	
Reactor Coolant System (RCS)	Group 2 - RCS Crossover Leg Piping (XL)	RCS-XL-5		XL ELBOW (<90)	31	3.688"	SA351 GR.CF8A (CASTING)		Not Applicable		556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air		25.5	25.5		Cast stainless steel elbow, where in some Westinghouse plants can have very high ferritic numbers and be highly susceptible to thermal aging - material close to being brittle in fully aged condition at operating temperature. CF8A not as bad as CF8M.		304 SST CASTING	
Reactor Coolant System (RCS)	Group 2 - RCS Crossover Leg Piping (XL)	RCS-XL-6		XL ELBOW (<90) - 31" XL PIPE	31	2.48"MW	SA351 GR.CF8A (CASTING)	SS TP 308	SA376 GR.TP304N (SMLS PIPE)	Field	556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	18.8	8.5	18.12				304 SST CASTING	
Reactor Coolant System (RCS)	Group 2 - RCS Crossover Leg Piping (XL)	RCS-XL-7		31" XL PIPE		2.48"MW	SA376 GR.TP304N (SMLS PIPE)		Not Applicable		556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air		24.6	24.6					
Reactor Coolant System (RCS)	Group 2 - RCS Crossover Leg Piping (XL)	RCS-XL-8		31" XL PIPE - ELBOW	31	2.48"MW	SA376 GR.TP304N (SMLS PIPE)	SS TP 308	SA351 GR.CF8A (CASTING)	Shop	556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air		7.99	18.12					304 SST CASTING
Reactor Coolant System (RCS)	Group 2 - RCS Crossover Leg Piping (XL)	RCS-XL-9		31" XL ELBOW	31	3.688"	SA351 GR.CF8A (CASTING)		Not Applicable		556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air		25.5	25.5		Cast stainless steel elbow, where in some Westinghouse plants can have very high ferritic numbers and be highly susceptible to thermal aging - material close to being brittle in fully aged condition at operating temperature.		304 SST CASTING	
Reactor Coolant System (RCS)	Group 2 - RCS Crossover Leg Piping (XL)	RCS-XL-10		ELBOW - 31" XL PIPE	31	2.48"MW	SA351 GR.CF8A (CASTING)	SS TP 308	SA376 GR.TP304N (SMLS PIPE)	Field	556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	18.8	6.65	12.53					
Reactor Coolant System (RCS)	Group 2 - RCS Crossover Leg Piping (XL)	RCS-XL-11		31" XL PIPE		2.48"MW	SA376 GR.TP304N (SMLS PIPE)		Not Applicable		556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air		24.6	24.6					304 SST CASTING
Reactor Coolant System (RCS)	Group 2 - RCS Crossover Leg Piping (XL)	RCS-XL-12		31" XL PIPE - 2" SWEEPOLET	2	0.344"	SA376 GR.TP304N (SMLS PIPE)	SS TP 308	SA182 GR.F316N	Shop	556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	23.66	24.6	24.6		LER 483 1995-006: HAZ on a weld to a 2 inch RCS LP 'D' Crossover Leg to Chemical Volume Control System Excess Letdown pipe. Interference between a flange and a surface mounted plate downstream of the crack location. The interference created a low cycle, high stress fatigue load at the flaw location.			
Reactor Coolant System (RCS)	Group 2 - RCS Crossover Leg Piping (XL)	RCS-XL-13		31" XL PIPE - 3" NOZZLE BRANCH CONNECTION CAPPED	3	0.438"	SA376 GR.TP304N (SMLS PIPE)	SS TP 308	SA182 GR.F316N	Shop	556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	23.66	24.6	24.6					
Reactor Coolant System (RCS)	Group 2 - RCS Crossover Leg Piping (XL)	RCS-XL-14		31" XL PIPE - 2" SWEEPOLET	2	0.344"	SA376 GR.TP304N (SMLS PIPE)	SS TP 308	SA182 GR.F316N	Shop	556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	23.66	24.6	24.6					
Reactor Coolant System (RCS)	Group 2 - RCS Crossover Leg Piping (XL)	RCS-XL-15		2" AND 3" BRANCH NOZZLES	2/3"		SA182 GR.F316N		Not Applicable		556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air		31.5	31.5					
Reactor Coolant System (RCS)	Group 2 - RCS Crossover Leg Piping (XL)	RCS-XL-16		31" XL PIPE - ELBOW	31	2.48"MW	SA376 GR.TP304N (SMLS PIPE)	SS TP 308	SA351 GR.CF8A (CASTING)	Shop	556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	18.2	7.72	13.66					
Reactor Coolant System (RCS)	Group 2 - RCS Crossover Leg Piping (XL)	RCS-XL-17		31" XL ELBOW	31	2.48"MW	SA351 GR.CF8A (CASTING)		Not Applicable		556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air		25.5	25.5		Cast stainless steel elbow, where in some Westinghouse plants can have very high ferritic numbers and be highly susceptible to thermal aging - material close to being brittle in fully aged condition at operating temperature.		304 SST CASTING	
Reactor Coolant System (RCS)	Group 2 - RCS Crossover Leg Piping (XL)	RCS-XL-18		31" XL ELBOW - RCP SUCTION NOZZLE	31	2.48"MW	SA351 GR.CF8A (CASTING)	SS TP 308	SA351 GR.CF8A (CASTING)	Field	556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	18.8	7.74	20.42				304 SST CASTING	

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in °F	Operating Pressure in psi	Operating Flow	Design Temperature in °F	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments	
Reactor Coolant System (RCS)	Group 3 - RCS Hot Leg Piping (HL)	RCS-HL-1		RPV OUTLET NOZZLE - HL SAFE END (202 DEG.)		2.940"	SA508 CL.2 (FORG.)	SS TP 308	SA182 GR.F316 (FORG.)		610 to 620	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air		16.76	30.21		Stress= pressure+ deadweight + thermal. Note, stainless steel weld metals also susceptible to thermal aging, but will not age as badly as high ferrite number static casting.		ALL WELD FILLER MATERIAL TP 308 (W-LR REPORT.PG. 57)	
Reactor Coolant System (RCS)	Group 3 - RCS Hot Leg Piping (HL)	RCS-HL-2		HL SAFE END	29	2.940"	SA182 GR.F316 (FORG.)		Not Applicable		610 to 620	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air		25.5	26.25			LER 395 2000-008: PWSCC		
Reactor Coolant System (RCS)	Group 3 - RCS Hot Leg Piping (HL)	RCS-HL-3		29" HL SAFE END - 29" HL PIPE	29	2.33"MW	SA182 GR.F316 (FORG.)	SS TP 308	SA376 GR.TP304N (SMLS PIPE)		610 to 620	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	18.8	16.76	30.21					
Reactor Coolant System (RCS)	Group 3 - RCS Hot Leg Piping (HL)	RCS-HL-4		29" HL PIPE	29	2.33"MW	SA376 GR.TP304N (SMLS PIPE)		Not Applicable		610 to 620	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air		24.6	24.6		Note in some Westinghouse plants this could be a cast stainless pipe. CF8A pipe is less susceptible to thermal aging than CF8M used in some Westinghouse plants.			
Reactor Coolant System (RCS)	Group 3 - RCS Hot Leg Piping (HL)	RCS-HL-5		29" HL NOZZLE - 14" BRANCH SURGE NOZZLE IN LOOP 4	14	2.33"MW	SA376 GR.TP304N (SMLS PIPE)	SS TP 308	SA182 GR.F316N (FORG.)	Shop	610 to 620	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	18.2	24.6	24.6					
Reactor Coolant System (RCS)	Group 3 - RCS Hot Leg Piping (HL)	RCS-HL-6		29" HL PIPE - 6" BRANCH NOZZLE FOR SI IN LOOPS 2&4	6	2.33"MW	SA376 GR.TP304N (SMLS PIPE)	SS TP 308	SA182 GR.F316N (FORG.)	Shop	610 to 620	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	18.2	24.6	24.6					
Reactor Coolant System (RCS)	Group 3 - RCS Hot Leg Piping (HL)	RCS-HL-7		29" HL PIPE - 12" BRANCH NOZZLE FOR RHR/SI IN LOOPS 1&3	12	2.33"MW	SA376 GR.TP304N (SMLS PIPE)	SS TP 308	SA182 GR.F316N (FORG.)	Shop	610 to 620	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	18.2	24.6	24.6					
Reactor Coolant System (RCS)	Group 3 - RCS Hot Leg Piping (HL)	RCS-HL-8		LARGE BORE BRANCH NOZZLES	>3		SA182 GR.F316N (FORG.)		Not Applicable		610 to 620	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air		25.5	26.25					
Reactor Coolant System (RCS)	Group 3 - RCS Hot Leg Piping (HL)	RCS-HL-9		29" HL PIPE - HL STOP VALVE 1RC8001A	29	2.33"MW	SA376 GR.TP304N (SMLS PIPE)	SS TP 308	SA351 GR.CF8M (CASTING)	Field	610 to 620	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	18.2	9.87	18.24				304 SST CASTING	
Reactor Coolant System (RCS)	Group 3 - RCS Hot Leg Piping (HL)	RCS-HL-10		STOP VALVE BODY	27.5		SA351 GR.CF8M (CASTING)		Not Applicable		610 to 620	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air		25.5	26.25				304 SST CASTING	
Reactor Coolant System (RCS)	Group 3 - RCS Hot Leg Piping (HL)	RCS-HL-11		STOP VALVE 8" BYPASS NOZZLE (PART OF VALVE BODY)	8	0.906"	SA376 GR.TP304N (SMLS PIPE)		Not Applicable		610 to 620	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air		24.6	24.6				Seamless pipe is correct. This nozzle part material is different from the valve body. Still do not know how this part is connected to the valve body.	
Reactor Coolant System (RCS)	Group 3 - RCS Hot Leg Piping (HL)	RCS-HL-12		HL STOP VALVE 1RC8001A - 29"X31" EXPANDING ELBOW (-90)	29	2.33"MW	SA351 GR.CF8M (CASTING)	SS TP 308	SA351 GR.CF8A (CASTING)	Field	610 to 620	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	18.8	10.6	22.67				304 SST CASTING	
Reactor Coolant System (RCS)	Group 3 - RCS Hot Leg Piping (HL)	RCS-HL-13		2.5" OD THERMOWELL BOSS	2.5	0.375"	SA351 GR.CF8A (CASTING)	SS TP 308	SA182 GR.F316N (FORG.)	Shop	610 to 620	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	24.44	25.5	26.25				304 SST CASTING	
Reactor Coolant System (RCS)	Group 3 - RCS Hot Leg Piping (HL)	RCS-HL-14		BRANCH CONNECTION - THERMOWELL	2.5	0.375"	SA182 GR.F316N (FORG.)	SS TP 308	SA479 GR.TP316 (BAR?)		610 to 620	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	24.44	25.5	26.25				LER 362 1997-002: PWSCC	
Reactor Coolant System (RCS)	Group 3 - RCS Hot Leg Piping (HL)	RCS-HL-15		2.5" OD THERMOWELL BOSS	2.5	0.375"	SA351 GR.CF8A (CASTING)	SS TP 308	SA182 GR.F316N (FORG.)		610 to 620	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	24.44	25.5	26.25				304 SST CASTING	
Reactor Coolant System (RCS)	Group 3 - RCS Hot Leg Piping (HL)	RCS-HL-16		29"X31" HL ELBOW - 2" SWEEPolet	2	0.344"	SA351 GR.CF8A (CASTING)	SS TP 308	SA182 GR.F316N (FORG.)	Shop	610 to 620	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	24.44	25.5	26.25				304 SST CASTING	
Reactor Coolant System (RCS)	Group 3 - RCS Hot Leg Piping (HL)	RCS-HL-17		SMALL BORE BRANCH NOZZLE			SA182 GR.F316N (FORG.)		Not Applicable		610 to 620	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air		25.5	26.25				LER 313 2000-003: Highly restrained weld joint that hadn't been stress relieved. Nozzles were roll expanded in the carbon steel penetration and seal welded with an autogenous weld to the SS cladding on the ID of the hot leg pipe. The nozzle was attached to the OD by a j groove partial penetration weld with a fillet cap. Alloy 182 SMAW weld metal was used for the j groove and fillet welds. Nozzle design with welds on the ID and on the OD caused high stresses between the Alloy 600 sleeve and Alloy 600 nozzle and the carbon steel hot leg piping. Also, boron build up and cracks indicated. LER 368 2000-001: Alloy 600 temperature detector nozzle experienced PWSCC	
Reactor Coolant System (RCS)	Group 3 - RCS Hot Leg Piping (HL)	RCS-HL-18		29"X31" HL ELBOW	29		SA351 GR.CF8A (CASTING)		Not Applicable		610 to 620	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air		25.5	26.25		Cast stainless steel elbow, where in some Westinghouse plants can have very high ferrite numbers and be highly susceptible to thermal aging material close to being brittle in fully aged condition at operating temperature. CF8A not as bad as CF8M.		304 SST CASTING	
Reactor Coolant System (RCS)	Group 3 - RCS Hot Leg Piping (HL)	RCS-HL-19		29"X31" HL ELBOW - SG INLET NOZZLE SAFE END	29	3.688"	SA351 GR.CF8A (CASTING)	SS TP 308	SA366 GR.F316/LN (FORG.)	Field	610 to 620	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	18.8	9.86	19.46					
Reactor Coolant System (RCS)	Group 3 - RCS Hot Leg Piping (HL)	RCS-HL-20		SG OUTLET NOZZLE SAFE END	31	3.688"	SA366 GR.F316/LN (FORG.)		Not Applicable		610 to 620	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air								
Reactor Coolant System (RCS)	Group 3 - RCS Hot Leg Piping (HL)	RCS-HL-21		SG INLET NOZZLE SAFE END - SG INLET NOZZLE	31	3.688"	SA366 GR.F316/LN (FORG.)	SS TP 308	SA508 CL.3 (FORG.)	BWI	610 to 620	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air		9.86	19.46					
Reactor Coolant System (RCS)	Group 3 - RCS Hot Leg Piping (HL)	RCS-HL-22		29"X31" HL ELBOW - SG INLET NOZZLE	31	2.48"MW	SA351 GR.CF8A (CASTING)	SS TP 308	SA216 GR.WCC (CASTING)	Field	610 to 620	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	18.8	25.5	26.25				NOT CLEAR OF THIS CONNECTION	

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in °F	Operating Pressure in psi	Operating Flow	Design Temperature in °F	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-1	1	SHELL - LOWER HEAD	91.5	2.750"	SA533 GR.A CL.2 (PLATE)	E9018	SA533 GR.A CL.2 (PLATE)		653	2250	250 GPM	680	2485	GPM	Reactor Coolant	Containment Air	58.9	45	45			SS CLADDING WITH 309L PRESSURE BOUNDARY WELD MATERIAL E9018	
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-2	2	SHELL - SHELL	91.5	3.9375"	SA533 GR.A CL.2 (PLATE)	E9018	SA533 GR.A CL.2 (PLATE)		653	2250	250 GPM	680	2485	GPM	Reactor Coolant	Containment Air	58.9	45	45			SS CLADDING WITH 309L PRESSURE BOUNDARY WELD MATERIAL E9018	
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-3	3	SHELL - SHELL	84	3.750"	SA533 GR.A CL.2 (PLATE)	E9018	SA533 GR.A CL.2 (PLATE)		653	2250	250 GPM	680	2485	GPM	Reactor Coolant	Containment Air	58.9	45	45			SS CLADDING WITH 309L PRESSURE BOUNDARY WELD MATERIAL E9018	
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-4	4	SHELL - SHELL	91.5	3.9375"	SA533 GR.A CL.2 (PLATE)	E9018	SA533 GR.A CL.2 (PLATE)		653	2250	250 GPM	680	2485	GPM	Reactor Coolant	Containment Air	58.9	45	45			SS CLADDING WITH 309L PRESSURE BOUNDARY WELD MATERIAL E9018	
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-5	5	SHELL - UPPER HEAD	91.5	2.0625"	SA533 GR.A CL.2 (PLATE)	E9018	SA533 GR.A CL.2 (PLATE)		653	2250	250 GPM	680	2485	GPM	Reactor Coolant	Containment Air	58.9	45	45			SS CLADDING WITH 309L PRESSURE BOUNDARY WELD MATERIAL E9018	
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-6	6	SHELL LONG SEAM	91.5	3.9375"	SA533 GR.A CL.2 (PLATE)	E9018	SA533 GR.A CL.2 (PLATE)		653	2250	250 GPM	680	2485	GPM	Reactor Coolant	Containment Air	58.9	45	45			SS CLADDING WITH 309L PRESSURE BOUNDARY WELD MATERIAL E9018	
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-7	7	SHELL LONG SEAM	91.5	3.9375"	SA533 GR.A CL.2 (PLATE)	E9018	SA533 GR.A CL.2 (PLATE)		653	2250	250 GPM	680	2485	GPM	Reactor Coolant	Containment Air	58.9	45	45			SS CLADDING WITH 309L PRESSURE BOUNDARY WELD MATERIAL E9018	
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-8	8	SHELL LONG SEAM	91.5	3.9375"	SA533 GR.A CL.2 (PLATE)	E9018	SA533 GR.A CL.2 (PLATE)		653	2250	250 GPM	680	2485	GPM	Reactor Coolant	Containment Air	58.9	45	45			SS CLADDING WITH 309L PRESSURE BOUNDARY WELD MATERIAL E9018	
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-9	9	SHELL LONG SEAM	91.5	3.9375"	SA533 GR.A CL.2 (PLATE)	E9018	SA533 GR.A CL.2 (PLATE)		653	2250	250 GPM	680	2485	GPM	Reactor Coolant	Containment Air	58.9	45	45			SS CLADDING WITH 309L PRESSURE BOUNDARY WELD MATERIAL E9018	
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-10	10	PRESSURIZER HEATER PENETRATION	0	N/A	SA533 GR.A CL.2 (PLATE)		SA182 GR.F316 (FORG.)		> 653	2250	250 GPM	680	2485	GPM	Reactor Coolant	Containment Air	58.9	45	45		Frequently partial penetration Inconel J-welds in many PWR plants, where J-welds may not be stress relieved.	IN 90-10: ALLOY 600 PWSCC.	Subgroup 4.8 parts 5, 6, 7, 13, and 16 are neither heater sleeve parts nor located in the heater well area. Parts 10, 26, 27, 28, and 29 are heater parts and could be subject to higher temperature. Therefore, temperatures for these parts are replaced as > 653.
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-11	11	PRESSURIZER - SURGE NOZZLE	14	2.750"	SA533 GR.A CL.2 (PLATE)		SA508 CL.2A (FORG.)		653	2250	250 GPM	680	2485	GPM	Reactor Coolant	Containment Air	58.9	45	45			NOZZLE BUILDUP WITH INCONEL 182. In older Westinghouse plant might be stainless weld (?), or Inconel buttered weld with stainless filler. Buttered inconel layers probably stress relieved.	
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-12	12	PRESSURIZER - SPRAY NOZZLE	4	2.0625"	SA533 GR.A CL.2 (PLATE)		SA508 CL.2A (FORG.)		653	2250	250 GPM	680	2485	GPM	Reactor Coolant	Containment Air	58.9	45	45			NOZZLE BUILDUP WITH INCONEL 182	
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-13	13	PRESSURIZER - RELIEF NOZZLE	6	2.0625"	SA533 GR.A CL.2 (PLATE)		SA508 CL.2A (FORG.)		653	2250	250 GPM	680	2485	GPM	Reactor Coolant	Containment Air	58.9	45	45			NOZZLE BUILDUP WITH INCONEL 182	
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-14	14	PRESSURIZER - SAFETY NOZZLE	6	2.0625"	SA533 GR.A CL.2 (PLATE)		SA508 CL.2A (FORG.)		653	2250	250 GPM	680	2485	GPM	Reactor Coolant	Containment Air	58.9	45	45			NOZZLE BUILDUP WITH INCONEL 182	
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-15	15	PRESSURIZER - SAFETY NOZZLE	6	2.0625"	SA533 GR.A CL.2 (PLATE)		SA508 CL.2A (FORG.)		653	2250	250 GPM	680	2485	GPM	Reactor Coolant	Containment Air	58.9	45	45			NOZZLE BUILDUP WITH INCONEL 182	
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-16	16	PRESSURIZER - SAFETY NOZZLE	6	2.0625"	SA533 GR.A CL.2 (PLATE)		SA508 CL.2A (FORG.)		653	2250	250 GPM	680	2485	GPM	Reactor Coolant	Containment Air	58.9	45	45			NOZZLE BUILDUP WITH INCONEL 182	
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-17	17	PZR SURGE NOZZLE - SAFE END	14	1.310"	SA508 CL.2A (FORG.)		SA182 GR.F316L (FORG.)		653	2250	250 GPM	680	2485	GPM	Reactor Coolant	Containment Air	42.1	45	45			NOZZLE BUILDUP WITH INCONEL 182	
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-18	18	PZR SAFETY NOZZLE - SAFE END	6	1.025"	SA508 CL.2A (FORG.)		SA182 GR.F316L (FORG.)		653	2250	250 GPM	680	2485	GPM	Reactor Coolant	Containment Air	42.1	45	45			NOZZLE BUILDUP WITH INCONEL 182	
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-19	19	PZR SAFETY NOZZLE - SAFE END	6	1.235"	SA508 CL.2A (FORG.)		SA182 GR.F316L (FORG.)		653	2250	250 GPM	680	2485	GPM	Reactor Coolant	Containment Air	42.1	45	45			NOZZLE BUILDUP WITH INCONEL 182	
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-20	20	PZR SAFETY NOZZLE - SAFE END	6	1.235"	SA508 CL.2A (FORG.)		SA182 GR.F316L (FORG.)		653	2250	250 GPM	680	2485	GPM	Reactor Coolant	Containment Air	42.1	45	45			NOZZLE BUILDUP WITH INCONEL 182	
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-21	21	PZR SPRAY NOZZLE - SAFE END	4	1.235"	SA508 CL.2A (FORG.)		SA182 GR.F316L (FORG.)		653	2250	250 GPM	680	2485	GPM	Reactor Coolant	Containment Air	42.1	45	45			NOZZLE BUILDUP WITH INCONEL 182	
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-22	22	PZR RELIEF NOZZLE - SAFE END	6	1.235"	SA508 CL.2A (FORG.)		SA182 GR.F316L (FORG.)		653	2250	250 GPM	680	2485	GPM	Reactor Coolant	Containment Air	42.1	45	45			NOZZLE BUILDUP WITH INCONEL 182	
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-23	23	PZR UPPER HEAD			SA533 GR.A CL.2 (PLATE)		Not Applicable		653	2250	250 GPM	680	2485	GPM	Reactor Coolant	Containment Air	45	45	45			LER 302 2003-003: light boric acid deposits and stains on the pressurizer carbon steel shell	
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-24	24	PZR LOWER HEAD			SA533 GR.A CL.2 (PLATE)		Not Applicable		653	2250	250 GPM	680	2485	GPM	Reactor Coolant	Containment Air	45	45	45			SKIRT TO HEAD WITH E-9018 AND TO FLANGE E-7018 WELD MATERIALS	
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-25	25	PZR SUPPORT SKIRT AND FLANGE			SA516 GR.70 (PLATE)	E9018/E7018	Not Applicable		ambient	ambient					Reactor Coolant	Containment Air	34.95	34.95	34.95			SKIRT TO HEAD WITH E-9018 AND TO FLANGE E-7018 WELD MATERIALS	
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-26	26	PZR HEATER WELL			SA213 GR.316 (SMLS TUBE)	SS 308L	Not Applicable		> 653	2250	250 GPM	680	2485	GPM	Reactor Coolant	Containment Air	25.5	25.5	25.5		Several Heater sleeve failures at ANO-2: Ruprured Alloy 600 heater sleeves. Residual stresses from swaging the MgO insulation to an acceptable density and then failure to anneal. Wetting insulation caused it to swell to 150% of its original volume and added additional stress. Several LERs for Calvert Cl - Alloy 600 sleeve indicated PWSCC. Circumferential bulge approximately 0.5 inches long and 0.019 inches high (diametral) in the area of the boric acid leaks; axial scoring showed; evidence of surface metal smearing and cold work associated with removal of stuck reamer. sulfur compounds on the surfaces, with the highest concentrations at the crack tips.	Subgroup 4.8 parts 5, 6, 7, 13, and 16 are neither heater sleeve parts nor located in the heater well area. Parts 10, 26, 27, 28, and 29 are heater parts and could be subject to higher temperature. Therefore, temperatures for these parts are replaced as > 653.	
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-27	27	PZR IMMERSION HEATER			SA213 GR.316 (SMLS TUBE)		Not Applicable		> 653	2250	250 GPM	680	2485	GPM	Reactor Coolant	Containment Air	25.5	25.5	25.5			LER 336 2003-004: PWSCC	Subgroup 4.8 parts 5, 6, 7, 13, and 16 are neither heater sleeve parts nor located in the heater well area. Parts 10, 26, 27, 28, and 29 are heater parts and could be subject to higher temperature. Therefore, temperatures for these parts are replaced as > 653.
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-28	28	PZR HTR SUPPORT PLATE			SA240 GR.TP304 (PLATE)		Not Applicable		> 653	2250	250 GPM	680	2485	GPM	Reactor Coolant	Containment Air	24.6	24.6	24.6			Subgroup 4.8 parts 5, 6, 7, 13, and 16 are neither heater sleeve parts nor located in the heater well area. Parts 10, 26, 27, 28, and 29 are heater parts and could be subject to higher temperature. Therefore, temperatures for these parts are replaced as > 653.	
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-29	29	PZR PZR HTR SUPPORT PLATE BRACKET			SA240 GR.TP304 (PLATE)		Not Applicable		> 653	2250	250 GPM	680	2485	GPM	Reactor Coolant	Containment Air	24.6	24.6	24.6			Subgroup 4.8 parts 5, 6, 7, 13, and 16 are neither heater sleeve parts nor located in the heater well area. Parts 10, 26, 27, 28, and 29 are heater parts and could be subject to higher temperature. Therefore, temperatures for these parts are replaced as > 653.	
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-30	30	PZR SURGE NOZZLE			SA508 CL.2A (FORG.)		Not Applicable		653	2250	250 GPM	680	2485	GPM	Reactor Coolant	Containment Air	45	45	45			INCONEL WELD BUILDUP, SA-240 THERMAL SLEEVE, INCONEL WELD SEE EDSK 379429B	
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-31	31	PZE SURGE NOZZLE THERMAL SLEEVE			SA240 (PLATE)		Not Applicable		653	2250	250 GPM	680	2485	GPM	Reactor Coolant	Containment Air	24.6	24.6	24.6			THERMAL SLEEVE WELDED TO SAFE END AND THE WELD IS FOR 45 DEGREE ON ITS CIRCUMFERENCE. SEE EDSK 379442B	
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-32	32	PZR SURGE NOZZLE SAFE END			SA182 GR.F316L (FORG.)		Not Applicable		653	2250	250 GPM	680	2485	GPM	Reactor Coolant	Containment Air	21	21	21				
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-33	33	PZR INSTRUMENT NOZZLE			SA213 TP316		Not Applicable		653	2250	250 GPM	680	2485	GPM	Reactor Coolant	Containment Air	25.5	25.5	25.5			INSTRUMENT PENETRATION NOZZLE: Alloy 600 subject to PWSCC	1" TUBE WELDED TO SS CLADDING
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-34	34	PZR LIFTING TRUNNION BUILDUP			LAS		Not Applicable		ambient	ambient					Reactor Coolant	Containment Air						LAS EQUIVALENT TO SHELL BUILDUP WITH E-9018 WELD MATERIAL	
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-35	35	PZR SEISMIC SUPPORT LUG			SA533 GR.A CL.2 (PLATE)		Not Applicable		ambient	ambient					Reactor Coolant	Containment Air	45	45	45				
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-36	36	PZR VALVE SUPPORT BRACKET			SA533 GR.A CL.2 (PLATE)		Not Applicable		ambient	ambient					Reactor Coolant	Containment Air	45	45	45				
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-37	37	PZR SPRAY NOZZLE			SA508 CL.2 (FORG.)		Not Applicable		653	2250	250 GPM	680	2485	GPM	Reactor Coolant	Containment Air	45	45	45				
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-38	38	PZR SPRAY NOZZLE THERMAL SLEEVE			SA213 GR.304 (SMLS TUBE)		Not Applicable		653	2250	250 GPM	680	2485	GPM	Reactor Coolant	Containment Air	25.5	25.5	25.5				THERMAL SLEEVE WELDED TO SAFE END AND THE WELD IS FOR 45 DEGREE ON ITS CIRCUMFERENCE. SEE EDSK 379445B
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-39	39	PZR SPRAY NOZZLE SAFE END			SA182 GR.F316L (FORG.)		Not Applicable		653	2250	250 GPM	680	2485	GPM	Reactor Coolant	Containment Air	21	21	21				
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-40	40	PZR SAFETY AND RELIEF NOZZLES			SA508 CL.2 (FORG.)		Not Applicable		653	2250	250 GPM	680	2485	GPM	Reactor Coolant	Containment Air	45	45	45			LER 528 1992-001: PWSCC/GIGA	
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-41	41	PZR SAFETY AND RELIEF NOZZLE SAFE ENDS			SA182 GR.F316L (FORG.)		Not Applicable		653	2250	250 GPM	680	2485	GPM	Reactor Coolant	Containment Air	21	21	21				
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-42	42	PRIMARY MANWAY			SA508 CL.2 (FORG.)		Not Applicable		653	2250	250 GPM	680	2485	GPM	Reactor Coolant	Containment Air	45	45	45				
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-43	43	PRIMARY MANWAY COVER			SA533 GR.A CL.1 (PLATE)		Not Applicable		653	2250	250 GPM	680	2485	GPM	Reactor Coolant	Containment Air	40.05	40.05	40.05				SA-240 TP 304 SS INSERT PLATE AND INCONEL WITH CANADIAN ASBESTOS GASKET
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR-44	44	PRIMARY MANWAY COVER BOLTS AND STUDS			SA193 GR.B7 (BOLTING)		Not Applicable		ambient	ambient					Reactor Coolant	Containment Air	105	105	105				

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in °F	Operating Pressure in psi	Operating Flow	Design Temperature in °F	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-1	1	4" PZR SPRAY NOZZLE SAFE END 6"X4" REDUCER	4	0.531"	SA182 GR.F316L (FORG.)		SA403 GR.WP304 (FITTING)	Field	556 to 559	2250	250 GPM	680	2485	GPM	Reactor Coolant	Containment Air	32.3	21	21			FROM PZR SPRAY NOZZLE	
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-2	2	6"X4" REDUCER - 6" ELBOW	6	0.719"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)	Shop	556 to 559	2250	1 GPM	650	2485	900 GPM	Reactor Coolant	Containment Air	18.3	24.6	24.6				
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-3	3	ELBOW - PIPE	6	0.719"	SA403 GR.WP304 (FITTING)		SA376 GR.TP304 (SMLS PIPE)	Shop	556 to 559	2250	1 GPM	650	2485	900 GPM	Reactor Coolant	Containment Air	18.3	24.6	24.6				
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-4	4	PIPE - ELBOW	6	0.719"	SA376 GR.TP304 (SMLS PIPE)		SA403 GR.WP304 (FITTING)	Shop	556 to 559	2250	1 GPM	650	2485	900 GPM	Reactor Coolant	Containment Air	18.3	24.6	24.6				
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-5	5	ELBOW - ELBOW	6	0.719"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)	Shop	556 to 559	2250	1 GPM	650	2485	900 GPM	Reactor Coolant	Containment Air	18.3	24.6	24.6				
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-6	6	6" PIPE - 2" SOCKOLET	2	0.344"	SA376 GR.TP304 (SMLS PIPE)		SA182 GR.F304 (FORG.)	Shop	556 to 559	2250	1 GPM	650	2485	900 GPM	Reactor Coolant	Containment Air	23.66	24.6	24.6				
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-7	7	PIPE - PIPE	6	0.719"	SA376 GR.TP304 (SMLS PIPE)		SA376 GR.TP304 (SMLS PIPE)	Shop	556 to 559	2250	1 GPM	650	2485	900 GPM	Reactor Coolant	Containment Air	18.2	24.6	24.6				
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-8	8	2" SOCKOLET	2	0.344"	SA182 GR.F304 (FORG.)		Not Applicable		556 to 559	2250	1 GPM	650	2485	900 GPM	Reactor Coolant	Containment Air		20.85	20.85				
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-9	9	6" ELBOW	6	0.719"	SA403 GR.WP304 (FITTING)		Not Applicable		556 to 559	2250	1 GPM	650	2485	900 GPM	Reactor Coolant	Containment Air		24.6	24.6				
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-10	10	6" PIPE	6	0.719"	SA376 GR.TP304 (SMLS PIPE)		Not Applicable		556 to 559	2250	1 GPM	650	2485	900 GPM	Reactor Coolant	Containment Air		24.6	24.6				
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-11	11	BRANCH CONNECTION - ELBOW	4	0.531"	SA182 GR.F316N		SA403 GR.WP304 (FITTING)	Field	556 to 559	2250	1 GPM	650	2485	900 GPM	Reactor Coolant	Containment Air	32.3	21	21			4" SPRAY LINE FROM LOOP 4 COLD LEG NOZZLE	
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-12	12	ELBOW - PIPE	4	0.531"	SA403 GR.WP304 (FITTING)		SA376 GR.TP304 (SMLS PIPE)	Shop	556 to 559	2250	1 GPM	650	2485	900 GPM	Reactor Coolant	Containment Air	18.3	24.6	24.6				
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-13	13	PIPE - ELBOW	4	0.531"	SA376 GR.TP304 (SMLS PIPE)		SA403 GR.WP304 (FITTING)	Shop	556 to 559	2250	1 GPM	650	2485	900 GPM	Reactor Coolant	Containment Air	18.2	24.6	24.6				
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-14	14	4" ELBOW	4	0.531"	SA403 GR.WP304 (FITTING)		Not Applicable		556 to 559	2250	1 GPM	650	2485	900 GPM	Reactor Coolant	Containment Air		24.6	24.6				
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-15	15	4" PIPE - 2" SOCKOLET	2	0.344"	SA376 GR.TP304 (SMLS PIPE)		SA182 GR.F304 (FORG.)	Shop	556 to 559	2250	1 GPM	650	2485	900 GPM	Reactor Coolant	Containment Air	23.66	24.6	24.6				
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-16	16	PIPE - PIPE	4	0.531"	SA376 GR.TP304 (SMLS PIPE)		SA376 GR.TP304 (SMLS PIPE)	Shop	556 to 559	2250	1 GPM	650	2485	900 GPM	Reactor Coolant	Containment Air	18.2	24.6	24.6				
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-17	17	PIPE - VALVE 1RY022	4	0.531"	SA376 GR.TP304 (SMLS PIPE)		SA182 GR.F316 (FORG.)	Field	556 to 559	2250	1 GPM	650	2485	900 GPM	Reactor Coolant	Containment Air	18.2	24.6	24.6				
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-18	18	VALVE 1RY022 - PIPE	4	0.531"	SA182 GR.F316 (FORG.)		SA376 GR.TP304 (SMLS PIPE)	Field	556 to 559	2250	1 GPM	650	2485	900 GPM	Reactor Coolant	Containment Air	32.3	21	21				
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-19	19	4" VALVE BODY	4		SA182 GR.F316 (FORG.)		Not Applicable		556 to 559	2250	1 GPM	650	2485	900 GPM	Reactor Coolant	Containment Air		21	21				
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-20	20	4" PIPE	4	0.531"	SA376 GR.TP304 (SMLS PIPE)		Not Applicable		556 to 559	2250	1 GPM	650	2485	900 GPM	Reactor Coolant	Containment Air		24.6	24.6				
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-21	21	ELBOW - 4"X6" REDUCER	4	0.531"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)	Shop	556 to 559	2250	1 GPM	650	2485	900 GPM	Reactor Coolant	Containment Air	18.3	24.6	24.6				
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-22	22	6"X4" REDUCER	6		SA403 GR.WP304 (FITTING)		Not Applicable		556 to 559	2250	1 GPM	650	2485	900 GPM	Reactor Coolant	Containment Air		24.6	24.6				
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-23	23	4"X6" REDUCER - TEE	6	0.719"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)	Shop	556 to 559	2250	1 GPM	650	2485	900 GPM	Reactor Coolant	Containment Air	18.3	24.6	24.6				
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-24	24	TEE - PIPE	6	0.719"	SA403 GR.WP304 (FITTING)		SA376 GR.TP304 (SMLS PIPE)	Shop	556 to 559	2250	1 GPM	650	2485	900 GPM	Reactor Coolant	Containment Air	18.3	24.6	24.6				
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-25	25	TEE - PIPE	4	0.531"	SA403 GR.WP304 (FITTING)		SA376 GR.TP304 (SMLS PIPE)	Shop	556 to 559	2250	1 GPM	650	2485	900 GPM	Reactor Coolant	Containment Air	18.3	24.6	24.6			4" SPRAY LINE FROM LOOP 3 COLD LEG NOZZLE TEE TO 4" SPRAY LINE FROM LOOP 4	
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-26	26	6"X6"X4" TEE	6		SA403 GR.WP304 (FITTING)		Not Applicable		556 to 559	2250	1 GPM	650	2485	900 GPM	Reactor Coolant	Containment Air		24.6	24.6				
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-27	27	PIPE - ELBOW	6	0.719"	SA376 GR.TP304 (SMLS PIPE)		SA403 GR.WP304 (FITTING)	Field	556 to 559	2250	1 GPM	650	2485	900 GPM	Reactor Coolant	Containment Air	18.2	24.6	24.6				
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-28	28	ELBOW - PIPE	6	0.719"	SA403 GR.WP304 (FITTING)		SA376 GR.TP304 (SMLS PIPE)	Field	556 to 559	2250	1 GPM	650	2485	900 GPM	Reactor Coolant	Containment Air	18.3	24.6	24.6				
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-29	29	PIPE - PIPE	6	0.719"	SA376 GR.TP304 (SMLS PIPE)		SA376 GR.TP304 (SMLS PIPE)	Field	556 to 559	2250	1 GPM	650	2485	900 GPM	Reactor Coolant	Containment Air	18.2	24.6	24.6				
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-30	30	4" BRANCH NOZZLE - PIPE	4	0.531"	SA182 GR.F316N		SA376 GR.TP304 (SMLS PIPE)	Field	556 to 559	2250	1 GPM	650	2485	900 GPM	Reactor Coolant	Containment Air	23.3	31.5	31.5			4" SPRAY LINE FROM LOOP 3 COLD LEG NOZZLE	
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-31	31	PIPE - ELBOW	4	0.531"	SA376 GR.TP304 (SMLS PIPE)		SA403 GR.WP304 (FITTING)	Shop	556 to 559	2250	1 GPM	650	2485	900 GPM	Reactor Coolant	Containment Air	18.3	24.6	24.6				
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-32	32	ELBOW - PIPE	4	0.531"	SA403 GR.WP304 (FITTING)		SA376 GR.TP304 (SMLS PIPE)	Shop	556 to 559	2250	1 GPM	650	2485	900 GPM	Reactor Coolant	Containment Air	18.3	24.6	24.6				
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-33	33	PIPE - PIPE	4	0.531"	SA376 GR.TP304 (SMLS PIPE)		SA376 GR.TP304 (SMLS PIPE)	Field	556 to 559	2250	1 GPM	650	2485	900 GPM	Reactor Coolant	Containment Air	18.2	24.6	24.6				
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-34	34	INSTRUMENT CONNECTION	c-1		NOT AVAILABLE		Not Applicable		556 to 559	2250	1 GPM	650	2485	900 GPM	Reactor Coolant	Containment Air							
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-35	35	PIPE - VALVE 1RY024	4	0.531"	SA376 GR.TP304 (SMLS PIPE)		SA182 GR.F316 (FORG.)	Field	556 to 559	2250	1 GPM	650	2485	900 GPM	Reactor Coolant	Containment Air	18.2	24.6	24.6				
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-36	36	VALVE 1RY024 - PIPE	4	0.531"	SA182 GR.F316 (FORG.)		SA376 GR.TP304 (SMLS PIPE)	Field	556 to 559	2250	1 GPM	650	2485	900 GPM	Reactor Coolant	Containment Air	32.3	21	21				

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in °F	Operating Pressure in psi	Operating Flow	Design Temperature in °F	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Reactor Coolant System (RCS)	Group 6 - Pressurizer Surge Piping (SURGE)	RCS-SURGE-	1	PZR SURGE NOZZLE SAFE END - PIPE	14	1.406"	SA182 GR.F316L (FORG.)		SA376 GR.TP316 (SMLS PIPE)	Field	620 to 653	2250	250 KGPM	680	2485		Reactor Coolant	Containment Air	18.8	25.5	25.5		NUREG/CR-6260; INEL-95/0045 2/95 pp 5-61 Table 5-82. There is a bimetallic weld at the pressurizer, but that may be in the pressurizer listing.		
Reactor Coolant System (RCS)	Group 6 - Pressurizer Surge Piping (SURGE)	RCS-SURGE-	2	PIPE - PIPE	14	1.406"	SA376 GR.TP316 (SMLS PIPE)		SA376 GR.TP316 (SMLS PIPE)	Shop	620 to 653	2250	250 KGPM	680	2485		Reactor Coolant	Containment Air	18.8	25.5	25.5				
Reactor Coolant System (RCS)	Group 6 - Pressurizer Surge Piping (SURGE)	RCS-SURGE-	3	14" PIPE	14	1.406"	SA376 GR.TP316 (SMLS PIPE)		Not Applicable		620 to 653	2250	250 KGPM	680	2485		Reactor Coolant	Containment Air		25.5	25.5		Some PWRs (i.e., newer CE plants) used cast stainless pipe.	EPIX 95: Leak in drain line due to SCC	
Reactor Coolant System (RCS)	Group 6 - Pressurizer Surge Piping (SURGE)	RCS-SURGE-	4	14" BEND PIPE	14	1.406"	SA376 GR.TP316 (SMLS PIPE)		Not Applicable		620 to 653	2250	250 KGPM	680	2485		Reactor Coolant	Containment Air		25.5	25.5			TYPICALLY PIPE BENDS ARE 5 TIME PIPE DIAMETER (70')	
Reactor Coolant System (RCS)	Group 6 - Pressurizer Surge Piping (SURGE)	RCS-SURGE-	5	1" SOCKOLET BOSS	1	?	SA182 GR.F304 (FORG.)		Not Applicable		620 to 653	2250	250 KGPM	680	2485		Reactor Coolant	Containment Air		25.5	25.5				
Reactor Coolant System (RCS)	Group 6 - Pressurizer Surge Piping (SURGE)	RCS-SURGE-	6	PIPE - 14" NOZZLE BRANCH CONNECTION	14	1.250"	SA376 GR.TP316 (SMLS PIPE)		SA182 GR.F316N	Field	620 to 653	2250	250 KGPM	680	2485		Reactor Coolant	Containment Air	18.8	25.5	25.5	1.734	CUF for 60 years 2.601		

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in °F	Operating Pressure in psi	Operating Flow	Design Temperature in °F	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Reactor Coolant System (RCS)	Group 7 - Pressurizer to PORVs (PORV)	RCS-PORV-	1	PZR RELIEF NOZZLE SAFE END - 6' ELBOW	6	0.719"	SA182 GR.F316L (FORG.)		SA403 GR.WP304 (FITTING)	Field	653	2250		680	2485		Reactor Coolant	Containment Air	32.3	8.18	28		Pressure+DW+Thermal Data provided by Exelon on "BRW/BYRON BRW Stress Load.xls".	LER 255 1993-009: HAZ of the PORV line to pressurizer nozzle safe end weld/ Inconel 600 - PWSCC, IG cracking	
Reactor Coolant System (RCS)	Group 7 - Pressurizer to PORVs (PORV)	RCS-PORV-	2	6' ELBOW	6	0.719"	SA403 GR.WP304 (FITTING)		Not Applicable		653	2250		680	2485		Reactor Coolant	Containment Air		8.17	24.6		See comment for Part #1		
Reactor Coolant System (RCS)	Group 7 - Pressurizer to PORVs (PORV)	RCS-PORV-	3	ELBOW - PIPE	6	0.719"	SA403 GR.WP304 (FITTING)		SA376 GR.TP304 (SMLS PIPE)	Shop	653	2250		680	2485		Reactor Coolant	Containment Air	18.3	24.6	24.6				
Reactor Coolant System (RCS)	Group 7 - Pressurizer to PORVs (PORV)	RCS-PORV-	4	6' PIPE - 2" SOCKOLET	2	0.344"	SA376 GR.TP304 (SMLS PIPE)		SA182 GR.F304 (FORG.)	Field	653	2250		680	2485		Reactor Coolant	Containment Air	18.2	24.6	24.6				
Reactor Coolant System (RCS)	Group 7 - Pressurizer to PORVs (PORV)	RCS-PORV-	5	2" SOCKOLET	2	0.344"	SA182 GR.F304 (FORG.)		Not Applicable		653	2250		680	2485		Reactor Coolant	Containment Air		20.85	20.85				
Reactor Coolant System (RCS)	Group 7 - Pressurizer to PORVs (PORV)	RCS-PORV-	6	6' PIPE	6	0.719"	SA376 GR.TP304 (SMLS PIPE)		Not Applicable		653	2250		680	2485		Reactor Coolant	Containment Air		24.6	24.6				
Reactor Coolant System (RCS)	Group 7 - Pressurizer to PORVs (PORV)	RCS-PORV-	7	PIPE - TEE	6	0.719"	SA376 GR.TP304 (SMLS PIPE)		SA403 GR.WP304 (FITTING)	Shop	653	2250		680	2485		Reactor Coolant	Containment Air	18.2	24.6	24.6				
Reactor Coolant System (RCS)	Group 7 - Pressurizer to PORVs (PORV)	RCS-PORV-	8	6"X6"X3" TEE			SA403 GR.WP304 (FITTING)		Not Applicable		653	2250		680	2485		Reactor Coolant	Containment Air		7.77	24.6		See comment for Part #1		
Reactor Coolant System (RCS)	Group 7 - Pressurizer to PORVs (PORV)	RCS-PORV-	9	TEE - 6"X3" REDUCER	6	0.719"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)	Shop	653	2250		680	2485		Reactor Coolant	Containment Air	18.3	24.6	24.6				
Reactor Coolant System (RCS)	Group 7 - Pressurizer to PORVs (PORV)	RCS-PORV-	10	6"X3" REDUCER			SA403 GR.WP304 (FITTING)		Not Applicable		653	2250		680	2485		Reactor Coolant	Containment Air		6.55	24.6		See comment for Part #1		
Reactor Coolant System (RCS)	Group 7 - Pressurizer to PORVs (PORV)	RCS-PORV-	11	REDUCER - PIPE	3	0.438"	SA403 GR.WP304 (FITTING)		SA376 GR.TP304 (SMLS PIPE)	Shop	653	2250		680	2485		Reactor Coolant	Containment Air	18.3	24.6	24.6				
Reactor Coolant System (RCS)	Group 7 - Pressurizer to PORVs (PORV)	RCS-PORV-	12	3" PIPE	3	0.438"	SA376 GR.TP304 (SMLS PIPE)		Not Applicable		653	2250		680	2485		Reactor Coolant	Containment Air		24.6	24.6				
Reactor Coolant System (RCS)	Group 7 - Pressurizer to PORVs (PORV)	RCS-PORV-	13	PIPE - ELBOW	3	0.438"	SA376 GR.TP304 (SMLS PIPE)		SA403 GR.WP304 (FITTING)	Shop	653	2250		680	2485		Reactor Coolant	Containment Air	18.2	24.6	24.6				
Reactor Coolant System (RCS)	Group 7 - Pressurizer to PORVs (PORV)	RCS-PORV-	14	3" ELBOW	3	0.438"	SA403 GR.WP304 (FITTING)		Not Applicable		653	2250		680	2485		Reactor Coolant	Containment Air		24.6	24.6				
Reactor Coolant System (RCS)	Group 7 - Pressurizer to PORVs (PORV)	RCS-PORV-	15	ELBOW - PIPE	3	0.438"	SA403 GR.WP304 (FITTING)		SA376 GR.TP304 (SMLS PIPE)	Shop	653	2250		680	2485		Reactor Coolant	Containment Air	18.3	24.6	24.6				
Reactor Coolant System (RCS)	Group 7 - Pressurizer to PORVs (PORV)	RCS-PORV-	16	ELBOW - ELBOW	3	0.438"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)	Shop	653	2250		680	2485		Reactor Coolant	Containment Air	18.3	24.6	24.6				
Reactor Coolant System (RCS)	Group 7 - Pressurizer to PORVs (PORV)	RCS-PORV-	17	PIPE - VALVE 1RY8000A	3	0.438"	SA376 GR.TP304 (SMLS PIPE)		SA182 GR.F316 (FORG.)	Field	653	2250		680	2485		Reactor Coolant	Containment Air	18.2	24.6	24.6				
Reactor Coolant System (RCS)	Group 7 - Pressurizer to PORVs (PORV)	RCS-PORV-	18	3" VALVE BODY	3		SA182 GR.F316 (FORG.)		Not Applicable		653	2250		680	2485		Reactor Coolant	Containment Air		20.85	20.85				
Reactor Coolant System (RCS)	Group 7 - Pressurizer to PORVs (PORV)	RCS-PORV-	19	VALVE 1RY8000A - PIPE	3	0.438"	SA182 GR.F316 (FORG.)		SA376 GR.TP304 (SMLS PIPE)	Field	653	2250		680	2485		Reactor Coolant	Containment Air	18.2	20.85	20.85				
Reactor Coolant System (RCS)	Group 7 - Pressurizer to PORVs (PORV)	RCS-PORV-	20	TEE - ELBOW	3	0.438"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)	Shop	653	2250		680	2485		Reactor Coolant	Containment Air	18.3	24.6	24.6				
Reactor Coolant System (RCS)	Group 7 - Pressurizer to PORVs (PORV)	RCS-PORV-	21	ELBOW - ELBOW	3	0.438"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)	Shop	653	2250		680	2485		Reactor Coolant	Containment Air	18.3	24.6	24.6				

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in °F	Operating Pressure in psi	Operating Flow	Design Temperature in °F	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Reactor Coolant System (RCS)	Group 8 - Pressurizer to SRVs (SRV)	RCS-SRV-1	1	SAFE END - ELBOW	6	0.719"	SA182 GR.F316L (FORG.)		SA403 GR.WP304 (FITTING)	Field	653	2250	0 K#/HR	680	2485		Reactor Coolant Steam	Containment Air	18.8	25.5	25.5		Bimetallic weld for this nozzle on pressurizer list. Higher temperature pressurizer more susceptible to PWSCC.		
Reactor Coolant System (RCS)	Group 8 - Pressurizer to SRVs (SRV)	RCS-SRV-2	2	6" ELBOW	6	0.719"	SA403 GR.WP304 (FITTING)		Not Applicable		653	2250	0 K#/HR	680	2485		Reactor Coolant Steam	Containment Air		11.94	24.6		Pressure+DW+Thermal Data provided by Exelon on "BRW/BYRON BRW Stress Load.xls". Typically wrought stainless in other Westinghouse plants as well.		
Reactor Coolant System (RCS)	Group 8 - Pressurizer to SRVs (SRV)	RCS-SRV-3	3	ELBOW - PIPE	6	0.719"	SA403 GR.WP304 (FITTING)		SA376 GR.TP304 (SMLS PIPE)	Shop	653	2250	0 K#/HR	680	2485		Reactor Coolant Steam	Containment Air	18.3	24.6	24.6				
Reactor Coolant System (RCS)	Group 8 - Pressurizer to SRVs (SRV)	RCS-SRV-4	4	6" PIPE	6	0.719"	SA376 GR.TP304 (SMLS PIPE)		Not Applicable		653	2250	0 K#/HR	680	2485		Reactor Coolant Steam	Containment Air		24.6	24.6		Typical wrought stainless in other Westinghouse plants as well.		
Reactor Coolant System (RCS)	Group 8 - Pressurizer to SRVs (SRV)	RCS-SRV-5	5	PIPE - ELBOW	6	0.719"	SA376 GR.TP304 (SMLS PIPE)		SA403 GR.WP304 (FITTING)	Shop	653	2250	0 K#/HR	680	2485		Reactor Coolant Steam	Containment Air	18.2	24.6	24.6				
Reactor Coolant System (RCS)	Group 8 - Pressurizer to SRVs (SRV)	RCS-SRV-6	6	ELBOW - PIPE	6	0.719"	SA403 GR.WP304 (FITTING)		SA376 GR.TP304 (SMLS PIPE)	Shop	653	2250	0 K#/HR	680	2485		Reactor Coolant Condensed Steam	Containment Air	18.3	24.6	24.6				
Reactor Coolant System (RCS)	Group 8 - Pressurizer to SRVs (SRV)	RCS-SRV-7	7	PIPE - ELBOW	6	0.719"	SA376 GR.TP304 (SMLS PIPE)		SA403 GR.WP304 (FITTING)	Shop	653	2250	0 K#/HR	680	2485		Reactor Coolant Condensed Steam	Containment Air	18.2	24.6	24.6				
Reactor Coolant System (RCS)	Group 8 - Pressurizer to SRVs (SRV)	RCS-SRV-8	8	ELBOW - VALVE 1RY9010A FLANGE	6	0.719"	SA403 GR.WP304 (FITTING)		SA182 GR.F316 (FORG.)	Shop	653	2250	0 K#/HR	680	2485		Reactor Coolant Condensed Steam	Containment Air	18.3	10.62	24.6		Pressure+DW+Thermal Data provided by Exelon on "BRW/BYRON BRW Stress Load.xls"		
Reactor Coolant System (RCS)	Group 8 - Pressurizer to SRVs (SRV)	RCS-SRV-9	9	6" VALVE	6	0.719"	SA182 GR.F316 (FORG.)		Not Applicable		653	2250	0 K#/HR	680	2485		Reactor Coolant Condensed Steam	Containment Air		25.5	25.5				

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in °F	Operating Pressure in psi	Operating Flow	Design Temperature in °F	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Reactor Coolant System (RCS)	Group 9 - Reactor Coolant Pump (RCP)	RCS-RCP-1		PUMP CASING WITH SUCTION AND DISCHARGE NOZZLES			SA351 GR.CF8 (CASTING)		Not Applicable		556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air		25.5	25.5				304 SST CASTING
Reactor Coolant System (RCS)	Group 9 - Reactor Coolant Pump (RCP)	RCS-RCP-2		PUMP MAIN FLANGE			SA351 GR.CF8 (CASTING)		Not Applicable		556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air		25.5	25.5				304 SST CASTING
Reactor Coolant System (RCS)	Group 9 - Reactor Coolant Pump (RCP)	RCS-RCP-3		MAIN FLANGE BOLTS			SA540 GR.B-24 (BOLTING)		Not Applicable		ambient	ambient					Reactor Coolant	Containment Air		34.95	34.95				
Reactor Coolant System (RCS)	Group 9 - Reactor Coolant Pump (RCP)	RCS-RCP-4		THERMAL BARRIER AND HEAT EXCHANGER			SA182		Not Applicable		556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air		25.5	25.5			LER 302 2001-003: drilled hole heat exchanger on the RCP cover thermal barrier, below the mechanical seals and above the pump bearing	304 SST FORGING
Reactor Coolant System (RCS)	Group 9 - Reactor Coolant Pump (RCP)	RCS-RCP-5		SEAL HOUSING			SA182 GR.F304 (FORG.)		Not Applicable		120	2260	0 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air		30	30				
Reactor Coolant System (RCS)	Group 9 - Reactor Coolant Pump (RCP)	RCS-RCP-6		THERMAL BARRIER FLANGE BOLT			SA193 (FSAR)		Not Applicable		556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air		85.35	85.35				
Reactor Coolant System (RCS)	Group 9 - Reactor Coolant Pump (RCP)	RCS-RCP-7		PUMP SHAFT			SA182 GR.F347 (FORG.)		Not Applicable		556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air		25.5	25.5				

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in °F	Operating Pressure in psi	Operating Flow	Design Temperature in °F	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments	
Reactor Coolant System (RCS)	Group 10 - Reactor Pressure Vessel (RPV)	RCS-RPV-	1	LOWER CENTER DISC - DUTCHMAN (TRANSITION FORGING)	0	5.625"	SA533 GR.B CL.1 (PLATE)		SA508 CL.2 (FORG.)		556 to 559	2250	140 MM/HR	650	2485	140 MM/HR	Reactor Coolant	Containment Air	42.1	40.05	40.05		NUREG/CR-6260; INEL-95/0045 2/95 pp 5-61 Table 5-62.		PRESSURE BOUNDARY STRUCTURAL WELDS USE TYPICALLY 1/8"-3/16" Ni STEEL CONSUMABLE WIRE AND WELDING FLUX (LINDE 80). INTERIOR SURFACE CLAD WITH SS TP 304 AND BETTER OR ALLOY 82/182 WELD MATERIAL - B&W LR REPORT	
Reactor Coolant System (RCS)	Group 10 - Reactor Pressure Vessel (RPV)	RCS-RPV-	2	DUTCHMAN - RX VESSEL LOWER SHELL FORGING	0	8.625"	SA508 CL.2 (FORG.)		SA508 CL.2 (FORG.)		556 to 559	2250	140 MM/HR	650	2485	140 MM/HR	Reactor Coolant	Containment Air	42.1	45	45	0.018				
Reactor Coolant System (RCS)	Group 10 - Reactor Pressure Vessel (RPV)	RCS-RPV-	3	RX VESSEL LOWER SHELL - RX VESSEL INTERMEDIATE SHELL FORGING	0	8.625"	SA508 CL.2 (FORG.)		SA508 CL.2 (FORG.)		556 to 559	2250	140 MM/HR	650	2485	140 MM/HR	Reactor Coolant	Containment Air	42.1	45	45					
Reactor Coolant System (RCS)	Group 10 - Reactor Pressure Vessel (RPV)	RCS-RPV-	4	RX VESSEL INTERMEDIATE SHELL - RX VESSEL UPPER SHELL FORGING	0	8.625"	SA508 CL.2 (FORG.)		SA508 CL.2 (FORG.)		556 to 559	2250	140 MM/HR	650	2485	140 MM/HR	Reactor Coolant	Containment Air	42.1	45	45					
Reactor Coolant System (RCS)	Group 10 - Reactor Pressure Vessel (RPV)	RCS-RPV-	5	RX VESSEL UPPER SHELL - UPPER SHELL FLANGE FORGING	0	9.6875"	SA508 CL.2 (FORG.)		SA508 CL.2 (FORG.)		556 to 559	2250	140 MM/HR	650	2485	140 MM/HR	Reactor Coolant	Containment Air	42.1	45	45					
Reactor Coolant System (RCS)	Group 10 - Reactor Pressure Vessel (RPV)	RCS-RPV-	6	RX UPPER SHELL FORGING - OUTLET NOZZLE (22 DEG.)	0	9.6875"	SA508 CL.2 (FORG.)		SA508 CL.2 (FORG.)		620	2250	0 MM/HR	650	2485	35 MM/HR	Reactor Coolant	Containment Air	42.1	45	45	0.658				
Reactor Coolant System (RCS)	Group 10 - Reactor Pressure Vessel (RPV)	RCS-RPV-	7	INLET NOZZLE - RX UPPER SHELL FORGING (67 DEG.)	0	9.6875"	SA508 CL.2 (FORG.)		SA508 CL.2 (FORG.)		556 to 559	2250	140 MM/HR	650	2485	140 MM/HR	Reactor Coolant	Containment Air	42.1	45	45	0.29				
Reactor Coolant System (RCS)	Group 10 - Reactor Pressure Vessel (RPV)	RCS-RPV-	8	OUTLET NOZZLE FORGING - SAFE END (22 DEG.)	0	2.940"	SA508 CL.2 (FORG.)		SA182 GR.F316 (FORG.)		620	2250	0 MM/HR	650	2485	35 MM/HR	Reactor Coolant	Containment Air	42.1	45	45					
Reactor Coolant System (RCS)	Group 10 - Reactor Pressure Vessel (RPV)	RCS-RPV-	9	SAFE END - INLET NOZZLE FORGING (67 DEG.)	0	2.810"	SA182 GR.F316 (FORG.)		SA508 CL.2 (FORG.)		556 to 559	2250	140 MM/HR	650	2485	140 MM/HR	Reactor Coolant	Containment Air	18.8	25.5	25.5					
Reactor Coolant System (RCS)	Group 10 - Reactor Pressure Vessel (RPV)	RCS-RPV-	10	HOT LEG SAFE END - HL PIPE	29	2.33"MM	SA182 GR.F316 (FORG.)		SA376 GR.TP304N (SMLS PIPE)		620	2250	0 MM/HR	650	2485	35 MM/HR	Reactor Coolant	Containment Air	18.8	25.5	25.5					
Reactor Coolant System (RCS)	Group 10 - Reactor Pressure Vessel (RPV)	RCS-RPV-	11	CL ELBOW - COLD LEG SAFE END	27.5	2.21"MM	SA351 GR.CF8A (CASTING)		SA182 GR.F316 (FORG.)		556 to 559	2250	140 MM/HR	650	2485	140 MM/HR	Reactor Coolant	Containment Air	18.8	25.5	25.5					
Reactor Coolant System (RCS)	Group 10 - Reactor Pressure Vessel (RPV)	RCS-RPV-	12	INTERIOR ATTACHMENT OUTSIDE BELTLINE REGION (CORE GUIDE LUGS)	0		SA508 CL.2 (FORG.)		SB168 INCONEL		556 to 559	2250	140 MM/HR	650	2485	140 MM/HR	Reactor Coolant	Containment Air	42.1	45	45				CC-1336 MATERIAL INFO FROM B&W VESSEL REPORT. WELDED TO CLADDING	
Reactor Coolant System (RCS)	Group 10 - Reactor Pressure Vessel (RPV)	RCS-RPV-	13	RX VESSEL INSTRUMENTATION NOZZLE - PERIPHERAL	0	N/A	SA533 GR.B CL.1 (PLATE)		SA166 INCONEL		556 to 559	2250	140 MM/HR	650	2485	140 MM/HR	Reactor Coolant	Containment Air	42.1	40.05	40.05		LER 318 1989-007: PWSCC			
Reactor Coolant System (RCS)	Group 10 - Reactor Pressure Vessel (RPV)	RCS-RPV-	14	RX VESSEL INSTRUMENTATION NOZZLE - VESSEL CENTRAL	0	N/A	SA533 GR.B CL.1 (PLATE)		SA166 INCONEL		556 to 559	2250	140 MM/HR	650	2485	140 MM/HR	Reactor Coolant	Containment Air	42.1	40.05	40.05		LER 317 1994-004: Three nuts on one of the Incore Instrumentation flanges on the reactor vessel head experienced excessive corrosion. The rate was apparently due to the presence of wet boric acid on some of the flange components where we expected only dry boric acid.			
Reactor Coolant System (RCS)	Group 10 - Reactor Pressure Vessel (RPV)	RCS-RPV-	15	RX VESSEL INSTRUMENTATION NOZZLE - INTERMEDIATE	0	N/A	SA533 GR.B CL.1 (PLATE)		SA166 INCONEL		556 to 559	2250	140 MM/HR	650	2485	140 MM/HR	Reactor Coolant	Containment Air	42.1	40.05	40.05					
Reactor Coolant System (RCS)	Group 10 - Reactor Pressure Vessel (RPV)	RCS-RPV-	16	CLOSURE HEAD FLANGE - REACTOR CLOSURE HEAD RING	0	6.9375"	SA508 CL.2 (FORG.)		SA508 CL.2 (FORG.)		-600	2250	0 MM/HR	650	2485	35 MM/HR	Reactor Coolant	Containment Air	42.1	45	45		IN 90-39 CRACKING OF CLADDING AND HAZ IN 90-32 SURFACE CRACK IN THE WELD			
Reactor Coolant System (RCS)	Group 10 - Reactor Pressure Vessel (RPV)	RCS-RPV-	17	REACTOR CLOSURE HEAD RING - UPPER CENTER DISC	0	6.9375"	SA508 CL.2 (FORG.)		SA533 GR.B CL.1 (PLATE)		-600	2250	0 MM/HR	650	2485	35 MM/HR	Reactor Coolant	Containment Air	42.1	45	45					
Reactor Coolant System (RCS)	Group 10 - Reactor Pressure Vessel (RPV)	RCS-RPV-	18	REACTOR VESSEL CRD NOZZLES - PERIPHERAL	0	0.656"	SA533 GR.B CL.1 (PLATE)		SB167 INCONEL		-600	2250	0 MM/HR	650	2485	35 MM/HR	Reactor Coolant	Containment Air	42.1	40.05	40.05		LER 269 2000-006: boric acid deposits on outside of the penetrations, axial cracks on the ID at partial penetration weld of T/C on underside of RPV head, pinhole leaks and radial cracks across the fillet weld on CRDM.			
Reactor Coolant System (RCS)	Group 10 - Reactor Pressure Vessel (RPV)	RCS-RPV-	19	REACTOR VESSEL CRD NOZZLES - INTERMEDIATE	0	0.656"	SA533 GR.B CL.1 (PLATE)		SB167 INCONEL		-600	2250	0 MM/HR	650	2485	35 MM/HR	Reactor Coolant	Containment Air	42.1	40.05	40.05		Numerous Reports: PWSCC at Alloy 600, Alloy 182 J-groove and CRDM nozzles.			
Reactor Coolant System (RCS)	Group 10 - Reactor Pressure Vessel (RPV)	RCS-RPV-	20	REACTOR VESSEL CRD NOZZLES - CENTRAL	0	0.656"	SA533 GR.B CL.1 (PLATE)		SB167 INCONEL		-600	2250	0 MM/HR	650	2485	35 MM/HR	Reactor Coolant	Containment Air	42.1	40.05	40.05					
Reactor Coolant System (RCS)	Group 10 - Reactor Pressure Vessel (RPV)	RCS-RPV-	21	WELD IN PERIPHERAL CRD HOUSING (45 LOCATIONS)	0	0.656"	SB167 INCONEL		SA182 GR.F304H (FORG.)		-600	2250	0 MM/HR	650	2485	35 MM/HR	Reactor Coolant	Containment Air	25.4	34.95	34.95					
Reactor Coolant System (RCS)	Group 10 - Reactor Pressure Vessel (RPV)	RCS-RPV-	22	REACTOR VESSEL NOZZLE VENT PIPE	0	N/A	SA533 GR.B CL.1 (PLATE)		SB167 INCONEL		-600	2250	0 MM/HR	650	2485	35 MM/HR	Reactor Coolant	Containment Air	42.1	40.05	40.05					
Reactor Coolant System (RCS)	Group 10 - Reactor Pressure Vessel (RPV)	RCS-RPV-	23	REACTOR VESSEL SHELL			SA508 CL.2 (FORG.)		Not Applicable		556 to 559	2250	140 MM/HR	650	2485	140 MM/HR	Reactor Coolant	Containment Air		45	45					
Reactor Coolant System (RCS)	Group 10 - Reactor Pressure Vessel (RPV)	RCS-RPV-	24	REACTOR VESSEL CLOSURE HEAD			SA508 CL.2 (FORG.)		Not Applicable		-600	2250	0 MM/HR	650	2485	35 MM/HR	Reactor Coolant	Containment Air		45	45		LER 287 2003-001: triangular cavity approximately 5 inches wide, 7 inches long, and completely through the low alloy steel RPV head thickness, was downhill of nozzle #3 approaching nozzle #11.		AND SA533 GR.B CL.1	
Reactor Coolant System (RCS)	Group 10 - Reactor Pressure Vessel (RPV)	RCS-RPV-	25	RX INLET AND OUTLET NOZZLES			SA508 CL.2 (FORG.)		Not Applicable		IN: 556 to 559	2250	0 MM/HR	650	2485	35 MM/HR	Reactor Coolant	Containment Air		45	45	0.29	0.435 CUF for inlet. For outlet, the CUF no.'s are 0.658 and 0.987.		Should split inlet and outlet into two parts	
Reactor Coolant System (RCS)	Group 10 - Reactor Pressure Vessel (RPV)	RCS-RPV-	26	RX INLET AND OUTLET NOZZLE SAFE ENDS			SA182 GR.F316 (FORG.)		Not Applicable		IN: 556 to 559	2250	0 MM/HR	650	2485	35 MM/HR	Reactor Coolant	Containment Air		25.5	25.5				Should split inlet and outlet into two parts	
Reactor Coolant System (RCS)	Group 10 - Reactor Pressure Vessel (RPV)	RCS-RPV-	27	RX CLOSURE STUDS/NUTS			SA540 CL.3 GR.B-23 (BOLTING)		Not Applicable		ambient	ambient					Reactor Coolant	Containment Air		34.95	34.95				IN 86-108 BORIC ACID CORROSION	CC 1335-2 FROM B&W VESSEL REPORT
Reactor Coolant System (RCS)	Group 10 - Reactor Pressure Vessel (RPV)	RCS-RPV-	28	RX INTERIOR ATTACHMENTS (CORE GUIDE LUGS)			SB168 INCONEL		Not Applicable		556 to 559	2250	140 MM/HR	650	2485	140 MM/HR	Reactor Coolant	Containment Air		34.95	34.95					CC-1336 MATERIAL INFO FROM B&W VESSEL REPORT
Reactor Coolant System (RCS)	Group 10 - Reactor Pressure Vessel (RPV)	RCS-RPV-	29	RX CORE INSTRUMENTATION NOZZLES (BOTTOM HEAD)			SA166 INCONEL		Not Applicable		556 to 559	2250	140 MM/HR	650	2485	140 MM/HR	Reactor Coolant	Containment Air		34.95	34.95		LER 498 2003-003: axial cracking across the J groove weld and into the nozzle; PWSCC			MATERIAL INFO FROM B&W VESSEL REPORT
Reactor Coolant System (RCS)	Group 10 - Reactor Pressure Vessel (RPV)	RCS-RPV-	30	RX CRDM AND THERMOCOUPLE NOZZLES (TOP HEAD)			SB167 INCONEL		Not Applicable		-600	2250	0 MM/HR	650	2485	35 MM/HR	Reactor Coolant	Containment Air		34.95	34.95		IN 86-108 BORIC ACID CORROSION			MATERIAL INFO FROM B&W VESSEL REPORT
Reactor Coolant System (RCS)	Group 10 - Reactor Pressure Vessel (RPV)	RCS-RPV-	31	RX EXTERIOR ATTACHMENTS (LIFTING LUGS ON CLOSURE HEAD, SUPPORT SKIRT, SEISMIC SUPPORTS OR NOZZLE PADS)			LAS		Not Applicable		ambient	ambient					Reactor Coolant	Containment Air								MATERIAL INFO FROM B&W VESSEL REPORT
Reactor Coolant System (RCS)	Group 10 - Reactor Pressure Vessel (RPV)	RCS-RPV-	32	CRD HOUSING AND CONOPY SEALS			Carbon Steel (BAW-2251A)											Containment Air					LER 313 1989-043: CRD housing flange bolts corroded. LER 275 1988-004: deposits of boric acid and rust colored material extending down the CRDM housing result contaminants (chlorides and sulfates) in the stagnant liquid in the canopy annulus and in the crevices formed by the lack of weld penetration; higher oxygen content suspected in the canopy annulus degrees F the spares. This is due to the canopy seal element drive housing. (reactor vessel head nozzle flange is SA 182 Grade 316 SS. The CEDM is SA 182 and SA 312 Grade 347 or Grade 348 SS).		LER 285 1990-028: residual stress from welding was 10 ksi. hoop stress introduced by an operational pressure degrees F 2100 psi would be an additional 10.4 ksi which results in a total tensile stress in the weld overlay area degrees F greater than 20 ksi. stagnant oxygenated conditions (300 to 1300 ppm). PWHT. Cracks in inside diameter weld overlay region approximately two feet from the bottom flange of the control element drive housing. (reactor vessel head nozzle flange is SA 182 Grade 316 SS. The CEDM is SA 182 and SA 312 Grade 347 or Grade 348 SS).	

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in °F	Operating Pressure in psi	Operating Flow	Design Temperature in °F	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-1	1	CHANNEL HEAD - TUBESHEET	135.5	3.320"	SA216 GR.WCC (CASTING)		SA508 CL.2A (FORG.)		IN: 610 to 620 OUT: 556 to 559	2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Containment Air	30.7	29.1	29.1				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-2	2	TUBE SHEET - STUB BARREL	135.5	3.375"	SA508 CL.2A (PLATE)		SA533 GR.A CL.2 (PLATE)		544	1000	0 Mm/HR	572	1235	16 Mm/HR	Reactor Coolant	Secondary Water	42.1	45	45				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-3	3	STUB BARREL - LOWER SHELL (A)	135.38	3.0625"	SA533 GR.A CL.2 (PLATE)		SA533 GR.A CL.2 (PLATE)		544	1000	0 Mm/HR	572	1235	16 Mm/HR	Reactor Coolant	Secondary Water	58.9	45	45				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-4	4	LOWER SHELL (A) - LOWER SHELL (B)	135.38	3.0625"	SA533 GR.A CL.2 (PLATE)		SA533 GR.A CL.2 (PLATE)		544	1000	0 Mm/HR	572	1235	16 Mm/HR	Reactor Coolant	Secondary Water	58.9	45	45				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-5	5	LOWER SHELL (B) - TRANSITION CONE	135.38	3.0625"	SA533 GR.A CL.2 (PLATE)		SA533 GR.A CL.2 (PLATE)		544	1000	0 Mm/HR	572	1235	16 Mm/HR	Reactor Coolant	Secondary Water	58.9	45	45				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-6	6	TRANSITION CONE - UPPER SHELL (A)	176.25	3.875"	SA533 GR.A CL.2 (PLATE)		SA533 GR.A CL.2 (PLATE)		544	1000	0 Mm/HR	572	1235	16 Mm/HR	Reactor Coolant	Secondary Water	58.9	45	45				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-7	7	UPPER SHELL (A) - UPPER SHELL (B)	176.25	3.875"	SA533 GR.A CL.2 (PLATE)		SA533 GR.A CL.2 (PLATE)		544	1000	0 Mm/HR	572	1235	16 Mm/HR	Reactor Coolant	Secondary Water	58.9	45	45				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-8	8	UPPER SHELL (B) - UPPER HEAD WELD	176.25	3.813"	SA533 GR.A CL.2 (PLATE)		SA533 GR.A CL.2 (PLATE)		544	1000	0 Mm/HR	572	1235	16 Mm/HR	Reactor Coolant	Secondary Water	58.9	45	45				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-9	9	STUB BARREL - LONGITUDINAL WELD	176.25		SA533 GR.A CL.2 (PLATE)		SA533 GR.A CL.2 (PLATE)		544	1000	0 Mm/HR	572	1235	16 Mm/HR	Reactor Coolant	Secondary Water	58.9	45	45				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-10	10	LOWER SHELL A - LONGITUDINAL WELD	176.25		SA533 GR.A CL.2 (PLATE)		SA533 GR.A CL.2 (PLATE)		544	1000	0 Mm/HR	572	1235	16 Mm/HR	Reactor Coolant	Secondary Water	58.9	45	45				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-11	11	LOWER SHELL B - LONGITUDINAL WELD	176.25		SA533 GR.A CL.2 (PLATE)		SA533 GR.A CL.2 (PLATE)		544	1000	0 Mm/HR	572	1235	16 Mm/HR	Reactor Coolant	Secondary Water	58.9	45	45				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-12	12	TRANSITION CONE - LONGITUDINAL WELD (3)	176.25		SA533 GR.A CL.2 (PLATE)		SA533 GR.A CL.2 (PLATE)		544	1000	0 Mm/HR	572	1235	16 Mm/HR	Reactor Coolant	Secondary Water	58.9	45	45				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-13	13	UPPER SHELL A - LONGITUDINAL WELD	176.25		SA533 GR.A CL.2 (PLATE)		SA533 GR.A CL.2 (PLATE)		544	1000	0 Mm/HR	572	1235	16 Mm/HR	Reactor Coolant	Secondary Water	58.9	45	45				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-14	14	UPPER SHELL B - LONGITUDINAL WELD	176.25		SA533 GR.A CL.2 (PLATE)		SA533 GR.A CL.2 (PLATE)		544	1000	0 Mm/HR	572	1235	16 Mm/HR	Reactor Coolant	Secondary Water	58.9	45	45				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-15	15	UPPER HEAD - LONGITUDINAL WELD (2)	176.25		SA533 GR.A CL.2 (PLATE)		SA533 GR.A CL.2 (PLATE)		544	1000	0 Mm/HR	572	1235	16 Mm/HR	Reactor Coolant	Secondary Water	58.9	45	45				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-16	16	STUB BARREL - FW NOZZLE (NOZZLE 2)	16	3.375"	SA533 GR.A CL.2 (PLATE)		SA508 CL.2A (FORG.)		940	1000	0 Mm/HR	572	1235	16 Mm/HR	Reactor Coolant	Secondary Water	58.9	45	45				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-17	17	UPPER HEAD - MS NOZZLE (NOZZLE 3)	30.25	3.813"	SA533 GR.A CL.2 (PLATE)		SA508 CL.2A (FORG.)		544	1000	0 Mm/HR	572	1235	16 Mm/HR	Reactor Coolant	Secondary Water	58.9	45	45				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-18	18	UPPER BARREL (A) - AFW NOZZLE (NOZZLE 13)	6	3.875"	SA533 GR.A CL.2 (PLATE)		SA508 CL.2A (FORG.)		544	1000	0 Mm/HR	572	1235	16 Mm/HR	Reactor Coolant	Secondary Water	58.9	45	45				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-19	19	CHANNEL HEAD - PRIMARY NOZZLES (INLET AND OUTLET) - NOZZLE 1A & 1B	31		SA216 GR.WCC (CASTING)		SA216 GR.WCC (CASTING)		IN: 610 to 620 OUT: 556 to 559	2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Containment Air	30.7	29.1	29.1				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-20	20	CHANNEL HEAD - PRIMARY MANWAY (2) - NOZZLE 9&80B	16		SA216 GR.WCC (CASTING)		SA216 GR.WCC (CASTING)		IN: 610 to 620 OUT: 556 to 559	2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Containment Air	30.7	29.1	29.1				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-21	21	UPPER SHELL (B) - SECONDARY MANWAY (2) - NOZZLE 10A&10B	16		SA533 GR.A CL.2 (PLATE)		SA508 CL.2A (FORG.)		544	1000	0 Mm/HR	572	1235	16 Mm/HR	Reactor Coolant	Secondary Water	58.9	45	45				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-22	22	STUB BARREL - INSPECTION OPENING (4) - NOZZLE 11A TO 11D	2		SA533 GR.A CL.2 (PLATE)		SA508 CL.2A (FORG.)		544	1000	0 Mm/HR	572	1235	16 Mm/HR	Reactor Coolant	Secondary Water	58.9	45	45			LER 247 1989-012: 2 pinhole leaks in 1" inspection port nipple weld heat affected zone of lower shell barrel of steam generator at 83' elevation/ schedule 80 carbon steel	
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-23	23	SG TUBES - TUBE SHEET-ROLL TRANSITION			ALLOY 600		Not Applicable		IN: 610 to 620 OUT: 556 to 559	2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Containment Air	25	34.95	34.95			Numerous events of PWSCC, wastage, pitting	
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-24	24	SG TUBES - U-BEND AREA			ALLOY 600		Not Applicable		PRI: -588 SEC:544	PRI: 2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Containment Air	25	34.95	34.95			Numerous events of PWSCC at the apex	
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-25	25	SG TUBES - ALL OTHERS			ALLOY 600		Not Applicable		PRI: 556 to 620 SEC: 544	PRI: 2250	35 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Secondary Water	25	34.95	34.95			250 degree circumferential through wall crack (primary to secondary leak) in peripheral tube in the steam generator (SG) at the sixth support plate due to fatigue	
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-26	26	SG TUBES - SLUDGE AREA			ALLOY 600		Not Applicable		PRI: 556 to 620 SEC: 544	PRI: 2250	35 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Secondary Water	25	34.95	34.95				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-27	27	SG TUBES - FREE SPAN WATER			ALLOY 600		Not Applicable		PRI: 556 to 620 SEC: 544	PRI: 2250	35 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Secondary Water	25	34.95	34.95				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-28	28	SG TUBES - TUBESHEET/TSP (DRILLED)			ALLOY 600		Not Applicable		544	1000	0 Mm/HR	572	1235	16 Mm/HR	Reactor Coolant	Secondary Water	25	34.95	34.95			Numerous events of IGA/SCC at the crevice regions, denting at tube support plate interactions, pitting in the sludge pile region at the top of tubesheet, volumetric indications in the sludge pile region, PWSCC in the roll expanded regions, PWSCC and ODS/SCC at the tube support plate interactions, ODS/IGA	
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-29	29	SG TUBES - TUBESHEET/TSP (LINE CONTACT)			ALLOY 600		Not Applicable		PRI: 556 to 620 SEC: 544	PRI: 2250	35 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Secondary Water	25	34.95	34.95				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-30	30	SG TUBES - FREE SPAN STEAM			ALLOY 600		Not Applicable		PRI: 556 to 620 SEC: 544	PRI: 2250	35 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Secondary Water	25	34.95	34.95				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-31	31	SG TUBES - FREE SPAN BEND			ALLOY 600		Not Applicable		PRI: 556 to 620 SEC: 544	PRI: 2250	35 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Secondary Water	25	34.95	34.95			Numerous fretting due to vibration	
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-32	32	SG TUBES - SUPERHEATER REGION (OTSG)			ALLOY 600		Not Applicable		not avail.	not avail.	0	0	0	not avail.	not avail.	25	34.95	34.95					
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-33	33	SG TUBES - WEAR AT TOP AREA			ALLOY 600		Not Applicable		PRI: -588 SEC:544	PRI: 2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Containment Air	25	34.95	34.95				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-34	34	SG TUBES - TUBE SHEET-ROLL TRANSITION			ALLOY 600TT		Not Applicable		IN: 610 to 620 OUT: 556 to 559	2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Containment Air	25	34.95	34.95				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-35	35	SG TUBES - U-BEND AREA			ALLOY 600TT		Not Applicable		PRI: -588 SEC:544	PRI: 2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Containment Air	25	34.95	34.95				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-36	36	SG TUBES - ALL OTHERS			ALLOY 600TT		Not Applicable		PRI: 556 to 620 SEC: 544	PRI: 2250	35 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Secondary Water	25	34.95	34.95				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-37	37	SG TUBES - SLUDGE AREA			ALLOY 600TT		Not Applicable		PRI: 556 to 620 SEC: 544	PRI: 2250	35 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Secondary Water	25	34.95	34.95				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-38	38	SG TUBES - FREE SPAN WATER			ALLOY 600TT		Not Applicable		PRI: 556 to 620 SEC: 544	PRI: 2250	35 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Secondary Water	25	34.95	34.95				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-39	39	SG TUBES - TUBESHEET/TSP (DRILLED)			ALLOY 600TT		Not Applicable		544	1000	0 Mm/HR	572	1235	16 Mm/HR	Reactor Coolant	Secondary Water	25	34.95	34.95				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-40	40	SG TUBES - TUBESHEET/TSP (LINE CONTACT)			ALLOY 600TT		Not Applicable		544	1000	0 Mm/HR	572	1235	16 Mm/HR	Reactor Coolant	Secondary Water	25	34.95	34.95				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-41	41	SG TUBES - FREE SPAN STEAM			ALLOY 600TT		Not Applicable		PRI: 556 to 620 SEC: 544	PRI: 2250	35 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Secondary Water	25	34.95	34.95				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-42	42	SG TUBES - FREE SPAN BEND			ALLOY 600TT		Not Applicable		PRI: 556 to 620 SEC: 544	PRI: 2250	35 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Secondary Water	25	34.95	34.95				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-43	43	SG TUBES - SUPERHEATER REGION (OTSG)			ALLOY 600TT		Not Applicable		not avail.	not avail.	0	0	0	not avail.	not avail.	25	34.95	34.95					
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-44	44	SG TUBES - WEAR AT TOP AREA			ALLOY 600TT		Not Applicable		PRI: -588 SEC:544	PRI: 2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Containment Air	25	34.95	34.95				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-45	45	SG TUBES - TUBE SHEET-ROLL TRANSITION			ALLOY 690		Not Applicable		IN: 610 to 620 OUT: 556 to 559	2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Containment Air	25	34.95	34.95				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-46	46	SG TUBES - U-BEND AREA			ALLOY 690		Not Applicable		PRI: -588 SEC:544	PRI: 2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Containment Air	25	34.95	34.95				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-47	47	SG TUBES - ALL OTHERS			ALLOY 690		Not Applicable		PRI: 556 to 620 SEC: 544	PRI: 2250	35 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Secondary Water	25	34.95	34.95				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-48	48	SG TUBES - SLUDGE AREA			ALLOY 690		Not Applicable		PRI: 556 to 620 SEC: 544	PRI: 2250	35 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Secondary Water	25	34.95	34.95				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-49	49	SG TUBES - FREE SPAN WATER			ALLOY 690		Not Applicable		PRI: 556 to 620 SEC: 544	PRI: 2250	35 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Secondary Water	25	34.95	34.95				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-50	50	SG TUBES - TUBESHEET/TSP (DRILLED)			ALLOY 690		Not Applicable		544	1000	0 Mm/HR	572	1235	16 Mm/HR	Reactor Coolant	Secondary Water	25	34.95	34.95				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-51	51	SG TUBES - TUBESHEET/TSP (LINE CONTACT)			ALLOY 690		Not Applicable		544	1000	0 Mm/HR	572	1235	16 Mm/HR	Reactor Coolant	Secondary Water	25	34.95	34.95				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-52	52	SG TUBES - FREE SPAN STEAM			ALLOY 690		Not Applicable		PRI: 556 to 620 SEC: 544	PRI: 2250	35 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Secondary Water	25	34.95	34.95				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-53	53	SG TUBES - FREE SPAN BEND			AL																		

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in °F	Operating Pressure in psi	Operating Flow	Design Temperature in °F	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	56	PRIMARY INLET NOZZLE			SA508 CL 2A (FORG.)		Not Applicable		610 to 620	2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Containment Air	42.1	45	45				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	57	PRIMARY OUTLET NOZZLE			SA508 CL 2A (FORG.)		Not Applicable		556 to 559	2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Containment Air	42.1	45	45				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	58	STEAM OUTLET NOZZLE			SA508 CL 2A (FORG.)		Not Applicable		544	1000	0 Mm/HR	572	1235	16 Mm/HR	Reactor Coolant	Secondary Water	42.1	45	45				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	59	FWAFW NOZZLE			SA508 CL 2A (FORG.)		Not Applicable		544	1000	0 Mm/HR	572	1235	16 Mm/HR	Reactor Coolant	Secondary Water	42.1	45	45		EPIX-397: Leakage from SG downcomer sample nozzle (Ni-alloy - J-weld). LER 323 1994-006: steam generator feedwater ring degradation/ Carbon Steel (FAC)		
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	60	TUBE SHEET			SA508 CL 2A (FORG.)		Not Applicable		PRI: 556 to 620 SEC: 544	PRI: 2250	35 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Secondary Water	42.1	45	45				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	61	NOZZLE SAFE ENDS			SA336 TP.F316N/F316LN		Not Applicable		PRI: 556 to 620 SEC: 544	PRI: 2250	35 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Secondary Water						F316LN	
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	62	SG SHELL			SA533 GR.A CL.2 (PLATE)		Not Applicable		544	1000	0 Mm/HR	572	1235	16 Mm/HR	Reactor Coolant	Secondary Water	58.9	45	45				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	63	SG TOP HEAD			SA533 GR.A CL.2 (PLATE)		Not Applicable		544	1000	0 Mm/HR	572	1235	16 Mm/HR	Reactor Coolant	Secondary Water	58.9	45	45				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	64	SG CHANNEL HEAD			SA216 GR.WCC (CASTING)		Not Applicable		IN: 610 to 620 OUT: 556 to 559	2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Containment Air	30.7	29.1	29.1		LER 414 2001-002: adjacent to the SG bowl drain nozzle at the partial penetration weld between the nozzle coupling and outer channel head surface. Alloy 600 subject to PWSCC.	FOR UNIT 2: MATL. SA-508, CL. 2 OR 3	
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	65	PRIMARY DIVIDER PLATE			SB163 INCONEL		Not Applicable		IN: 610 to 620 OUT: 556 to 559	2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Containment Air	25	34.95	34.95				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	66	PRIMARY MANWAY AND COVER ASSEMBLY (Bolts)			SA533 GR.A CL.2 (PLATE) (bolts - SA193, GR. B7)		Not Applicable		IN: 610 to 620 OUT: 556 to 559	2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Containment Air	58.9	45	45			CLOSURE BOLTS SA-193, GR. B7	
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	67	SECONDARY MANWAY AND COVER ASSEMBLY			SA516 GR.70 (PLATE)		Not Applicable		544	1000	0 Mm/HR	572	1235	16 Mm/HR	Reactor Coolant	Secondary Water						ASSUMED SAME FOR INSPECTION OPENINGS IN STUB BARREL. CLOSURE BOLTS SA-193, GR. B7	
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	68	SG TUBE, PLUGS/SLEEVES			ALLOY 600		Not Applicable		IN: 610 to 620 OUT: 556 to 559	2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Containment Air	25	34.95	34.95		Numerous SG Tube leak, pitting, wastage, blockage. Thermally treated Inconel 600 steam generator mechanical tube plug failed due to circumferential cracks by PWSCC (improperly manufactured plugs of heat 3513).		
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	69	SG TUBE, PLUGS/SLEEVES			ALLOY 600TT		Not Applicable		IN: 610 to 620 OUT: 556 to 559	2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Containment Air	25	34.95	34.95				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	70	SG TUBE, PLUGS/SLEEVES			ALLOY 690		Not Applicable		IN: 610 to 620 OUT: 556 to 559	2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Containment Air	25	34.95	34.95				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	71	Tube Support Plates and preheater baffles			Carbon Steel or Stainless Steel with variations in geometric designs		Not Applicable		544	1000	0 Mm/HR	572	1235	16 Mm/HR		Secondary Water	85.3	85.35	85.35				

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in °F	Operating Pressure in psi	Operating Flow	Design Temperature in °F	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Reactor Coolant System (RCS)	Group 12 - Reactor Vessel Internals (RVI)	RCS-RVI-	1	UPPER INTERNALS ASSEMBLY - UPPER SUPPORT PLATE			SS		Not Applicable		620	2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Reactor Coolant							ACTS AS THE DIVIDER BETWEEN THE UPPER PLENUM AND THE UPPER HEAD. THE UPPER SUPPORT COLUMNS AND GUIDE TUBES ARE ATTACHED TO THIS. POSITIONS AND SUPPORTS THE UCP. THERMOCOUPLE COLUMNS AND GUIDES.
Reactor Coolant System (RCS)	Group 12 - Reactor Vessel Internals (RVI)	RCS-RVI-	2	UPPER INTERNALS ASSEMBLY - UPPER SUPPORT COLUMN			SS CASS		Not Applicable		620	2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Reactor Coolant							ATTACHED TO BOTH USP AND UCP.
Reactor Coolant System (RCS)	Group 12 - Reactor Vessel Internals (RVI)	RCS-RVI-	3	UPPER INTERNALS ASSEMBLY - UPPER SUPPORT COLUMN BOLTS			SS		Not Applicable		620	2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Reactor Coolant							
Reactor Coolant System (RCS)	Group 12 - Reactor Vessel Internals (RVI)	RCS-RVI-	4	UPPER INTERNALS ASSEMBLY - UPPER CORE PLATE			SS		Not Applicable		620	2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Reactor Coolant							POSITIONS THE UPPER ENDS OF THE FUEL ASSEMBLIES AND THE LOWER ENDS OF THE CRD GUIDE TUBES
Reactor Coolant System (RCS)	Group 12 - Reactor Vessel Internals (RVI)	RCS-RVI-	5	UPPER INTERNALS ASSEMBLY - UPPER CORE PLATE ALIGNMENT PIN			NI ALLOY		Not Applicable		620	2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Reactor Coolant							RESTRAINS THE LATERAL MOVEMENT OF UCP AT EACH OF THE 4 MAJOR REACTOR AXES. ARE WELDED TO THE CORE BARREL AND INTERFACE WITH UCP THROUGH CORE PLATE INSERTS.
Reactor Coolant System (RCS)	Group 12 - Reactor Vessel Internals (RVI)	RCS-RVI-	6	UPPER INTERNALS ASSEMBLY - FUEL ALIGNMENT PINS			NI ALLOY		Not Applicable		620	2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Reactor Coolant							TWO FOR EACH FUEL ASSEMBLY LOCATED BOTTOM SIDE OF THE UCP FOR POSITIONING AND SUPPORTING FUEL ASSEMBLIES
Reactor Coolant System (RCS)	Group 12 - Reactor Vessel Internals (RVI)	RCS-RVI-	7	UPPER INTERNALS ASSEMBLY - HOLDDOWN SPRING			SS		Not Applicable		-600	2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Reactor Coolant							PROVIDES PRELOAD TO LIMIT AXIAL MOTION OF THE UPPER AND LOWER INTERNALS ASSEMBLIES. LOCATED BETWEEN THE FLANGES OF THE USP AND THE CORE BARREL
Reactor Coolant System (RCS)	Group 12 - Reactor Vessel Internals (RVI)	RCS-RVI-	8	RCCA GUIDE TUBE ASSEMBLIES - RCCA GUIDE TUBES			SS		Not Applicable		620	2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Reactor Coolant							GUIDE TUBES ARE BOLTED TO THE USP AND PINNED AT THE UCP WITH SPRING-TYPE PINS
Reactor Coolant System (RCS)	Group 12 - Reactor Vessel Internals (RVI)	RCS-RVI-	9	RCCA GUIDE TUBE ASSEMBLIES - RCCA GUIDE TUBE BOLTS			SS		Not Applicable		620	2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Reactor Coolant							
Reactor Coolant System (RCS)	Group 12 - Reactor Vessel Internals (RVI)	RCS-RVI-	10	RCCA GUIDE TUBE ASSEMBLIES - RCCA GUIDE TUBE SUPPORT PINS			NI ALLOY (X-750)		Not Applicable		620	2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Reactor Coolant							HAS FAILED DUE TO SCC. REPLACED WITH HEAT TREATED OF SAME MATL. TWO PLANTS HAVE USED 316 CW SS
Reactor Coolant System (RCS)	Group 12 - Reactor Vessel Internals (RVI)	RCS-RVI-	11	CORE BARREL - CORE BARREL			SS		Not Applicable		556 to 620	2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Reactor Coolant							SUPPORTS THE CORE. RESTS DIRECTLY ON THE LCP THAT IS ULTIMATELY SUPPORTED BY THE CORE BARREL. ATTACHED AT LCP PERIPHERY WHICH IS SUPPORTED BY LOWER SUPPORT COLUMNS THAT ARE ATTACHED TO THE LOWER SUPPORT FORGING WHICH IS WELDED AT ITS EDGE TO THE BOTTOM E
Reactor Coolant System (RCS)	Group 12 - Reactor Vessel Internals (RVI)	RCS-RVI-	12	CORE BARREL - CORE BARREL FLANGE			SS		Not Applicable		556 to 620	2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Reactor Coolant							
Reactor Coolant System (RCS)	Group 12 - Reactor Vessel Internals (RVI)	RCS-RVI-	13	CORE BARREL - CORE BARREL OUTLET NOZZLES			SS		Not Applicable		620	2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Reactor Coolant							
Reactor Coolant System (RCS)	Group 12 - Reactor Vessel Internals (RVI)	RCS-RVI-	14	CORE BARREL - THERMAL SHIELD			SS		Not Applicable		556 to 559	2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Reactor Coolant							
Reactor Coolant System (RCS)	Group 12 - Reactor Vessel Internals (RVI)	RCS-RVI-	15	BAFFLE AND FORMER ASSEMBLY - BAFFLE AND FORMER PLATES			SS		Not Applicable		556 to 620	2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Reactor Coolant							VERTICAL PLATES (BAFFLES) AND HORIZONTAL PLATES (FORMERS). BAFFLE PLATES ARE BOLTED TO FORMERS WHICH ARE ATTACHED TO CORE BARREL ID BY BOLTS
Reactor Coolant System (RCS)	Group 12 - Reactor Vessel Internals (RVI)	RCS-RVI-	16	BAFFLE AND FORMER ASSEMBLY - BAFFLE/FORMER BOLTS			SS TP347		Not Applicable		556 to 620	2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Reactor Coolant							AND COLD WORKED TP316 OR NI ALLOY
Reactor Coolant System (RCS)	Group 12 - Reactor Vessel Internals (RVI)	RCS-RVI-	17	LOWER INTERNAL ASSEMBLY - LOWER CORE PLATE			SS		Not Applicable		556 to 559	2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Reactor Coolant							
Reactor Coolant System (RCS)	Group 12 - Reactor Vessel Internals (RVI)	RCS-RVI-	18	LOWER INTERNAL ASSEMBLY - FUEL ALIGNMENT PINS			SS		Not Applicable		556 to 559	2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Reactor Coolant							TWO PER FUEL ASSEMBLY ATTACHED TO THE LCP THAT POSITION THE FUEL ASSEMBLIES.
Reactor Coolant System (RCS)	Group 12 - Reactor Vessel Internals (RVI)	RCS-RVI-	19	LOWER INTERNAL ASSEMBLY - LOWER SUPPORT FORGING OR CASTING			CASS		Not Applicable		556 to 559	2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Reactor Coolant							
Reactor Coolant System (RCS)	Group 12 - Reactor Vessel Internals (RVI)	RCS-RVI-	20	LOWER INTERNAL ASSEMBLY - LOWER SUPPORT PLATE COLUMNS			SS CASS		Not Applicable		556 to 559	2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Reactor Coolant							SUPPORT THE LCP AND TRANSMIT LOADS FROM THE LCP TO THE LOWER SUPPORT FORGING
Reactor Coolant System (RCS)	Group 12 - Reactor Vessel Internals (RVI)	RCS-RVI-	21	LOWER INTERNAL ASSEMBLY - LOWER SUPPORT PLATE COLUMN BOLTS			NI ALLOY		Not Applicable		556 to 559	2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Reactor Coolant							COLUMNS ARE ATTACHED WITH THREADED FASTENERS TO THE LCP AND A THREADED JOINT TO THE LOWER SUPPORT
Reactor Coolant System (RCS)	Group 12 - Reactor Vessel Internals (RVI)	RCS-RVI-	22	LOWER INTERNAL ASSEMBLY - RADIAL SUPPORT KEYS AND CREVIS INSERTS			SS		Not Applicable		556 to 559	2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Reactor Coolant							
Reactor Coolant System (RCS)	Group 12 - Reactor Vessel Internals (RVI)	RCS-RVI-	23	LOWER INTERNAL ASSEMBLY - CLEVIS INSERT BOLTS			NI ALLOY		Not Applicable		556 to 559	2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Reactor Coolant							
Reactor Coolant System (RCS)	Group 12 - Reactor Vessel Internals (RVI)	RCS-RVI-	24	INSTRUMENTATION SUPPORT STRUCTURE - FLUX THIMBLE GUIDE TUBES			SS		Not Applicable		556 to 559	2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Reactor Coolant							
Reactor Coolant System (RCS)	Group 12 - Reactor Vessel Internals (RVI)	RCS-RVI-	25	INSTRUMENTATION SUPPORT STRUCTURE - FLUX THIMBLES			SS		Not Applicable		556 to 559	2250	0 Mm/HR	650	2485	35 Mm/HR	Reactor Coolant	Reactor Coolant							

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in °F	Operating Pressure in psi	Operating Flow	Design Temperature in °F	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYP-	1	VALVE 1RC8002A CL NOZZLE - ELBOW	8	0.906"	SA351 GR.CF8M (CASTING)		SA403 GR.WP304 (FITTING)	Field	-600	2250	0	650	2485		Reactor Coolant	Containment Air	18.30	24.60	36.60		at 600F		
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYP-	2	ELBOW - ELBOW	8	0.906"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)	Shop	-600	2250	0	650	2485		Reactor Coolant	Containment Air	18.30	24.60	36.60		at 600F		
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYP-	3	ELBOW	8	0.906"	SA403 GR.WP304 (FITTING)		Not Applicable		-600	2250	0	650	2485		Reactor Coolant	Containment Air		24.60	36.60		at 600F		
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYP-	4	ELBOW - PIPE	8	0.906"	SA403 GR.WP304 (FITTING)		SA376 GR.TP304 (SMLS PIPE)	Shop	-600	2250	0	650	2485		Reactor Coolant	Containment Air	18.20	24.60	36.40		at 600F		
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYP-	5	PIPE - SOCKOLET	1.5	0.281"	SA376 GR.TP304 (SMLS PIPE)		SA182 GR.F304 (FORG.)	Shop	-600	2250	0	650	2485		Reactor Coolant	Containment Air	23.66	20.85	36.40		at 600F		
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYP-	6	PIPE - PIPE	8	0.906"	SA376 GR.TP304 (SMLS PIPE)		SA376 GR.TP304 (SMLS PIPE)	Field	-600	2250	0	650	2485		Reactor Coolant	Containment Air	18.20	24.60	36.40		at 600F		
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYP-	7	PIPE	8	0.906"	SA376 GR.TP304 (SMLS PIPE)		Not Applicable		-600	2250	0	650	2485		Reactor Coolant	Containment Air		24.60	36.40		at 600F		
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYP-	8	PIPE - ELBOW	8	0.906"	SA376 GR.TP304 (SMLS PIPE)		SA403 GR.WP304 (FITTING)	Shop	-600	2250	0	650	2485		Reactor Coolant	Containment Air	18.20	24.60	36.40		at 600F		
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYP-	9	PIPE - VALVE 1RC8003A	8	0.906"	SA376 GR.TP304 (SMLS PIPE)		SA182 GR.F316 (FORG.)	Field	-600	2250	0	650	2485		Reactor Coolant	Containment Air	18.20	24.60	36.40		at 600F		
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)		10	RELIEF VALVE	8	0.906"	SA182 GR.F316 (FORG.)		Not Applicable		-600	2250	0	650	2485		Reactor Coolant	Containment Air		25.50	37.60		at 600F		
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYP-	11	VALVE 1RC8003A - PIPE	8	0.906"	SA376 GR.TP304 (SMLS PIPE)		SA182 GR.F316 (FORG.)	Field	-600	2250	0	650	2485		Reactor Coolant	Containment Air	18.20	24.60	36.40		at 600F		
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYP-	12	PIPE - VALVE 1RC8001A NOZZLE	8	0.906"	SA376 GR.TP304 (SMLS PIPE)		SA351 GR.CF8M (CASTING)	Field	-600	2250	0	650	2485		Reactor Coolant	Containment Air	18.20	24.60	36.40		at 600F		
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYP-	13	BRANCH CONNECTION - PIPE	1.5	0.281"	SA182 GR.F304 (FORG.)		SA376 GR.TP304 (SMLS PIPE)	Field	-600	2250	0	650	2485		Reactor Coolant	Containment Air	23.66	20.85	36.40		at 600F		
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYP-	14	PIPE - ELBOW	1.5	0.281"	SA376 GR.TP304 (SMLS PIPE)		SA182 GR.F304 (FORG.)	Field	-600	2250	0	650	2485		Reactor Coolant	Containment Air	23.66	20.85	36.40		at 600F		
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYP-	15	ELBOW	1.5	0.281"	SA376 GR.TP304 (SMLS PIPE)		Not Applicable		-600	2250	0	650	2485		Reactor Coolant	Containment Air		24.60	36.40		at 600F		
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYP-	16	ELBOW - PIPE	1.5	0.281"	SA182 GR.F304 (FORG.)		SA376 GR.TP304 (SMLS PIPE)	Field	-600	2250	0	650	2485		Reactor Coolant	Containment Air	23.66	20.85	36.40		at 600F		
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYP-	17	PIPE	1.5	0.281"	SA182 GR.F304 (FORG.)		Not Applicable		-600	2250	0	650	2485		Reactor Coolant	Containment Air		20.85	36.40		at 600F		
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYP-	18	PIPE - VALVE 1RC8045A	1.5	0.281"	SA182 GR.F316 (FORG.)		SA376 GR.TP304 (SMLS PIPE)	Field	-600	2250	0	650	2485		Reactor Coolant	Containment Air	23.66	24.60	36.40		at 600F		
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYP-	19	CHECK VALVE	1.5	0.281"	SA182 GR.F316 (FORG.)		Not Applicable		-600	2250	0	650	2485		Reactor Coolant	Containment Air		25.50	37.60		at 600F		
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYP-	20	VALVE 1RC8045A - PIPE	1.5	0.281"	SA182 GR.F316 (FORG.)		SA376 GR.TP304 (SMLS PIPE)	Field	-600	2250	0	650	2485		Reactor Coolant	Containment Air	23.66	24.60	36.40		at 600F		
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYP-	21	PIPE - TEE	1.5	0.281"	SA376 GR.TP304 (SMLS PIPE)		SA182 GR.F304 (FORG.)	Field	-600	2250	0	650	2485		Reactor Coolant	Containment Air	23.66	20.85	36.40		at 600F		
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYP-	22	FULL SIZE TEE	1.5	0.281"	SA182 GR.F304 (FORG.)		Not Applicable		-600	2250	0	650	2485		Reactor Coolant	Containment Air		20.85	36.40		at 600F		
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYP-	23	TEE - 1.5"X.75" REDUCER	1.5	0.281"	SA182 GR.F304 (FORG.)		SA182 GR.F304 (FORG.)	Field	-600	2250	0	650	2485		Reactor Coolant	Containment Air	23.66	20.85	36.40		at 600F		
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYP-	24	1.5"X.75" REDUCER	1.5	0.281"	SA182 GR.F304 (FORG.)		Not Applicable		-600	2250	0	650	2485		Reactor Coolant	Containment Air		20.85	36.40		at 600F		
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYP-	25	TEE - PIPE	1.5	0.281"	SA182 GR.F304 (FORG.)		SA376 GR.TP304 (SMLS PIPE)	Field	-600	2250	0	650	2485		Reactor Coolant	Containment Air	23.66	20.85	36.40		at 600F		
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYP-	26	PIPE - TEE	1.5	0.281"	SA376 GR.TP304 (SMLS PIPE)		SA182 GR.F304 (FORG.)	Field	-600	2250	0	650	2485		Reactor Coolant	Containment Air	23.66	20.85	36.40		at 600F		
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYP-	27	3"X1.5" REDUCER	1.5	0.281"	SA182 GR.F304 (FORG.)		Not Applicable		-600	2250	0	650	2485		Reactor Coolant	Containment Air		20.85	36.40		at 600F		
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYP-	28	3"X1.5" REDUCER - PIPE	1.5	0.281"	SA182 GR.F304 (FORG.)		SA376 GR.TP304 (SMLS PIPE)	Field	-600	2250	0	650	2485		Reactor Coolant	Containment Air	23.66	20.85	36.40		at 600F		
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYP-	29	PIPE - VALVE 1RC8042A	1.5	0.281"	SA376 GR.TP304 (SMLS PIPE)		SA182 GR.F316 (FORG.)	Field	-600	2250	0	650	2485		Reactor Coolant	Containment Air	23.66	24.60	36.40		at 600F	LER 338 1991-011: weld on line between the "B" cold leg LP stop valve and the isolation valve for the 3/4 inch (3/8inch inside diameter) upper disc pressurization line - fatigue failure	
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYP-	30	GATE VALVE	1.5	0.281"	SA182 GR.F316 (FORG.)		Not Applicable		-600	2250	0	650	2485		Reactor Coolant	Containment Air		25.50	37.60		at 600F		
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYP-	31	VALVE 1RC8042A - PIPE	1.5	0.281"	SA182 GR.F316 (FORG.)		SA376 GR.TP304 (SMLS PIPE)	Field	-600	2250	0	650	2485		Reactor Coolant	Containment Air	23.66	24.60	36.40		at 600F		
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYP-	32	PIPE - FLANGE	1.5	0.281"	SA376 GR.TP304 (SMLS PIPE)		SA182 GR.F304 (FORG.)	Field	-600	2250	0	650	2485		Reactor Coolant	Containment Air	23.66	20.85	36.40		at 600F		
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYP-	33	PIPE FLANGE	1.5	0.281"	SA182 GR.F304 (FORG.)		Not Applicable		-600	2250	0	650	2485		Reactor Coolant	Containment Air		20.85	36.40		at 600F		
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYP-	34	FLANGE - PIPE	1.5	0.281"	SA182 GR.F304 (FORG.)		SA376 GR.TP304 (SMLS PIPE)	Field	-600	2250	0	650	2485		Reactor Coolant	Containment Air	23.66	20.85	36.40		at 600F		
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYP-	35	PIPE - TEE	1.5	0.281"	SA376 GR.TP304 (SMLS PIPE)		SA182 GR.F304 (FORG.)	Field	-600	2250	0	650	2485		Reactor Coolant	Containment Air	23.66	20.85	36.40		at 600F		
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYP-	36	TEE - 1.5"X.75" REDUCER	1.5	0.281"	SA182 GR.F304 (FORG.)		SA182 GR.F304 (FORG.)	Field	-600	2250	0	650	2485		Reactor Coolant	Containment Air	23.66	20.85	36.40		at 600F		
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYP-	37	FULL SIZE ANGLE TEE	1.5	0.281"	SA182 GR.F304 (FORG.)		Not Applicable		-600	2250	0	650	2485		Reactor Coolant	Containment Air		20.85	36.40		at 600F		
Emergency Core Cooling Systems	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYP-	38	LOOP STOP VALVE WITH EACH HAVING A 8" NOZZLE FOR LOOP BYPASS			SA351 GR.CF8M (CASTING)		Not Applicable		-600	2250	0	650	2485		Reactor Coolant	Containment Air							VALVE DETAILS NOT AVAILBALE

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in °F	Operating Pressure in psi	Operating Flow	Design Temperature in °F	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPs)	ECCS-CVPMPs	42	FLANGE - ELBOW	6	0.280"	SA182 GR.F304 (FORG.)		SA403 GR.WP304 (FITTING)	Shop	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPs)	ECCS-CVPMPs	43	ELBOW - PUMP 1CV01PB FLANGE	6	0.280"	SA403 GR.WP304 (FITTING)		SA182 GR.F304 (FORG.)	Shop	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPs)	ECCS-CVPMPs	44	FLANGE - PUMP 1CV01PB CASING	6	0.280"	SA182 GR.F304 (FORG.)		SA182 GR.F304 (FORG.)		200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPs)	ECCS-CVPMPs	45	TEE - PIPE	6	0.280"	SA403 GR.WP304 (FITTING)		SA312 GR.TP304 (WLD. & SMLS PIPE)	Field	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPs)	ECCS-CVPMPs	46	PIPE - ELBOW	6	0.280"	SA312 GR.TP304 (WLD. & SMLS PIPE)		SA403 GR.WP304 (FITTING)	Shop	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPs)	ECCS-CVPMPs	47	ELBOW - VALVE 1SI8924	6	0.280"	SA403 GR.WP304 (FITTING)		SA182 GR.F316 (FORG.)	Field	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPs)	ECCS-CVPMPs	48	VALVE 1CV8804A	8	0.322"	SA182 GR.F316 (FORG.)		Not Applicable		200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air		34.95	69.9		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPs)	ECCS-CVPMPs	49	VALVE 1CV8804A - PIPE	8	0.322"	SA182 GR.F316 (FORG.)		SA312 GR.TP304 (WLD. & SMLS PIPE)	Field	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPs)	ECCS-CVPMPs	50	PIPE - ELBOW	8	0.322"	SA312 GR.TP304 (WLD. & SMLS PIPE)		SA403 GR.WP304 (FITTING)	Field	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPs)	ECCS-CVPMPs	51	ELBOW - PIPE	8	0.322"	SA403 GR.WP304 (FITTING)		SA312 GR.TP304 (WLD. & SMLS PIPE)	Field	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPs)	ECCS-CVPMPs	52	PIPE - TEE	8	0.322"	SA312 GR.TP304 (WLD. & SMLS PIPE)		SA403 GR.WP304 (FITTING)	Shop	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPs)	ECCS-CVPMPs	53	8"X4" REDUCER - PIPE	8	0.322"	SA403 GR.WP304 (FITTING)		SA312 GR.TP304 (WLD. & SMLS PIPE)	Field	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPs)	ECCS-CVPMPs	54	PIPE - PIPE	8	0.322"	SA312 GR.TP304 (WLD. & SMLS PIPE)		SA312 GR.TP304 (WLD. & SMLS PIPE)	Field	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPs)	ECCS-CVPMPs	55	PIPE - ELBOW	8	0.322"	SA312 GR.TP304 (WLD. & SMLS PIPE)		SA403 GR.WP304 (FITTING)	Field	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPs)	ECCS-CVPMPs	56	ELBOW - PIPE	8	0.322"	SA403 GR.WP304 (FITTING)		SA312 GR.TP304 (WLD. & SMLS PIPE)	Field	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPs)	ECCS-CVPMPs	57	CVCS PUMPS			SA182 GR.F304 (FORG.)		Not Applicable		200	2250	0 GPM	200	2800	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air						LER 344 1987-014: Corrosion of the centrifugal charging pump casing was through the stainless steel cladding into the carbon steel base material	CHARGING PUMP DETAILS NOT AVAILABLE

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in °F	Operating Pressure in psi	Operating Flow	Design Temperature in °F	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Emergency Core Cooling Systems (ECCS)	Group 16 - RWST Header to SI Pumps (SIPMPS)	ECCS-SIPMPS	41	VALVE 1SI8807B - TEE	6	0.280"	SA182 GR.F316 (FORG.)		SA403 GR.WP304 (FITTING)	Field	ambient	< 100 psi	0 GPM	300	1750	400-650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60		@ambient		
Emergency Core Cooling Systems (ECCS)	Group 16 - RWST Header to SI Pumps (SIPMPS)	ECCS-SIPMPS	42	PIPE - VALVE 1SI8924	6	0.280"	SA312 GR.TP304 (WLD. & SMLS PIPE)		SA182 GR.F316 (FORG.)	Field	ambient	< 100 psi	0 GPM	300	1750	400-650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60		@ambient		
Emergency Core Cooling Systems (ECCS)	Group 16 - RWST Header to SI Pumps (SIPMPS)	ECCS-SIPMPS	43	ELBOW - VALVE 1SI8807A	6	0.280"	SA403 GR.WP304 (FITTING)		SA182 GR.F316 (FORG.)	Field	ambient	< 100 psi	0 GPM	300	1750	400-650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60		@ambient		
Emergency Core Cooling Systems (ECCS)	Group 16 - RWST Header to SI Pumps (SIPMPS)	ECCS-SIPMPS	44	VALVE 1SI8807A	6	0.280"	SA182 GR.F316 (FORG.)		Not Applicable		ambient	< 100 psi	0 GPM	300	1750	400-650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air		34.95	69.9		@ambient		
Emergency Core Cooling Systems (ECCS)	Group 16 - RWST Header to SI Pumps (SIPMPS)	ECCS-SIPMPS	45	VALVE 1SI8807A - PIPE	6	0.280"	SA182 GR.F316 (FORG.)		SA312 GR.TP304 (WLD. & SMLS PIPE)	Field	ambient	< 100 psi	0 GPM	300	1750	400-650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60		@ambient		
Emergency Core Cooling Systems (ECCS)	Group 16 - RWST Header to SI Pumps (SIPMPS)	ECCS-SIPMPS	46	TEE - PIPE	8	0.322"	SA403 GR.WP304 (FITTING)		SA312 GR.TP304 (WLD. & SMLS PIPE)	Field	ambient	< 100 psi	0 GPM	300	1750	400-650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60		@ambient		
Emergency Core Cooling Systems (ECCS)	Group 16 - RWST Header to SI Pumps (SIPMPS)	ECCS-SIPMPS	47	PIPE - VALVE 1SI8804B	8	0.322"	SA312 GR.TP304 (WLD. & SMLS PIPE)		SA182 GR.F316 (FORG.)	Field	ambient	< 100 psi	0 GPM	300	1750	400-650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60		@ambient		
Emergency Core Cooling Systems (ECCS)	Group 16 - RWST Header to SI Pumps (SIPMPS)	ECCS-SIPMPS	48	SI PUMPS			SS		Not Applicable		ambient	< 100 psi	0 GPM	300	1750	400-650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air							

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in °F	Operating Pressure in psi	Operating Flow	Design Temperature in °F	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Emergency Core Cooling Systems (ECCS) (RHPMPS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	42	ELBOW - ELBOW	12	0.375"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)	Shop	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60		@100F		
Emergency Core Cooling Systems (ECCS) (RHPMPS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	43	12" ELBOW	12	0.375"	SA403 GR.WP304 (FITTING)		Not Applicable		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air		30	60		@100F		
Emergency Core Cooling Systems (ECCS) (RHPMPS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	44	PIPE - ELBOW	12	0.375"	SA312 GR.TP304 (WLD. & SMLS PIPE)		SA403 GR.WP304 (FITTING)	Field	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60		@100F		
Emergency Core Cooling Systems (ECCS) (RHPMPS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	45	ELBOW - PIPE	12	0.375"	SA403 GR.WP304 (FITTING)		SA312 GR.TP304 (WLD. & SMLS PIPE)	Shop	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60		@100F		
Emergency Core Cooling Systems (ECCS) (RHPMPS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	46	12" PIPE	12	0.375"	SA312 GR.TP304 (WLD. & SMLS PIPE)		Not Applicable		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air		30	60		@100F		
Emergency Core Cooling Systems (ECCS) (RHPMPS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	47	PIPE - PIPE	12	0.375"	SA312 GR.TP304 (WLD. & SMLS PIPE)		SA312 GR.TP304 (WLD. & SMLS PIPE)	Field	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60		@100F		
Emergency Core Cooling Systems (ECCS) (RHPMPS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	48	VALVE 1RH8701A - PIPE	12	1.125"	SA182 GR.F316 (FORG.)		SA376 GR.TP316 (SMLS PIPE)	Field	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS) (RHPMPS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	49	PIPE - PIPE	12	1.125"	SA376 GR.TP316 (SMLS PIPE)		SA376 GR.TP316 (SMLS PIPE)	Field	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS) (RHPMPS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	50	PIPE - VALVE 1RH8701A	12	1.125"	SA376 GR.TP316 (SMLS PIPE)		SA182 GR.F316 (FORG.)	Field	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS) (RHPMPS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	51	VALVE 1S18811A - PIPE	24	0.688"	SA182 GR.F316 (FORG.)		SA358 GR.TP304 (WLD. PIPE)	Field	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS) (RHPMPS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	52	PIPE LONG SEAM	24	0.688"	SA358 GR.TP304 (WLD. PIPE)		SA358 GR.TP304 (WLD. PIPE)		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS) (RHPMPS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	53	24" PIPE	24	0.688"	SA358 GR.TP304 (WLD. PIPE)		Not Applicable		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air		30	60		@100F		
Emergency Core Cooling Systems (ECCS) (RHPMPS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	54	PIPE - ELBOW	24	0.688"	SA358 GR.TP304 (WLD. PIPE)		SA403 GR.WP304 (FITTING)	Shop	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS) (RHPMPS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	55	ELBOW LONG SEAM (INSIDE)	24	0.688"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS) (RHPMPS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	56	ELBOW LONG SEAM (OUTSIDE)	24	0.688"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS) (RHPMPS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	57	ELBOW LONG SEAM (INSIDE)	24	0.688"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS) (RHPMPS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	58	ELBOW LONG SEAM (OUTSIDE)	24	0.688"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS) (RHPMPS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	59	24" ELBOW	24	0.688"	SA403 GR.WP304 (FITTING)		Not Applicable		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air		30	60		@100F		
Emergency Core Cooling Systems (ECCS) (RHPMPS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	60	ELBOW - PIPE	24	0.688"	SA403 GR.WP304 (FITTING)		SA358 GR.TP304 (WLD. PIPE)	Shop	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS) (RHPMPS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	61	PIPE - PIPE	24	0.688"	SA358 GR.TP304 (WLD. PIPE)		SA358 GR.TP304 (WLD. PIPE)	Field	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS) (RHPMPS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	62	PIPE-SADDLE	16	0.500"	SA358 GR.TP304 (WLD. PIPE)		SA403 GR.WP304 (FITTING)	Shop	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS) (RHPMPS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	63	PIPE LONG SEAM	24	0.688"	SA358 GR.TP304 (WLD. PIPE)		SA358 GR.TP304 (WLD. PIPE)		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS) (RHPMPS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	64	SADDLE-PIPE	16	0.500"	SA403 GR.WP304 (FITTING)		SA358 GR.TP304 (WLD. PIPE)		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS) (RHPMPS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	65	PIPE LONG SEAM (INACCESSIBLE)	16	0.500"	SA358 GR.TP304 (WLD. PIPE)		SA358 GR.TP304 (WLD. PIPE)		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS) (RHPMPS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	66	BRANCH CONNECTION (INACCESSIBLE)	16	0.500"	SA358 GR.TP304 (WLD. PIPE)		SA358 GR.TP304 (WLD. PIPE)	Shop	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS) (RHPMPS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	67	BRANCH CONNECTION LONG SEAM	16	0.500"	SA358 GR.TP304 (WLD. PIPE)		SA358 GR.TP304 (WLD. PIPE)		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS) (RHPMPS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	68	ELBOW LONG SEAM (OUTSIDE)	24	0.688"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS) (RHPMPS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	69	ELBOW LONG SEAM (INSIDE)	24	0.688"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS) (RHPMPS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	70	ELBOW LONG SEAM (OUTSIDE)	24	0.688"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS) (RHPMPS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	71	ELBOW LONG SEAM (INSIDE)	24	0.688"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS) (RHPMPS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	72	REDUCER LONG SEAM	24	0.688"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS) (RHPMPS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	73	ELBOW - 24"X16" REDUCER	24	0.688"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)	Shop	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS) (RHPMPS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	74	REDUCER LONG SEAM	24	0.688"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS) (RHPMPS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	75	24"X16"REDUCER - VALVE 1CS009A	16	0.500"	SA403 GR.WP304 (FITTING)		SA351 GR.CF8M (CASTING)	Field	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS) (RHPMPS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	76	VALVE 1CS009A	16	0.500"	SA351 GR.CF8M (CASTING)		Not Applicable		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air		30	60		@100F	LER 255 1994-006: through wall defect of check valve body due to corrosion of sensitized grain boundary in the weld	
Emergency Core Cooling Systems (ECCS) (RHPMPS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	77	RHR PUMPS			SS		Not Applicable		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air					@100F	LER 305 1993-019: casting void approximately 1/2 1/2 inches long by 1/2 inch wide, by 3/8 inch deep. The void was located between 19/32 and 30/32 of an inch from the outside diameter of the 1 inch thick pump casing was the flaw that initiated crack growth due to service induced stress due to BAC. LER 312 1986-002: elbow in the one inch casing drain line piping due to erosion.	

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in °F	Operating Pressure in psi	Operating Flow	Design Temperature in °F	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-1	1	1S104TD ACCUMULATOR NOZZLE SAFE END	10	0.365"	SA350 GR.LF-2 (FORG.)		SA312 GR.TP304 (WLD. & SMLS PIPE)		100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	39	30	60		@100F		ENTIRE PIPING INSIDE THE CONTAINMENT
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-2	2	ACCUMULATOR NOZZLE SAFE END	10		SA312 GR.TP304 (WLD. & SMLS PIPE)		Not Applicable		100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air		30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-3	3	PIPE LONG SEAM	10	0.365"	SA312 GR.TP304 (WLD. & SMLS PIPE)		SA312 GR.TP304 (WLD. & SMLS PIPE)		100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-4	4	ACCUMULATOR NOZZLE SAFE END - PIPE	10	0.365"	SA312 GR.TP304 (WLD. & SMLS PIPE)	Field	SA312 GR.TP304 (WLD. & SMLS PIPE)		100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-5	5	PIPE	10		SA312 GR.TP304 (WLD. & SMLS PIPE)		Not Applicable		100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air		30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-6	6	PIPE - PIPE	10	0.365"	SA312 GR.TP304 (WLD. & SMLS PIPE)	Field	SA312 GR.TP304 (WLD. & SMLS PIPE)		100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-7	7	PIPE - ELBOW	10	0.365"	SA312 GR.TP304 (WLD. & SMLS PIPE)	Shop	SA403 GR.WP304 (FITTING)		100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-8	8	ELBOW LONG SEAM	10	0.365"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)		100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-9	9	ELBOW	10		SA403 GR.WP304 (FITTING)		Not Applicable		100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air		30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-10	10	ELBOW - PIPE	10	0.365"	SA403 GR.WP304 (FITTING)	Shop	SA312 GR.TP304 (WLD. & SMLS PIPE)		100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-11	11	PIPE - VALVE 1S18808D	10	1.000"	SA376 GR.TP316 (SMLS PIPE)		SA182 GR.F316 (FORG.)		100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-12	12	VALVE 1S18808D	10		SA182 GR.F316 (FORG.)		Not Applicable		100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air		34.95	69.9		@100F		
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-13	13	VALVE 1S18808D - PIPE	10	1.000"	SA182 GR.F316 (FORG.)	Field	SA376 GR.TP316 (SMLS PIPE)		100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-14	14	PIPE - ELBOW	10	1.000"	SA376 GR.TP316 (SMLS PIPE)	Shop	SA403 GR.WP316 (FITTING)		100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-15	15	ELBOW	10		SA403 GR.WP316 (FITTING)		Not Applicable		100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air		30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-16	16	ELBOW - PIPE	10	1.000"	SA403 GR.WP316 (FITTING)	Shop	SA376 GR.TP316 (SMLS PIPE)		100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-17	17	PIPE	10		SA376 GR.TP316 (SMLS PIPE)		Not Applicable		100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air		30	60		@100F		LER 323 1994-001107/2004: 3/4 inch diameter vent line socket weld off an accumulator line connected to the RCS LP 3 cold leg. Inadequate weld penetration, lack of fusion fatigue.
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-18	18	PIPE - PIPE	10	1.000"	SA376 GR.TP316 (SMLS PIPE)		SA376 GR.TP316 (SMLS PIPE)		100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-19	19	PIPE - VALVE 1S18956D	10	1.000"	SA376 GR.TP316 (SMLS PIPE)	Field	SA182 GR.F316 (FORG.)		100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-20	20	VALVE 1S18956D	10		SA182 GR.F316 (FORG.)		Not Applicable		100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air		34.95	69.9		@100F		
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-21	21	VALVE 1S18956D - PIPE	10	1.000"	SA182 GR.F316 (FORG.)	Field	SA376 GR.TP316 (SMLS PIPE)		100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-22	22	ELBOW - ELBOW	10	1.000"	SA403 GR.WP316 (FITTING)	Shop	SA403 GR.WP316 (FITTING)		100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-23	23	PIPE - TEE	10	1.000"	SA376 GR.TP316 (SMLS PIPE)	Shop	SA403 GR.WP316 (FITTING)		100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-24	24	REDUCING TEE	10		SA403 GR.WP316 (FITTING)		Not Applicable		100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air		30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-25	25	TEE - PIPE	10	1.000"	SA403 GR.WP316 (FITTING)	Shop	SA376 GR.TP316 (SMLS PIPE)		100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-26	26	PIPE - VALVE 1S18948D	10	1.000"	SA376 GR.TP316 (SMLS PIPE)	Field	SA182 GR.F316 (FORG.)		100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-27	27	VALVE 1S18948D	10		SA182 GR.F316 (FORG.)		Not Applicable		-600	2250	0	650	2485		Reactor Coolant	Containment Air		34.95	69.9		@100F		
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-28	28	VALVE 1S18948D - PIPE	10	1.000"	SA182 GR.F316 (FORG.)	Field	SA376 GR.TP316 (SMLS PIPE)		-600	2250	0	650	2485		Reactor Coolant	Containment Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-29	29	PIPE - 45 DEG. ELBOW	10	1.000"	SA376 GR.TP316 (SMLS PIPE)	Shop	SA403 GR.WP316 (FITTING)		-600	2250	0	650	2485		Reactor Coolant	Containment Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-30	30	45 DEG ELBOW	10		SA403 GR.WP316 (FITTING)		Not Applicable		-600	2250	0	650	2485		Reactor Coolant	Containment Air		30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-31	31	45 DEG. ELBOW - 45 DEG. ELBOW	10	1.000"	SA403 GR.WP316 (FITTING)	Shop	SA403 GR.WP316 (FITTING)		-600	2250	0	650	2485		Reactor Coolant	Containment Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-32	32	45 DEG. ELBOW - PIPE	10	1.000"	SA403 GR.WP316 (FITTING)	Shop	SA376 GR.TP316 (SMLS PIPE)		-600	2250	0	650	2485		Reactor Coolant	Containment Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-33	33	PIPE - 10" BRANCH NOZZLE FROM RCS COLD LEG LOOP 4	10	1.000"	SA376 GR.TP316 (SMLS PIPE)	Field	SA351 GR.CF8A (CASTING)		-600	2250	0	650	2485		Reactor Coolant	Containment Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-34	34	REDUCING TEE - PIPE	6	0.719"	SA403 GR.WP304 (FITTING)	Shop	SA376 GR.TP304 (SMLS PIPE)		100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-35	35	PIPE	6		SA376 GR.TP304 (SMLS PIPE)		Not Applicable		100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air		30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-36	36	PIPE - PIPE	6	0.719"	SA376 GR.TP304 (SMLS PIPE)	Field	SA376 GR.TP304 (SMLS PIPE)		100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-37	37	PIPE - ELBOW	6	0.719"	SA376 GR.TP304 (SMLS PIPE)	Shop	SA403 GR.WP304 (FITTING)		100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-38	38	ELBOW	6		SA403 GR.WP304 (FITTING)		Not Applicable		100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air		30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-39	39	ELBOW - PIPE	6	0.719"	SA403 GR.WP304 (FITTING)	Shop	SA376 GR.TP304 (SMLS PIPE)		100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-40	40	PIPE - ELBOW	6	0.719"	SA376 GR.TP304 (SMLS PIPE)	Field	SA403 GR.WP304 (FITTING)		100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM-41	41	ACCUMULATOR SHELL AND HEAD ASSEMBLY			SA254		Not Applicable		100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air							ACCUMULATOR VOLUME 1350 CUBIC FEET. NITROGEN VOLUME 500 CUBIC FEET.

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in °F	Operating Pressure in psi	Operating Flow	Design Temperature in °F	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCNN)	ECCS-HLCNN	45	PIPE - VALVE 1SI8949B	6	0.719"	SA376 GR.TP304 (SMLS PIPE)		SA182 GR.F316 (FORG.)	Field	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	30	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCNN)	ECCS-HLCNN	46	VALVE 1SI8949B - PIPE	6	0.719"	SA182 GR.F316 (FORG.)		SA376 GR.TP304 (SMLS PIPE)	Field	610 to 620	2250	0 GPM	650	2485	35 Mm/HR	Reactor Coolant	Containment Air	30	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCNN)	ECCS-HLCNN	47	PIPE - ELBOW	6	0.719"	SA376 GR.TP304 (SMLS PIPE)		SA403 GR.WP304 (FITTING)	Shop	610 to 620	2250	0 GPM	650	2485	35 Mm/HR	Reactor Coolant	Containment Air	30	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCNN)	ECCS-HLCNN	48	ELBOW - BRANCH CONNECTION	6	0.719"	SA403 GR.WP304 (FITTING)		SA182 GR.F316N	Field	610 to 620	2250	0 GPM	650	2485	35 Mm/HR	Reactor Coolant	Containment Air	30	30	26.9		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCNN)	ECCS-HLCNN	49	VALVE 1SI8905B - PIPE	2	0.344"	SA182 GR.F316 (FORG.)		SA376 GR.TP304 (SMLS PIPE)	Field	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCNN)	ECCS-HLCNN	50	PIPE - TEE	2	0.344"	SA376 GR.TP304 (SMLS PIPE)		SA182 GR.F304 (FORG.)	Field	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCNN)	ECCS-HLCNN	51	TEE - 2"X3/4" REDUCER	2	0.344"	SA182 GR.F304 (FORG.)		SA182 GR.F304 (FORG.)	Field	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCNN)	ECCS-HLCNN	52	TEE - PIPE	2	0.344"	SA182 GR.F304 (FORG.)		SA376 GR.TP304 (SMLS PIPE)	Field	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCNN)	ECCS-HLCNN	53	2" ST TEE	2	0.344"	SA182 GR.F304 (FORG.)		Not Applicable		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air		30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCNN)	ECCS-HLCNN	54	2"X3/4" REDUCER	2	0.344"	SA182 GR.F304 (FORG.)		Not Applicable		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air		30	60		@ 100F	LER 528 2004-001: root of the socket weld on the upstream side of the one inch drain valve off of a high pressure safety injection line connected to the RCS LP 1 hot leg failed due to fatigue	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCNN)	ECCS-HLCNN	55	PIPE - COUPLING	2	0.344"	SA376 GR.TP304 (SMLS PIPE)		SA182 GR.F304 (FORG.)	Field	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCNN)	ECCS-HLCNN	56	2" COUPLING	2	0.344"	SA182 GR.F304 (FORG.)		Not Applicable		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air		30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCNN)	ECCS-HLCNN	57	COUPLING - PIPE	2	0.344"	SA182 GR.F304 (FORG.)		SA376 GR.TP304 (SMLS PIPE)	Field	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCNN)	ECCS-HLCNN	58	COUPLING - 6" B.W. CAP	2	0.344"	SA182 GR.F304 (FORG.)		SA403 GR.WP304 (FITTING)	Field	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	39	30	60		@ 100F		

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in °F	Operating Pressure in psi	Operating Flow	Design Temperature in °F	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD-	45	VALVE 1RH8724B - PIPE	8	0.322"	SA182 GR.F316 (FORG.)		SA312 GR.TP304 (WLD. & SMLS PIPE)	Field	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD-	46	PIPE - FLANGE	8	0.322"	SA312 GR.TP304 (WLD. & SMLS PIPE)		SA182 GR.F304 (FORG.)	Shop	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD-	47	8" FLANGE	8	0.322"	SA182 GR.F304 (FORG.)		Not Applicable		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air		30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD-	48	FLANGE - PIPE	8	0.322"	SA182 GR.F304 (FORG.)		SA312 GR.TP304 (WLD. & SMLS PIPE)	Shop	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD-	49	RHR HX SHELL - BOTTOM HEAD	44	0.875"	SA240 GR.TP304 (PLATE)		SA240 GR.TP304 (PLATE)		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD-	50	RHR HX SHELL - BOTTOM HEAD	44	0.875"	SA240 GR.TP304 (PLATE)		SA240 GR.TP304 (PLATE)		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD-	51	RHR HX NOZZLE - SHELL	14	0.375"	SA240 GR.TP304 (PLATE)		SA240 GR.TP304 (PLATE)		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD-	52	RHR HX NOZZLE - SHELL	14	0.375"	SA240 GR.TP304 (PLATE)		SA240 GR.TP304 (PLATE)		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD-	53	RHR HX TUBE SIDE			SS		Not Applicable		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Treated water							
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD-	54	RHR HX SHELL SIDE			CS		Not Applicable		-100	-100	0 GPM	200	150	2.475 M#/HR	Treated Water	Aux Bldg Air							

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in °F	Operating Pressure in psi	Operating Flow	Design Temperature in °F	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCL	1	TEE - ELBOW	8	0.322"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)	Field	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCL	2	8" ELBOW	8	0.322"	SA403 GR.WP304 (FITTING)		Not Applicable		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCL	3	ELBOW - PIPE	8	0.322"	SA403 GR.WP304 (FITTING)		SA312 GR.TP304 (WLD. & SMLS PIPE)	Shop	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCL	4	PIPE - ELBOW	8	0.322"	SA403 GR.TP304 (WLD. & SMLS PIPE)		SA403 GR.WP304 (FITTING)	Shop	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCL	5	ELBOW - PIPE	8	0.322"	SA403 GR.WP304 (FITTING)		SA312 GR.TP304 (WLD. & SMLS PIPE)	Shop	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCL	6	8" PIPE	8	0.322"	SA312 GR.TP304 (WLD. & SMLS PIPE)		Not Applicable		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCL	7	PIPE - PIPE	8	0.322"	SA312 GR.TP304 (WLD. & SMLS PIPE)		SA312 GR.TP304 (WLD. & SMLS PIPE)	Shop	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCL	8	PIPE - TEE	8	0.322"	SA312 GR.TP304 (WLD. & SMLS PIPE)		SA403 GR.WP304 (FITTING)	Field	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCL	9	8" ST TEE	8	0.322"	SA403 GR.WP304 (FITTING)		Not Applicable		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCL	10	ELBOW - ELBOW	8	0.322"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)	Field	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCL	11	PIPE - VALVE 1SI8809B	8	0.906"	SA312 GR.TP304 (WLD. & SMLS PIPE)		SA182 GR.F316 (FORG.)	Field	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	30	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCL	12	VALVE 1SI8809B	8	0.906"	SA182 GR.F316 (FORG.)		Not Applicable		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	34.95	30	69.9		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCL	13	8"X6" REDUCER - VALVE 1SI8818C	6	0.719"	SA403 GR.WP304 (FITTING)		SA182 GR.F316 (FORG.)	Field	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	30	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCL	14	ELBOW - 8"X6" REDUCER	8	0.906"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)	Shop	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	30	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCL	15	TEE - PIPE	8	0.906"	SA403 GR.WP304 (FITTING)		SA376 GR.TP304 (SMLS PIPE)	Shop	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	30	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCL	16	VALVE 1SI8809B - PIPE	8	0.906"	SA182 GR.F316 (FORG.)		SA376 GR.TP304 (SMLS PIPE)	Field	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	30	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCL	17	PIPE - 8"X6" REDUCER	8	0.906"	SA376 GR.TP304 (SMLS PIPE)		SA403 GR.WP304 (FITTING)	Shop	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	30	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCL	18	8"X6" REDUCER	6	0.719"	SA403 GR.WP304 (FITTING)		Not Applicable		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	30	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCL	19	8"X6" REDUCER - VALVE 1SI8818B	6	0.719"	SA403 GR.WP304 (FITTING)		SA182 GR.F316 (FORG.)	Field	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	30	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCL	20	VALVE 1SI8818B	6	0.719"	SA182 GR.F316 (FORG.)		Not Applicable		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	35	34.95	69.9		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCL	21	VALVE 1SI8818B - PIPE	6	0.719"	SA182 GR.F316 (FORG.)		SA376 GR.TP304 (SMLS PIPE)	Field	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	30	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCL	22	PIPE - ELBOW	6	0.719"	SA376 GR.TP304 (SMLS PIPE)		SA403 GR.WP304 (FITTING)	Shop	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	30	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCL	23	ELBOW - PIPE	6	0.719"	SA403 GR.WP304 (FITTING)		SA376 GR.TP304 (SMLS PIPE)	Shop	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	30	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCL	24	2" SOCKOLET - 6" PIPE	2	0.344"	SA182 GR.F304 (FORG.)		SA376 GR.TP304 (SMLS PIPE)	Shop	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCL	25	PIPE - PIPE	6	0.719"	SA376 GR.TP304 (SMLS PIPE)		SA376 GR.TP304 (SMLS PIPE)	Shop	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	30	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCL	26	VALVE 1SI8819B	2	0.344"	SA182 GR.F316 (FORG.)		Not Applicable		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	34.95	30	69.9		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCL	27	VALVE 1SI8819B - PIPE	2	0.344"	SA182 GR.F316 (FORG.)		SA376 GR.TP304 (SMLS PIPE)	Field	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	39	30	60		@ 100F	LER 364 1987-01010/7/2004: thermal transients were due to valve leakage resulted in a thru wall crack	
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCL	28	PIPE - ELBOW	2	0.344"	SA376 GR.TP304 (SMLS PIPE)		SA182 GR.F304 (FORG.)	Field	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCL	29	ELBOW - PIPE	2	0.344"	SA182 GR.F304 (FORG.)		SA376 GR.TP304 (SMLS PIPE)	Field	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCL	30	PIPE - BRANCH CONNECTION	2	0.344"	SA376 GR.TP304 (SMLS PIPE)		SA182 GR.F304 (FORG.)	Field	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	39	30	60		@ 100F	LER 309 1995-017: 3/4 inch reducing coupling upstream of the inlet flange cracked due to fatigue	

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in °F	Operating Pressure in psi	Operating Flow	Design Temperature in °F	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL	60	3" PIPE - 1.5" SOCKLET	1.5	0.281"	SA376 GR.TP304 (SMLS PIPE)		SA182 GR.F304 (FORG.)	Shop	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL	61	PIPE - 3"X1.5" REDUCER	3	0.438"	SA376 GR.TP304 (FITTING)		SA403 GR.WP304 (FITTING)	Shop	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL	62	3"X1.5" REDUCER - COUPLING	1.5	0.281"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)	Shop	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL	63	BRANCH CONNECTION - PIPE	1.5	0.281"	SA182 GR.F304 (FORG.)		SA376 GR.TP304 (SMLS PIPE)	Field	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	39	30	60		@ 100F	EPIX-557: High pressure vent stack line weld leaking due to weld defects, vibration, or metallurgical issues (SCC) LER 348 2002-009: axial cracks at the downstream end of the ASTM A336 F316 (316 SS) thermal sleeve. hot reactor coolant and relatively cool makeup flow run through the line. bypass flow was increased to 11.15 gpm in 1988 to decrease thermal stratification and minimize thermal cycle mixing. However, a flow decrease F 50 gpm is recommended to eliminate the mixing zone.	
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL	64	1.5" PIPE	1.5	0.281"	SA376 GR.TP304 (SMLS PIPE)		Not Applicable		200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL	65	PIPE - ELBOW	1.5	0.281"	SA376 GR.TP304 (SMLS PIPE)		SA182 GR.F304 (FORG.)	Field	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL	66	1.5" ELBOW	1.5	0.281"	SA182 GR.F304 (FORG.)		Not Applicable		200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL	67	ELBOW - PIPE	1.5	0.281"	SA182 GR.F304 (FORG.)		SA376 GR.TP304 (SMLS PIPE)	Field	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL	68	PIPE - 2"X1.5" REDUCER	1.5	0.281"	SA376 GR.TP304 (SMLS PIPE)		SA182 GR.F304 (FORG.)	Field	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL	69	2"X1.5" REDUCER	2	0.344"	SA182 GR.F304 (FORG.)		Not Applicable		200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL	70	2"X1.5" REDUCER - COUPLING	2	0.344"	SA182 GR.F304 (FORG.)		SA182 GR.F304 (FORG.)	Field	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL	71	COUPLING - PIPE	2	0.344"	SA182 GR.F304 (FORG.)		SA376 GR.TP304 (SMLS PIPE)	Field	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL	72	PIPE - FLANGE	2	0.344"	SA376 GR.TP304 (SMLS PIPE)		SA182 GR.F316 (FORG.)	Field	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL	73	FLANGE - PIPE	2	0.344"	SA182 GR.F316 (FORG.)		SA376 GR.TP304 (SMLS PIPE)	Field	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL	74	PIPE - COUPLING	2	0.344"	SA376 GR.TP304 (SMLS PIPE)		SA182 GR.F304 (FORG.)	Field	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL	75	COUPLING - 2"X1.5" REDUCER	2	0.344"	SA182 GR.F304 (FORG.)		SA182 GR.F304 (FORG.)	Field	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL	76	2" X 1.5" REDUCER - PIPE	1.5	0.281"	SA182 GR.F304 (FORG.)		SA376 GR.TP304 (SMLS PIPE)	Field	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL	77	PIPE - VALVE 1SI8810A	1.5	0.281"	SA376 GR.TP304 (SMLS PIPE)		SA182 GR.F316 (FORG.)	Field	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL	78	VALVE 1SI8810A - PIPE	1.5	0.281"	SA182 GR.F316 (FORG.)		SA376 GR.TP304 (SMLS PIPE)	Field	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL	79	PIPE - ELBOW	1.5	0.281"	SA376 GR.TP304 (SMLS PIPE)		SA182 GR.F304 (FORG.)	Field	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL	80	PIPE - REDUCER	1.5	0.281"	SA376 GR.TP304 (SMLS PIPE)		SA182 GR.F304 (FORG.)	Field	556 to 559	2250	M#/HR	650	2485	M#/HR	Reactor Coolant	Containment Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL	81	VALVE 1SI8900A - PIPE	1.5	0.281"	SA182 GR.F316 (FORG.)		SA376 GR.TP304 (SMLS PIPE)	Field	556 to 559	2250	M#/HR	650	2485	M#/HR	Reactor Coolant	Containment Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL	82	PIPE - VALVE 1SI8900A	1.5	0.281"	SA376 GR.TP304 (SMLS PIPE)		SA182 GR.F316 (FORG.)	Field	556 to 559	2250	M#/HR	650	2485	M#/HR	Reactor Coolant	Containment Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL	83	ELBOW - PIPE	1.5	0.281"	SA182 GR.F304 (FORG.)		SA376 GR.TP304 (SMLS PIPE)	Field	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air	39	30	60		@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL	84	BIT SHELL ASSEMBLY			SA351 CF8A		Not Applicable		200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air							
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL	85	BIT HEAD ASSEMBLY			SA240 TP304				200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air							
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL	86	BIT FORGINGS			SA182 GR.F304				200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air							

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in oF	Operating Pressure in psi	Operating Flow	Design Temperature in oF	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Emergency Core Cooling Systems (ECCS)	Group 23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	1	SI pump discharge nozzle - 3"x4" reducer	3	0.3	Stainless Steel		SA403 WP304/316 (SMLS/WELDED)		100	1500-1700	400 GPM Pump Rating	300	1750	850 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air		30.00	48.30	Not calculated	No secondary stress included - Design		
Emergency Core Cooling Systems (ECCS)	Group 23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	2	3"x4" reducer	4	0.337	SA403 WP304/316 (SMLS/WELDED)		Not Applicable		100	1500-1700	400 GPM Pump Rating	300	1750	850 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air		30.00	48.30	Not calculated	No secondary stress included - Design		
Emergency Core Cooling Systems (ECCS)	Group 23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	3	3"x4" reducer - elbow	4	0.337	SA403 WP304/316 (SMLS/WELDED)		SA403 WP304/316 (SMLS/WELDED)	Shop	100	1500-1700	400 GPM Pump Rating	300	1750	850 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	31.40	30.00	48.30	Not calculated	No secondary stress included - Design		
Emergency Core Cooling Systems (ECCS)	Group 23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	4	4" Elbow	4	0.337	SA403 WP304/316 (SMLS/WELDED)		Not Applicable		100	1500-1700	400 GPM Pump Rating	300	1750	850 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air		30.00	48.30	Not calculated	No secondary stress included - Design		
Emergency Core Cooling Systems (ECCS)	Group 23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	5	1 1/2" socketlet from elbow	4	0.337	SA182, GR, F304 or F316		Not Applicable	Shop	100	1500-1700	400 GPM Pump Rating	300	1750	850 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	31.33	34.95	48.20	Not calculated	No secondary stress included - Design stress only	LER 528-96-006:incomplete fusion at the root of the socket weld which made it susceptible to crack initiation and propagation from vibration.	
Emergency Core Cooling Systems (ECCS)	Group 23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	6	Elbow - Pipe	4	0.337	SA403 WP304/316 (SMLS/WELDED)		SA312 GR,TP304 (SMLS PIPE)	Shop	100	1500-1700	400 GPM Pump Rating	300	1750	850 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	31.40	30.00	48.30	Not calculated	No secondary stress included - Design		
Emergency Core Cooling Systems (ECCS)	Group 23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	7	Instrument nozzle from pipe - 3/4" or less	4	0.337	SA182, F304 or F316		Not Applicable		100	1500-1700	400 GPM Pump Rating	300	1750	850 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air		34.95	48.30	Not calculated	No secondary stress included - Design		
Emergency Core Cooling Systems (ECCS)	Group 23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	8	Straight pipe	4	0.337	SA312 GR, TP304 (SMLS PIPE)		Not Applicable		100	1500-1700	400 GPM Pump Rating	300	1750	850 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air		30.00	48.30	Not calculated	No secondary stress included - Design		
Emergency Core Cooling Systems (ECCS)	Group 23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	9	Pipe - Valve 8922A	4	0.337	SA312 GR, TP304 (SMLS PIPE)		SA182, GR, F316	Field	100	1500-1700	400 GPM Pump Rating	300	1750	850 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	31.33	30.00	48.20	Not calculated	No secondary stress included - Design		
Emergency Core Cooling Systems (ECCS)	Group 23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	10	Valve 8922A - Valve 8921A	4	0.337	SA182, GR, F316		SA182, GR, F316	Field	100	1500-1700	400 GPM Pump Rating	300	1750	850 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	31.33	34.95	48.20	Not calculated	No secondary stress included - Design		
Emergency Core Cooling Systems (ECCS)	Group 23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	11	Valve 8921A	4	0.337	SA182, GR, F316		Not Applicable		100	1500-1700	400 GPM Pump Rating	300	1750	850 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air		34.95	48.30	Not calculated	No secondary stress included - Design	LER 280-86-007: IGSCC in bolts of valve	
Emergency Core Cooling Systems (ECCS)	Group 23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	12	Valve 8921A - Elbow	4	0.337	SA182, GR, F316		SA403 WP304/316 (SMLS/WELDED)	Field	100	1500-1700	400 GPM Pump Rating	300	1750	850 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	31.33	34.95	48.20	Not calculated	No secondary stress included - Design		
Emergency Core Cooling Systems (ECCS)	Group 23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	13	Pipe - Flange	4	0.337	SA312 GR, TP304 (SMLS PIPE)		SA182, GR, F304 or F316		100	1500-1700	400 GPM Pump Rating	300	1750	850 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air		30.00	48.30	Not calculated	No secondary stress included - Design		
Emergency Core Cooling Systems (ECCS)	Group 23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	14	Flange	4	0.337	SA182, GR, F304 or F316		Not Applicable		100	1500-1700	400 GPM Pump Rating	300	1750	850 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air		34.95	48.30	Not calculated	No secondary stress included - Design stress only	LER 445-96-005:flange socket weld located outside the containment building had a 0.25" thru wall crack	
Emergency Core Cooling Systems (ECCS)	Group 23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	15	Pipe - Tee	4	0.337	SA312 GR, TP304 (SMLS PIPE)		SA403 WP304/316 (SMLS/WELDED)	Shop	100	1500-1700	400 GPM Pump Rating	300	1750	850 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	31.33	30.00	48.20	Not calculated	No secondary stress included - Design		
Emergency Core Cooling Systems (ECCS)	Group 23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	16	Straight Tee	4	0.337	SA403 WP304/316 (SMLS/WELDED)		Not Applicable		100	1500-1700	400 GPM Pump Rating	300	1750	850 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air		30.00	48.30	Not calculated	No secondary stress included - Design		
Emergency Core Cooling Systems (ECCS)	Group 23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	17	Tee - Pipe	4	0.337	SA403 WP304/316 (SMLS/WELDED)		SA312 GR, TP304 (SMLS PIPE)	Shop	100	1500-1700	400 GPM Pump Rating	300	1750	850 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	31.40	30.00	48.30	Not calculated	No secondary stress included - Design		
Emergency Core Cooling Systems (ECCS)	Group 23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	18	Valve 8821A	4	0.337	SA182, GR, F316		Not Applicable		100	1500-1700	400 GPM Pump Rating	300	1750	850 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air		34.95	48.30	Not calculated	No secondary stress included - Design		
Emergency Core Cooling Systems (ECCS)	Group 23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	19	Valve 8821A - Tee	4	0.337	SA182, GR, F316		SA403 WP304/316 (SMLS/WELDED)	Field	100	1500-1700	400 GPM Pump Rating	300	1750	850 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	31.33	34.95	48.20	Not calculated	No secondary stress included - Design		
Emergency Core Cooling Systems (ECCS)	Group 23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	20	Pipe - 90 Degree Elbow	4	0.337	SA312 GR, TP304 (SMLS PIPE)		SA403 WP304/316 (SMLS/WELDED)	Field	100	1500-1700	400 GPM Pump Rating	300	1750	850 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	31.33	30.00	48.20	Not calculated	No secondary stress included - Design		
Emergency Core Cooling Systems (ECCS)	Group 23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	21	<90 Degree Elbow	4	0.337	SA403 WP304/316 (SMLS/WELDED)		Not Applicable		100	1500-1700	400 GPM Pump Rating	300	1750	850 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air		30.00	48.30	Not calculated	No secondary stress included - Design		
Emergency Core Cooling Systems (ECCS)	Group 23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	22	3/4" socketlet from elbow	4	0.337	SA182, GR, F304 or F316		Not Applicable	Shop	100	1500-1700	400 GPM Pump Rating	300	1750	850 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	31.33	34.95	48.20	Not calculated	No secondary stress included - Design	LER 335-97-005: hot cracking initiated by boric acid weld contamination	
Emergency Core Cooling Systems (ECCS)	Group 23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	23	Pipe - Pipe	4	0.337	SA376 GR, TP 304/316 (SMLS)		SA376 GR, TP 304/316 (SMLS)	Shop	100	1500-1700	400 GPM Pump Rating	300	1750	850 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air	31.72	30.00	48.80	Not calculated	No secondary stress included - Design		
Emergency Core Cooling Systems (ECCS)	Group 23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	24	Straight Pipe	4	0.337	SA376 GR, TP 304/316 (SMLS)		Not Applicable		100	1500-1700	400 GPM Pump Rating	300	1750	850 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air		30.00	48.30	Not calculated	No secondary stress included - Design		
Emergency Core Cooling Systems (ECCS)	Group 23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	25	Pipe - Elbow	4	0.337	SA376 GR, TP 304/316 (SMLS)		SA403 WP304/316 (SMLS/WELDED)	Field	100	1500-1700	400 GPM Pump Rating	300	1750	850 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air	31.72	30.00	48.80	Not calculated	No secondary stress included - Design		
Emergency Core Cooling Systems (ECCS)	Group 23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	26	Tee - 4"x2" Reducer	4	0.337	SA403 WP304/316 (SMLS/WELDED)		SA182, GR, F304 or F316	Field	100	1500-1700	400 GPM Pump Rating	300	1750	850 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air	31.40	30.00	48.30	Not calculated	No secondary stress included - Design		
Emergency Core Cooling Systems (ECCS)	Group 23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	27	4"x2" Reducer	2	0.344	SA182, GR, F304 or F316		Not Applicable		100	1500-1700	400 GPM Pump Rating	300	1750	850 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air		30.00	48.30	Not calculated	No secondary stress included - Design		
Emergency Core Cooling Systems (ECCS)	Group 23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	28	4"x2" Reducer - Coupling	2	0.344	SA182, GR, F304 or F316		SA182, GR, F304 or F316	Field	100	1500-1700	400 GPM Pump Rating	300	1750	850 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air	31.33	34.95	48.20	Not calculated	No secondary stress included - Design		
Emergency Core Cooling Systems (ECCS)	Group 23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	29	Coupling	2	0.344	SA182, GR, F304 or F316		Not Applicable		100	1500-1700	400 GPM Pump Rating	300	1750	850 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air		34.95	48.30	Not calculated	No secondary stress included - Design		
Emergency Core Cooling Systems (ECCS)	Group 23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	30	Coupling - Pipe	2	0.344	SA182, GR, F304 or F316		SA376 GR, TP 304/316 (SMLS)	Field	100	1500-1700	400 GPM Pump Rating	300	1750	850 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air	31.33	34.95	48.20	Not calculated	No secondary stress included - Design		
Emergency Core Cooling Systems (ECCS)	Group 23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	31	Straight pipe	2	0.344	SA376 GR, TP 304/316 (SMLS)		Not Applicable		100	1500-1700	400 GPM Pump Rating	300	1750	850 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air		30.00	48.30	Not calculated	No secondary stress included - Design		
Emergency Core Cooling Systems (ECCS)	Group 23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	32	Pipe - Elbow	2	0.344	SA376 GR, TP 304/316 (SMLS)		SA182, GR, F304 or F316	Field	100	1500-1700	400 GPM Pump Rating	300	1750	850 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air	31.72	30.00	48.80	Not calculated	No secondary stress included - Design		
Emergency Core Cooling Systems (ECCS)	Group 23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	33	Elbow	2	0.344	SA182, GR, F304 or F316		Not Applicable		100	1500-1700	400 GPM Pump Rating	300	1750	850 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air		34.95	48.30	Not calculated	No secondary stress included - Design		
Emergency Core Cooling Systems (ECCS)	Group 23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	34	Pipe - Flange	2	0.344	SA376 GR, TP 304/316 (SMLS)		SA182, GR, F304 or F316	Field	100	1500-1700	400 GPM Pump Rating	300	1750	850 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air	31.72	30.00	48.80	Not calculated	No secondary stress included - Design		
Emergency Core Cooling Systems (ECCS)	Group 23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	35	Flange	2	0.344	SA182, GR, F304 or F316		Not Applicable		100	1500-1700	400 GPM Pump Rating	300	1750	850 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air		34.95	48.30	Not calculated	No secondary stress included - Design		
Emergency Core Cooling Systems (ECCS)	Group 23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	36	Pipe - Valve	2	0.344	SA376 GR, TP 304/316 (SMLS)		SA182, GR, F304 or F316	Field	100	1500-1700	400 GPM Pump Rating	300	1750	850 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air	31.72	30.00	48.80	Not calculated	No secondary stress included - Design		
Emergency Core Cooling Systems (ECCS)	Group 23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	37	Valve	2	0.344	SA182, GR, F304 or F316		Not Applicable		100	1500-1700	400 GPM Pump Rating	300	1750	850 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air		30.00	48.30	Not calculated	No secondary stress included - Design		
Emergency Core Cooling Systems (ECCS)	Group 23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	38	<90 Degree Elbow	2	0.344	SA182, GR, F304 or F316		Not Applicable		100	1500-1700	400 GPM Pump Rating	300	1750	850 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air		34.95	48.30	Not calculated	No secondary stress included - Design		
Emergency Core Cooling Systems (ECCS)	Group 23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	39	Branch Connection Socketlet to 6" Line	2	0.344	SA182, GR, F304 or F316		SA376 GR, TP 304/316 (SMLS)	Field	100	1500-1700	400 GPM Pump Rating	300	1750	850 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air	31.33	34.95	48.20	Not calculated	No secondary stress included - Design stress only	INPO58-A crack was found at the safe end to pipe weld on the High Pressure Injection to RCS acid leg nozzle near Reactor Coolant Pump. The safe end and pipe were found to be cracked internally and the thermal sleeve was found to be loose and damaged due t	
Emergency Core Cooling Systems (ECCS)	Group 23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	40	Elbow - Elbow																					

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in °F	Operating Pressure in psi	Operating Flow	Design Temperature in °F	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-1	1	SG NOZZLE 1RC01BA	32	1.313"	SA508 CL 2A		N/A		527.6	1035 to 1235	4 million lbs/hr	600	1185		saturated steam <0.25% moisture content	CONT. with 3" type B insul	45.00	90.00	Not calculated	No secondary stress included - Design stress only			
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-2	2	SAFE END - ELBOW	32	1.313"	SA350 GR.LF-2		SA234 GR.WPB	Field	527.6	1035 to 1235	4 million lbs/hr	600	1185		saturated steam <0.25% moisture content	CONT. with 3" type B insul	23.00	22.95	45.90	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-3	3	32 x 31.25" Elbow	32	1.313" to 1.250"	SA234 GR.WPB		N/A		527.6	1035 to 1235	4 million lbs/hr	600	1185		saturated steam <0.25% moisture content	CONT. with 3" type B insul	28.05	53.80	Not calculated	No secondary stress included - Design stress only			
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-4	4	ELBOW - PIPE	30.25	1.250"	SA234 GR.WPB		SA155 GR.KC65	Shop	527.6	1035 to 1235	4 million lbs/hr	600	1185		saturated steam <0.25% moisture content	CONT. with 3" type B insul	26.90	28.05	53.80	Not calculated	No secondary stress included - Design stress only	INPO191: thru-wall leak at elbow downstream in main steam pipes	
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-5	5	Straight PIPE	30.25	1.250"	SA155 GR.KC65		N/A		527.6	1035 to 1235	4 million lbs/hr	600	1185		saturated steam <0.25% moisture content	CONT. with 3" type B insul	25.95	51.90	Not calculated	No secondary stress included - Design stress only			
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-6	6	3/4" SOL on 30.25" PIPE	3	1.250"	SA155 GR.KC65		SA155 GR.KC65	Shop	527.6	1035 to 1235	0	600	3000		saturated steam <0.25% moisture content	CONT. with 3" type B insul	27.00	25.95	51.90	Not calculated	No secondary stress included - Design stress only	INPO529 Leak in Main Steam Drain Line. INPO818 - a steam leak was found near a Sensing Line for a flow transmitter. The leak appeared to be through weld near the instrumentation tap.	
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-7	7	RT Access Port - Bolted Cover	6" diameter	1.250"	SA155 GR.KC65		SA155 GR.KC65		527.6	1035 to 1235	0	600	1185		saturated steam <0.25% moisture content	CONT. with 3" type B insul	27.00	25.95	51.90	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-8	8	PIPE - PENET. (1PC-078) PIPE	30.25	1.250"	SA155 GR.KC65		SA350 GR.LF-1	Field	527.6	1035 to 1235	4 million lbs/hr	600	1185		saturated steam <0.25% moisture content	CONT.	27.00	25.95	51.90	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-9	9	MECHANICAL PENETRATION 1PC-078	36	1.250"	SA350 GR.LF-1		N/A		120	14.7	approx 15 cfm	600	150 (Cont. design)		Conditioned Air	CONT.		22.95	45.90	Not calculated	No secondary stress included - Design stress only		Concentric portion of penetration is cooled by forced containment air
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-10	10	PENETRATION (1PC-078) - PIPE	30.25	1.250"	SA350 GR.LF-1		SA155 GR.KC65	Field	527.6	1035 to 1235	4 million lbs/hr	600	1185		saturated steam <0.25% moisture content	VALVE ROOM	26.60	22.95	45.90	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-11	11	PIPE - TEE	30.25	1.250"	SA155 GR.KC65		SA234 GR.WPB	Shop	527.6	1035 to 1235	4 million lbs/hr	600	1185		saturated steam <0.25% moisture content	VALVE ROOM with 3" type B insulation	27.00	25.95	51.90	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-12	12	30.25" x 28" TEE	30.25	1.250"	SA234 GR.WPB		N/A		527.6	1035 to 1235	4 million lbs/hr	600	1185		saturated steam <0.25% moisture content	VALVE ROOM with 3" type B insulation	28.05	53.80	Not calculated	No secondary stress included - Design stress only			
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-13	13	TEE - PIPE	30.25	1.250"	SA234 GR.WPB		SA155 GR.KC65	Shop	527.6	1035 to 1235	4 million lbs/hr	600	1185		saturated steam <0.25% moisture content	VALVE ROOM with 3" type B insulation	26.90	28.05	53.80	Not calculated	No secondary stress included - Design stress only	INPO617-A through wall steam leak developed in the weld downstream of a coupling located in a steam line	
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-14	14	12" WELDOLET on 30.25" PIPE	12	1.250"	SA155 GR.KC65		SA234 GR.WPB	Shop	527.6	1035 to 1235	23,000 lbs/hr	600	1185		saturated steam <0.25% moisture content	VALVE ROOM with 3" type B insulation	27.00	25.95	51.90	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-15	15	WELDOLET - PIPE	12	0.688"	SA234 GR.WPB		SA106 GR.B	Shop	527.6	1035 to 1235	23,000 lbs/hr	600	1185		saturated steam <0.25% moisture content	VALVE ROOM with 3" type B insulation	26.90	28.05	53.80	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-16	16	12" STRAIGHT PIPE	12	0.688"	SA106 GR.B		N/A		527.6	1035 to 1235	23,000 lbs/hr	600	1185		saturated steam <0.25% moisture content	VALVE ROOM with 3" type B insulation	26.85	53.60	Not calculated	No secondary stress included - Design stress only			
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-17	17	3" WELDOLET on 12" pipe	3	0.688"	SA106 GR.B		SA106 GR.B	Shop	527.6	1035 to 1235	23,000 lbs/hr	600	1185		saturated steam <0.25% moisture content	VALVE ROOM with 3" type B insulation	26.80	26.85	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-18	18	PIPE - CAP	12	0.688"	SA106 GR.B		SA234 GR.WPB	Shop	527.6	1035 to 1235	0	600	1185		saturated steam <0.25% moisture content	VALVE ROOM with 3" type B insulation	26.80	26.85	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-19	19	4" WELDOLET on 30.25" PIPE	4	1.250"	SA155 GR.KC65		SA234 GR.WPB	Shop	527.6	1035 to 1235	0	600	1185		saturated steam <0.25% moisture content	VALVE ROOM with 3" type B insulation	27.00	25.95	51.90	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-20	20	PIPE - VALVE 1MS001A	30.25	1.250"	SA155 GR.KC65		SA216 GR.WCB	Field	527.6	1035 to 1235	4 million lbs/hr	600	1185		saturated steam <0.25% moisture content	VALVE ROOM with 3" type B insulation	27.00	25.95	51.90	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-21	21	MSIV - 1MS001A	30.25	1.250"	SA216 GR.WCB		N/A		527.6	1035 to 1235	4 million lbs/hr	600	1185		saturated steam <0.25% moisture content	VALVE ROOM with 3" type B insulation	27.60	55.20	Not calculated	No secondary stress included - Design stress only			
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-22	22	VALVE 1MS001A - PIPE	30.25	1.250"	SA216 GR.WCB		SA155 GR.KC65	Field	527.6	1035	4 million lbs/hr	600	1185		saturated steam <0.25% moisture content	VALVE ROOM with 3" type B insulation	27.60	27.60	55.20	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-23	23	PIPE to HP TURBINE	30.25	1.250"	SA155 GR.KC65		N/A		527.6	1035	4 million lbs/hr	600	1185		saturated steam <0.25% moisture content	VALVE ROOM with 3" type B insulation	25.95	51.90	Not calculated	No secondary stress included - Design stress only	INPO263-A steam leak in piping under the High Pressure Turbine. The leak appeared to be through-wall at a fitting upstream of Drain Valve.		
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-24	24	TEE - PIPE	28	1.188"	SA234 GR.WPB		SA155 GR.KC65	Field	527.6	1035	0 to 4 00,000 lbs/hr	600	1185		saturated steam <0.25% moisture content	VALVE ROOM with 3" type B insulation	26.80	28.05	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-25	25	STRAIGHT PIPE	28	1.188"	SA155 GR.KC65		N/A		527.6	1035	0 to 4 00,000 lbs/hr	600	1185		saturated steam <0.25% moisture content	VALVE ROOM with 3" type B insulation	25.95	51.90	Not calculated	No secondary stress included - Design stress only			
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-26	26	8" WELDOLET on 28" PIPE	8	1.188"	SA155 GR.KC65		SA234 GR.WPB	Shop	527.6	1035	0 to 4 00,000 lbs/hr	600	1185		saturated steam <0.25% moisture content	VALVE ROOM with 3" type B insulation	27.00	25.95	51.90	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-27	27	WELDOLET - PIPE	8	0.906"	SA234 GR.WPB		SA106 GR.B	Shop	527.6	1035	0 to 4 00,000 lbs/hr	600	1185		saturated steam <0.25% moisture content	VALVE ROOM with 3" type B insulation	26.80	28.05	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-28	28	PIPE - ELBOW	8	0.906"	SA106 GR.B		SA234 GR.WPB	Field	527.6	1035	0 to 4 00,000 lbs/hr	600	1185		saturated steam <0.25% moisture content	VALVE ROOM with 3" type B insulation	26.80	26.85	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-29	29	ELBOW - PIPE	8	0.906"	SA234 GR.WPB		SA106 GR.B	Shop	527.6	1035	0 to 4 00,000 lbs/hr	600	1185		saturated steam <0.25% moisture content	VALVE ROOM with 3" type B insulation	26.80	28.05	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-30	30	PIPE - VALVE 1MS019A	8	0.906"	SA106 GR.B		SA216 GR.WCB	Field	527.6	1035	0 to 4 00,000 lbs/hr	600	1185		saturated steam <0.25% moisture content	VALVE ROOM with 3" type B insulation	26.80	26.85	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-31	31	Isolation Valve 1MS019A	8	0.906"	SA216 GR.WCB		N/A		527.6	1035	0 to 4 00,000 lbs/hr	600	1185		saturated steam <0.25% moisture content	VALVE ROOM with 3" type B insulation	27.60	55.20	Not calculated	No secondary stress included - Design stress only			
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-32	32	VALVE 1MS019A - ELBOW	8	0.906"	SA216 GR.WCB		SA234 GR.WPB	Field	527.6	1035	0 to 4 00,000 lbs/hr	600	1185		saturated steam <0.25% moisture content	VALVE ROOM with 3" type B insulation	27.60	27.60	55.20	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-33	33	ELBOW - PIPE	8	0.906"	SA234 GR.WPB		SA106 GR.B	Field	527.6	1035	0 to 4 00,000 lbs/hr	600	1185		saturated steam <0.25% moisture content	VALVE ROOM with 3" type B insulation	26.80	28.05	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-34	34	PIPE - 8"x6" REDUCER	8	0.906"	SA106 GR.B		SA234 GR.WPB	Shop	527.6	1035	0 to 4 00,000 lbs/hr	600	1185		saturated steam <0.25% moisture content	VALVE ROOM with 3" type B insulation	26.80	26.85	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-35	35	8"x6" REDUCER - VALVE 1MS018A	6	0.719"	SA234 GR.WPB		SA216 GR.WCC	Field	527.6	1035	0 to 4 00,000 lbs/hr	600	1185		saturated steam <0.25% moisture content	VALVE ROOM with 3" type B insulation	26.80	28.05	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-36	36	6" RELIEF VALVE	6	0.719"	SA216 GR.WCC		N/A		527.6	1035	0 to 4 00,000 lbs/hr	600	1185	400,000 lbs/hr	saturated steam <0.25% moisture content	VALVE ROOM with 3" type B insulation	27.60	55.20	Not calculated	No secondary stress included - Design stress only			
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-37	37	PIPE - ELBOW	28	1.188"	SA155 GR.KC65		SA234 GR.WPB	Shop	527.6	1035 to 1235	0 to 4 85,000 lbs/hr	600	1185		saturated steam <0.25% moisture content	VALVE ROOM with 3" type B insulation	27.00	25.95	51.90	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-38	38	28" ELBOW	28	1.188"	SA234 GR.WPB		N/A		527.6	1035 to 1235	0 to 4 85,000 lbs/hr	600	1185		saturated steam <0.25% moisture content	VALVE ROOM with 3" type B insulation	28.05	53.60	Not calculated	No secondary stress included - Design stress only			
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-39	39	ELBOW - PIPE	28	1.188"	SA234 GR.WPB		SA155 GR.KC65	Field	527.6	1035 to 1235	0 to 4 85,000 lbs/hr	600	1185		saturated steam <0.25% moisture content	VALVE ROOM with 3" type B insulation	26.80	28.05	53.60	Not calculated	No secondary stress included - Design stress only	LER285-97-003 steam line ruptured at a large radius elbow due to FAC	
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-40	40	Straight PIPE	28	1.188"	SA155 GR.KC65		N/A		527.6	1035 to 1235	0 to 4 85,000 lbs/hr	600	1185		saturated steam <0.25% moisture content	VALVE ROOM with 3" type B insulation	25.95	51.90	Not calculated	No secondary stress included - Design stress only			
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-41	41	PIPE - SADDLE	28	1.188"	SA155 GR.KC65		SA234 GR.WPB	Shop	527.6	0	0	600	1185		reinforcement for the relief valve pipe connection	VALVE ROOM with 3" type B insulation	27.00	25.95	51.90	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-42	42	SADDLE - PIPE	6	0.719"	SA234 GR.WPB		SA105	Shop	527.6	0	0 to 4 85,000 lbs/hr	600	1185		saturated steam <0.25% moisture content	VALVE ROOM with 3" type B insulation	26.80	28.05	53.60	Not calculated	No secondary stress included - Design stress only	INPO941-steam leak at the U-2 Main Turbine doghouse at Cold Reheat Steam to MSR Shell Side piping	
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-43	43	6" PIPE BRANCH CONNECTION to 28" PIPE	6	0.719"	SA155 GR.KC65		SA105	Shop	527.6	1035 to 1235	0 to 4 85,000 lbs/hr	600	1185										

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in oF	Operating Pressure in psi	Operating Flow	Design Temperature in oF	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	1	ELBOW - SG NOZZLE 1RC01BA	16	0.844"	SA234 GR.WPB		SA508 CL2A	Shop	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	CONT. with 3" mirror insulation	26.90	26.85	53.70	Not calculated	No secondary stress included - Design stress only	LER 275-92-022: cracking due to thermal stratification induced fatigue (during Modes 2 (Startup) and 3(Hot Standby), and during Mode 1 (Power Operation) below 12percent power)	
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	2	ELBOW - SAFE END	16	1.219"	SA234 GR.WP22		SB-166 (I-690)	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	CONT. with 3" mirror insulation	26.90	26.85	53.70	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	3	PIPE - ELBOW	16	0.844"	SA106 GR.B		SA234 GR.WP22	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	CONT. with 3" mirror insulation	26.80	26.85	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	4	PIPE	16	0.844"	SA106 GR.B		Not Applicable	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	CONT. with 3" mirror insulation	26.80	26.85	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	5	PIPE - PENETRATION (1PC-079)	16	0.844"	SA106 GR.B		SA350 GRLF-1	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	26.80	26.85	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	6	6" VESSELET in 16" PIPE	6	0.844"	SA106 GR.B		SA234 GR.WPB	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	26.80	26.85	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	7	Straight PIPE	16	0.844"	SA106 GR.B		Not Applicable	Shop	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	26.80	26.85	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	8	PIPE - VALVE 1FW009A	16	1.219"	SA333 GR.6		SA105	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	26.80	26.85	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	9	VALVE 1FW009A	16	1.219"	SA333 GR.6		Not Applicable		250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation		26.85	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	10	16" PIPE - 6" WELDOLET	6	1.219"	SA333 GR.6		SA234 GR.WPB	Shop	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	26.80	26.85	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	11	PIPE - VALVE 1FW079A	16	1.219"	SA216 GR.WCB		SA333 GR.6	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	27.60	27.60	55.20	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	12	VALVE 1FW079A	16	1.219"	SA333 GR.6		Not Applicable		250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation		26.85	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	13	16" x 6" WELDOLET in 16" PIPE	6	0.432"	SA106 GR.B		SA234 GR.WPB	Shop	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	34.84	26.85	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	14	16"x6" VESSELET to 6" PIPE	6	0.432"	SA106 GR.B		SA234 GR.WPB	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type B insulation	34.84	26.85	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	15	ELBOW - PIPE	6	0.432"	SA234 GR.WPB		SA106 GR.B	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type B insulation	34.97	26.85	53.70	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	16	TEE - PIPE	6	0.432"	SA234 GR.WPB		SA106 GR.B	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type B insulation	34.97	26.85	53.70	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	17	6"X4" REDUCER - TEE	6	0.432"	SA234 GR.WPB		SA234 GR.WPB	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	34.97	26.85	53.70	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	18	PIPE - TEE	6	0.432"	SA106 GR.B		SA234 GR.WPB	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	34.84	26.85	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	19	ELBOW - PIPE	6	0.432"	SA234 GR.WPB		SA106 GR.B	Shop	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	34.97	26.85	53.70	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	20	Straight PIPE	6	0.432"	SA106 GR.B		Not Applicable	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	34.84	26.85	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	21	PIPE - VALVE 1FW039A	6	0.562"	SA106 GR.B		SA216 GR.WCB	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	26.80	26.85	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	22	VALVE 1FW039A	6	0.562"	SA216 GR.WCB		Not Applicable		250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation		27.60	55.20	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	23	PIPE - VALVE 1FW041A	6	0.562"	SA216 GR.WCB		SA106 GR.B	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	27.60	27.60	55.20	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	24	VALVE 1FW041A	6	0.562"	SA216 GR.WCB		Not Applicable		250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation		27.60	55.20	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	25	VALVE 1FW041A - ELBOW	6	0.562"	SA216 GR.WCB		SA234 GR.WPB	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	27.60	27.60	55.20	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	26	ELBOW - PIPE	6	0.562"	SA234 GR.WPB		SA106 GR.B	Shop	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	26.90	26.85	53.70	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	27	6" PIPE TO WELDOLET in 16" PIPE	6	0.562"	SA106 GR.B		SA234 GR.WPB	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	VALVE ROOM	26.80	26.85	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	28	6" x 4" WELDOLET in 6" PIPE	4	0.432"	SA106 GR.B		SA234 GR.WPB	Shop	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	VALVE ROOM	34.84	26.85	53.60	Not calculated	No secondary stress included - Design stress only	LER 400-92-014: Wall thinning in piping of Main feedwater and auxiliary feedwater system/schedule 120 carbon steel pipe due to FAC	
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	29	16" x 3" WELDOLET in 16" PIPE	3	0.844"	SA106 GR.B		SA234 GR.WPB	Shop	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	26.80	26.85	53.60	Not calculated	No secondary stress included - Design stress only	LER 255-98-009: pinhole leak due to residual moisture in the line during welding	
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	30	PIPE - Valve 1FW510	16	1.219"	SA106 GR.B		SA234 GR.WPB	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	26.80	26.85	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	31	Solenoid operated relief valve 1FW510	16	1.219"	SA234 GR.WPB		N/A	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	26.90	26.85	53.70	Not calculated	No secondary stress included - Design stress only	Set point is 850 psi, but valve can be manually opened from control room	
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	32	PIPE - Valve 1FW006A	16	1.219"	SA106 GR.B		SA234 GR.WPB	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	26.80	26.85	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	33	Feedwater Regulating Valve 1FW006A	16	1.219"	SA234 GR.WPB		N/A	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	26.90	26.85	53.70	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	34	Valve 1FW006A to PIPE	16	1.219"	SA234 GR.WPB		SA106 GR.B	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	26.90	26.85	53.70	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	35	16" x 6" WELDOLET in 16" PIPE	6	0.562"	SA106 GR.B		SA234 GR.WPB	Shop	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	26.80	26.85	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	36	6" WELDOLET to 6" PIPE	6	0.562"	SA234 GR.WPB		SA106 GR.B	Shop	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	26.90	26.85	53.70	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	37	6" PIPE TO VALVE FW055A	6	0.562"	SA106 GR.B		SA234 GR.WPB	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	VALVE ROOM	26.80	26.85	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	38	MOTOR OPERATED VALVE FW055A	6	0.562"	SA234 GR.WPB		N/A	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	VALVE ROOM	26.90	26.85	53.70	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	39	VALVE FW055A TO PIPE	6	0.562"	SA234 GR.WPB		SA106 GR.B	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	VALVE ROOM	26.90	26.85	53.70	Not calculated	No secondary stress included - Design stress only		

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in oF	Operating Pressure in psi	Operating Flow	Design Temperature in oF	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	40	6" PIPE TO VALVE FW510A	6	0.562"	SA106 GR.B		SA234 GR.WPB	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	VALVE ROOM	26.80	26.85	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	41	MOTOR OPERATED VALVE FW510A	6	0.562"	SA234 GR.WPB		N/A	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	VALVE ROOM	26.90	26.85	53.70	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	42	VALVE FW510A to 6" PIPE	6	0.562"	SA234 GR.WPB		SA106 GR.B	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	VALVE ROOM	26.90	26.85	53.70	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	43	6" PIPE to 6" WELDOLET in 16" PIPE	6	0.562"	SA106 GR.B		SA234 GR.WPB	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	26.80	26.85	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	44	16" PIPE to 30" TEE	16	1.219"	SA106 GR.B		SA234 GR.WPB	Field	250 to 450	650		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	26.80	26.85	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	45	30" TEE to 30" HEADER PIPE	30	1.875"	SA234 GR.WPB		SA155 GR.KC65	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	26.90	26.85	53.70	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	46	30" TEE to 24" HEADER PIPE	24	1.812	SA234 GR.WPB		SA155 GR.KC65	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	26.90	26.85	53.70	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	47	24" HEADER PIPE TO VALVE	24	1.812	SA155 GR.KC65		SA234 GR.WPB	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	26.80	25.95	51.90	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	48	24" ISOLATION VALVE FW002C	24	1.812	SA234 GR.WPB		N/A	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	26.90	26.85	53.70	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	49	VALVE TO 24" PIPE	24	1.812	SA234 GR.WPB		SA155 GR.KC65	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	26.90	26.85	53.70	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	50	24" PIPE TO FLANGE	24	1.812	SA155 GR.KC65		SA234 GR.WPB	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	26.80	25.95	51.90	Not calculated	No secondary stress included - Design stress only		Part not on drawing - iso not available from plant
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	51	24" FLANGED FLOW VENTURI	24	1.812	SA234 GR.WPB		N/A	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	26.90	26.85	53.70	Not calculated	No secondary stress included - Design stress only		Part not on drawing - iso not available from plant
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	52	FLANGE TO 24" PIPE	24	1.812	SA234 GR.WPB		SA155 GR.KC65	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	26.90	26.85	53.70	Not calculated	No secondary stress included - Design stress only	INPO722 - pinhole leak was the result of erosion on the inside of the pipe from Flow Accelerated Corrosion (FAC).	Part not on drawing - iso not available from plant
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	53	24" PIPE TO CHECK VALVE	24	1.812	SA155 GR.KC65		SA234 GR.WPB	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	26.80	25.95	51.90	Not calculated	No secondary stress included - Design stress only		Part not on drawing - iso not available from plant
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	54	24" CHECK VALVE FW001C	24	1.812	SA234 GR.WPB		N/A	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	26.90	26.85	53.70	Not calculated	No secondary stress included - Design stress only		Part not on drawing - iso not available from plant
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	55	VALVE TO 24" PIPE	24	1.812	SA234 GR.WPB		SA155 GR.KC65	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	26.90	26.85	53.70	Not calculated	No secondary stress included - Design stress only		Part not on drawing - iso not available from plant
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW-	56	24" PIPE TO STEAM DRIVEN MFW PUMP	24	1.812	SA155 GR.KC65		SA234 GR.WPB	Field	250 to 450	655		600	1200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	26.80	25.95	51.90	Not calculated	No secondary stress included - Design stress only	INPO218 - water leaking from Steam Generator Feed Pump Suction Piping	Part not on drawing - iso not available from plant

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in oF	Operating Pressure in psi	Operating Flow	Design Temperature in oF	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Power Conversion Systems (PCS)	Group 27 - Steam Generator Blowdown (SGBD)	PCS-SGBD-	38	Pipe	0.75"	0.154"	SA106 GR. B (SMLS)		Not Applicable		556	1092		567	1185		Saturated Steam/water	Valve Room 2" Type A insulation		26.85	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 27 - Steam Generator Blowdown (SGBD)	PCS-SGBD-	39	Pipe - Cap	0.75"	0.154"	SA106 GR. B (SMLS)		SA105 CS	Field	556	1092		567	1185		Saturated Steam/water	Valve Room 2" Type A insulation	34.84	26.85	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 27 - Steam Generator Blowdown (SGBD)	PCS-SGBD-	40	Straight Tee to Pipe	2	0.218"	SA105 CS		SA105 CS	Field	556	1092		567	900		Saturated Steam/water	Valve Room 3" Type A insulation	34.84	26.85	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 27 - Steam Generator Blowdown (SGBD)	PCS-SGBD-	41	Pipe to Globe Valve	2	0.218"	SA105 CS		SA105 CS	Field	556	1092		567	900		Saturated Steam/water	Valve Room 3" Type A insulation		27.60	55.20	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 27 - Steam Generator Blowdown (SGBD)	PCS-SGBD-	42	Globe Valve	2	0.218"	SA105 CS		Not Applicable		556	1092		567	900		Saturated Steam/water	Valve Room 3" Type A insulation	34.84	26.85	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 27 - Steam Generator Blowdown (SGBD)	PCS-SGBD-	43	Globe Valve to Pipe	2	0.218"	SA105 CS		SA106 GR. B (SMLS)	Field	556	1092		567	900		Saturated Steam/water	Valve Room 3" Type A insulation	34.84	26.85	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 27 - Steam Generator Blowdown (SGBD)	PCS-SGBD-	44	Pipe to Control Valve	2	0.218"	SA106 GR. B (SMLS)		SA106 GR. B (SMLS)	Field	556	1092		567	900		Saturated Steam/water	Valve Room 3" Type A insulation	34.84	26.85	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 27 - Steam Generator Blowdown (SGBD)	PCS-SGBD-	45	Control Valve	2	0.218"	SA106 GR. B (SMLS)		Not Applicable		556	1092		567	900		Saturated Steam/water	Valve Room 3" Type A insulation		27.60	55.20	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 27 - Steam Generator Blowdown (SGBD)	PCS-SGBD-	46	Control Valve to Pipe	2	0.218"	SA106 GR. B (SMLS)		SA106 GR. B (SMLS)	Field	556	1092		567	1185		Saturated Steam/water	Valve Room 3" Type A insulation	34.84	26.85	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 27 - Steam Generator Blowdown (SGBD)	PCS-SGBD-	47	Pipe - Orifice Flange	2	0.218"	SA106 GR. B (SMLS)		SA105 CS	Field	556	1092		567	1185		Saturated Steam/water	Valve Room 3" Type A insulation	34.84	26.85	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 27 - Steam Generator Blowdown (SGBD)	PCS-SGBD-	48	Orifice Flange	2	0.218"	SA105 CS		Not Applicable		556	1092		567	1500		Saturated Steam/water	Valve Room 3" Type A insulation		27.60	55.20	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 27 - Steam Generator Blowdown (SGBD)	PCS-SGBD-	49	Pipe to Valve	2	0.218"	SA105 CS		SA234 GR. WPB	Field	556	1092		567	1185		Saturated Steam/water	Valve Room 3" Type A insulation		26.85	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 27 - Steam Generator Blowdown (SGBD)	PCS-SGBD-	50	Globe Valve	2	0.218"	SA234 GR. WPB		Not Applicable	Field	556	1092		567	1500		Saturated Steam/water	Valve Room 3" Type A insulation							
Power Conversion Systems (PCS)	Group 27 - Steam Generator Blowdown (SGBD)	PCS-SGBD-	51	Valve to Pipe	2	0.218"	SA234 GR. WPB		SA106 GR. B (SMLS)	Field	556	1092		567	1185		Saturated Steam/water	Valve Room 3" Type A insulation		26.85	53.70	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 27 - Steam Generator Blowdown (SGBD)	PCS-SGBD-	52	Pipe to - 3"x2" Swage nipple	2	0.218"	SA106 GR. B (SMLS)		SA234 GR. WPB	Field	556	1092		567	1185		Saturated Steam/water	Valve Room 3" Type A insulation	34.97	26.85	53.70	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 27 - Steam Generator Blowdown (SGBD)	PCS-SGBD-	53	3"x2" Swage nipple	3	0.300"	SA234 GR. WPB		Not Applicable		556	1092		567	1185		Saturated Steam/water	Valve Room 3" Type A insulation		26.85	53.70	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 27 - Steam Generator Blowdown (SGBD)	PCS-SGBD-	54	3"x2" Swage nipple to Pipe	3	0.300"	SA234 GR. WPB		SA105 CS	Field	556	1092		567	1185		Saturated Steam/water	Valve Room 3" Type A insulation	34.97	26.85	53.70	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 27 - Steam Generator Blowdown (SGBD)	PCS-SGBD-	55	Pipe to Flash tank and condenser	3	0.300"	SA105 CS		Not Applicable		556	1092		567	1185		Saturated Steam/water	Valve Room 3" Type A insulation		27.60	55.20	Not calculated	No secondary stress included - Design stress only		

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in oF	Operating Pressure in psi	Operating Flow	Design Temperature in oF	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Support Systems (SS)	Group 28 - Service Water Suction From Pond (SWSUC)	SS-SWSUC	40	Elbow (<90 degrees)	30	0.375"	SA234 GR. WPB		Not Applicable		100	100	Total 37000 GPM at full power	100	125	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Aux. Bldg. Air		28.05	65.10	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 28 - Service Water Suction From Pond (SWSUC)	SS-SWSUC	41	Elbow - 30"x36" Reducer	30	0.375"	SA234 GR. WPB		SA234 GR. WPB	Field	100	100	Total 37000 GPM at full power	100	125	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Aux. Bldg. Air	45.50	28.05	56.10	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 28 - Service Water Suction From Pond (SWSUC)	SS-SWSUC	42	30"x36" Eccentric Reducer	36	0.375"	SA234 GR. WPB		Not Applicable		100	100	Total 37000 GPM at full power	100	125	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Aux. Bldg. Air		28.05	56.10	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 28 - Service Water Suction From Pond (SWSUC)	SS-SWSUC	43	Elbow - Sockolet (<2" Lines)	36	0.375"	SA234 GR. WPB		SA106 GR. B	Shop	100	100	Total 37000 GPM at full power	100	125	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Aux. Bldg. Air	45.50	28.05	56.10	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 28 - Service Water Suction From Pond (SWSUC)	SS-SWSUC	44	Elbow - Valve	36	0.375"	SA234 GR. WPB		SA234 GR. WPB	Shop	100	100	Total 37000 GPM at full power	100	125	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Aux. Bldg. Air	45.50	28.05	56.10	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 28 - Service Water Suction From Pond (SWSUC)	SS-SWSUC	45	Valve	36	0.375"	SA234 GR. WPB		Not Applicable		100	100	Total 37000 GPM at full power	100	125	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Aux. Bldg. Air		28.05	56.10	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 28 - Service Water Suction From Pond (SWSUC)	SS-SWSUC	46	Pipe - 6" Weldolet	36	0.375"	SA155 GR. KC65 CL. 2		SS TP316	Shop	100	100	Total 37000 GPM at full power	100	125	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Aux. Bldg. Air	45.50	32.55	65.10	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 28 - Service Water Suction From Pond (SWSUC)	SS-SWSUC	47	Pipe	36	0.375"	SA155 GR. KC65 CL. 2		Not Applicable		100	100	Total 37000 GPM at full power	100	125	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Aux. Bldg. Air		32.55	65.10	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 28 - Service Water Suction From Pond (SWSUC)	SS-SWSUC	48	Pipe - Strainer Flange	36	0.375"	SA155 GR. KC65 CL. 2		SA106 GR. II	Field	100	100	Total 37000 GPM at full power	100	125	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Aux. Bldg. Air	45.50	32.55	65.10	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 28 - Service Water Suction From Pond (SWSUC)	SS-SWSUC	49	Strainer	36	0.375"	SA234 GR. WPB		Not Applicable		100	100	Total 37000 GPM at full power	100	125	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Aux. Bldg. Air		28.05	65.10	Not calculated	No secondary stress included - Design stress only		

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in oF	Operating Pressure in psi	Operating Flow	Design Temperature in oF	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Support Systems (SS)	Group 29 - Service Water Discharge to Containment and Auxiliary Buildings (SWDIS)	SS-SWDIS-	38	20"x20"x16" Tee	20	0.375"	SA234 GR. WPB		Not Applicable		100		Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air		28.05	56.10	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 29 - Service Water Discharge to Containment and Auxiliary Buildings (SWDIS)	SS-SWDIS-	39	Tee - Elbow	16	0.375"	SA234 GR. WPB		SA234 GR. WPB	Shop	100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	39.00	28.05	56.10	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 29 - Service Water Discharge to Containment and Auxiliary Buildings (SWDIS)	SS-SWDIS-	40	Elbow	16	0.375"	SA234 GR. WPB		Not Applicable		100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air		28.05	56.10	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 29 - Service Water Discharge to Containment and Auxiliary Buildings (SWDIS)	SS-SWDIS-	41	Pipe	16	0.375"	SA106 GR. B (SMLS)		Not Applicable		100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air		30.00	60.00	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 29 - Service Water Discharge to Containment and Auxiliary Buildings (SWDIS)	SS-SWDIS-	42	Elbow - Pipe	16	0.375"	SA234 GR. WPB		SA106 GR. B (SMLS)	Field	100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	39.00	28.05	56.10	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 29 - Service Water Discharge to Containment and Auxiliary Buildings (SWDIS)	SS-SWDIS-	43	20"x20"x16" Tee - 20"x14" Reducer	20	0.375"	SA234 GR. WPB		SA234 GR. WPB	Field	100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	39.00	28.05	56.10	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 29 - Service Water Discharge to Containment and Auxiliary Buildings (SWDIS)	SS-SWDIS-	44	20"x14" Reducer	14	0.375"	SA234 GR. WPB		Not Applicable		100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air		28.05	56.10	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 29 - Service Water Discharge to Containment and Auxiliary Buildings (SWDIS)	SS-SWDIS-	45	14" Straight Tee	14	0.375"	SA234 GR. WPB		Not Applicable		100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air		28.05	56.10	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 29 - Service Water Discharge to Containment and Auxiliary Buildings (SWDIS)	SS-SWDIS-	46	Tee - Tee	14	0.375"	SA234 GR. WPB		SA234 GR. WPB	Field	100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	39.00	28.05	56.10	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 29 - Service Water Discharge to Containment and Auxiliary Buildings (SWDIS)	SS-SWDIS-	47	14"x14"x6" Tee	14	0.375"	SA234 GR. WPB		Not Applicable		100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air		28.05	56.10	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 29 - Service Water Discharge to Containment and Auxiliary Buildings (SWDIS)	SS-SWDIS-	48	Tee - Reducer	14	0.375"	SA234 GR. WPB		Not Applicable	Shop	100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air		28.05	56.10	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 29 - Service Water Discharge to Containment and Auxiliary Buildings (SWDIS)	SS-SWDIS-	49	14"x10" Reducer	10	40S	SA234 GR. WPB		Not Applicable		100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air		28.05	56.10	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 29 - Service Water Discharge to Containment and Auxiliary Buildings (SWDIS)	SS-SWDIS-	50	Pipe	10		SA106 GR. B (SMLS)		Not Applicable		100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air		30.00	60.00	Not calculated	No secondary stress included - Design stress only	LER 281-86-006: galvanic corrosion cracking between the flanged section and the expanding ribbed section of an expansion joint on the service water return line from a reticulation spray heat exchanger	
Support Systems (SS)	Group 29 - Service Water Discharge to Containment and Auxiliary Buildings (SWDIS)	SS-SWDIS-	51	Pipe - Elbow	10		SA106 GR. B (SMLS)		SA234 GR. WPB	Shop	100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	52.50	30.00	60.00	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 29 - Service Water Discharge to Containment and Auxiliary Buildings (SWDIS)	SS-SWDIS-	52	Elbow	10		SA234 GR. WPB		Not Applicable		100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air		28.05	56.10	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 29 - Service Water Discharge to Containment and Auxiliary Buildings (SWDIS)	SS-SWDIS-	53	Valve	10		SA234 GR. WPB		Not Applicable		100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air		28.05	56.10	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 29 - Service Water Discharge to Containment and Auxiliary Buildings (SWDIS)	SS-SWDIS-	54	Valve - Tee	10		SA234 GR. WPB		SA234 GR. WPB	Field	100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	39.00	28.05	56.10	Not calculated	No secondary stress included - Design stress only	LER 213-94-002: Service Water System (SWS) supply piping to the "A" Emergency Diesel Generator. The leak occurred on the first weld upstream of a manual isolation valve due to MIC	
Support Systems (SS)	Group 29 - Service Water Discharge to Containment and Auxiliary Buildings (SWDIS)	SS-SWDIS-	55	Tee - 10"x8" Reducer	10		SA234 GR. WPB		SA234 GR. WPB	Field	100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	39.00	28.05	56.10	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 29 - Service Water Discharge to Containment and Auxiliary Buildings (SWDIS)	SS-SWDIS-	56	10"x8" Reducer	8		SA234 GR. WPB		Not Applicable		100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air		28.05	56.10	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 29 - Service Water Discharge to Containment and Auxiliary Buildings (SWDIS)	SS-SWDIS-	57	Pipe - Elbow	8		SA106 GR. B (SMLS)		SA234 GR. WPB	Field	100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	52.50	30.00	60.00	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 29 - Service Water Discharge to Containment and Auxiliary Buildings (SWDIS)	SS-SWDIS-	58	Elbow - Elbow	8		SA234 GR. WPB		SA234 GR. WPB	Shop	100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	39.00	28.05	56.10	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 29 - Service Water Discharge to Containment and Auxiliary Buildings (SWDIS)	SS-SWDIS-	59	Elbow	8		SA234 GR. WPB		Not Applicable		100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air		28.05	56.10	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 29 - Service Water Discharge to Containment and Auxiliary Buildings (SWDIS)	SS-SWDIS-	60	Pipe	8		SA106 GR. B (SMLS)		Not Applicable		100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air		30.00	60.00	Not calculated	No secondary stress included - Design stress only	INPO - Numerous reported leaks due to normal wear, general corrosion, MIC	
Support Systems (SS)	Group 29 - Service Water Discharge to Containment and Auxiliary Buildings (SWDIS)	SS-SWDIS-	61	Pipe - Socket <2"	8		SA106 GR. B (SMLS)		SA234 GR. WPB	Shop	100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	52.50	30.00	60.00	Not calculated	No secondary stress included - Design stress only	INPO 533 - through wall leak was found at the socket weld of pipe 2" -CCB-6, the discharge of the charging pump at the inlet to check valve due to erosion	
Support Systems (SS)	Group 29 - Service Water Discharge to Containment and Auxiliary Buildings (SWDIS)	SS-SWDIS-	62	10"x10"x8" Tee	8		SA234 GR. WPB		Not Applicable		100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air		28.05	56.10	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 29 - Service Water Discharge to Containment and Auxiliary Buildings (SWDIS)	SS-SWDIS-	63	10"x10"x8" Tee - Elbow	8		SA234 GR. WPB		SA234 GR. WPB	Shop	100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	39.00	28.05	56.10	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 29 - Service Water Discharge to Containment and Auxiliary Buildings (SWDIS)	SS-SWDIS-	64	Elbow	8		SA234 GR. WPB		Not Applicable		100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air		28.05	56.10	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 29 - Service Water Discharge to Containment and Auxiliary Buildings (SWDIS)	SS-SWDIS-	65	Elbow - Pipe	8		SA234 GR. WPB		SA106 GR. B (SMLS)	Field	100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	39.00	28.05	56.10	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 29 - Service Water Discharge to Containment and Auxiliary Buildings (SWDIS)	SS-SWDIS-	66	Pipe	8		SA106 GR. B (SMLS)		Not Applicable		100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air		30.00	60.00	Not calculated	No secondary stress included - Design stress only	INPO 134 - Through wall leakage from pipe on inlet to 11 CCHX CL Relief valve. INPO66 - pin-hole leak was discovered in the cooling water supply line to the turbine inboard bearing	
Support Systems (SS)	Group 29 - Service Water Discharge to Containment and Auxiliary Buildings (SWDIS)	SS-SWDIS-	67	CCW HX Shell	50	0.5	Carbon Steel		Not Applicable		130	150		200	150	3.07 x 10 ⁶ lb/hr	Treated Water (CCW)	Aux. Bldg. Air		30	30		Assumed SA106 GR. B SMLS	INPO 359 - Service water leak in CCW heat exchanger "A" outlet due to corrosion. LER 250-91-001: thru-wall erosion-corrosion in HX admiralty brass has a lower recommended flow rate than aluminum brass 4.6 ft/s instead degrees F 8 ft/s. Average operation level within the annular which ultimately	LER 483-95-006: turbulence caused the annular to vibrate. The annular, which is made of harder material than the CCW piping, wore away a portion of the support hole. This resulted in an increase in the vibration level within the annular which ultimately
Support Systems (SS)	Group 29 - Service Water Discharge to Containment and Auxiliary Buildings (SWDIS)	SS-SWDIS-	68	CCW HX Shell Side Fittings			Carbon Steel		Not Applicable		130	150		200	150	3.07 x 10 ⁶ lb/hr	Treated Water (CCW)	Aux. Bldg. Air		30	30		Assumed SA106 GR. B SMLS		
Support Systems (SS)	Group 29 - Service Water Discharge to Containment and Auxiliary Buildings (SWDIS)	SS-SWDIS-	69	CCW HX Tubes	3/4"		90-10 Cu-Ni		Not Applicable		130	150		200	150	9.96 x 10 ⁶ lb/hr	Service Water	Aux. Bldg. Air						LER 305-2002-002: Circumferential cracking in the tubesheet to tube area of the CCW HX due to circumferential SCC.	
Support Systems (SS)	Group 29 - Service Water Discharge to Containment and Auxiliary Buildings (SWDIS)	SS-SWDIS-	70	CCW HX Tubesheet	52	2.5	Carbon Steel		Not Applicable		130	150		200	150	9.96 x 10 ⁶ lb/hr	Service Water	Aux. Bldg. Air		30	30		Assumed SA106 GR. B SMLS		

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in oF	Operating Pressure in psi	Operating Flow	Design Temperature in oF	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Support Systems (SS)	Group 30 - Service Water Containment Fan (SWCONT)	SS-SWCONT-	40	PIPE - PIPE	10	0.365"	SA106 GR.B (SMLS)		SA106 GR.B (SMLS)	Field	100	100	Load-specific	125	100	2660 GPM Max.	Pond (Raw) Water	CONT. Bldg.Air	45.50	30.00	60.00	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 30 - Service Water Containment Fan (SWCONT)	SS-SWCONT-	41	PIPE - 10"X4"REDUCER	10	0.365"	SA106 GR.B (SMLS)		SA234 GR.WPB	Shop	100	100	Load-specific	125	100	2660 GPM Max.	Pond (Raw) Water	CONT. Bldg.Air	45.50	30.00	60.00	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 30 - Service Water Containment Fan (SWCONT)	SS-SWCONT-	42	ELBOW - PIPE	10	0.365"	SA234 GR.WPB		SA106 GR.B (SMLS)	Field	100	100	Load-specific	125	100	2660 GPM Max.	Pond (Raw) Water	CONT. Bldg.Air	39.00	28.05	56.10	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 30 - Service Water Containment Fan (SWCONT)	SS-SWCONT-	43	ELBOW - FLANGE	10	0.365"	SA234 GR.WPB		SA105 GR.II	Shop	100	100	Load-specific	125	100	2660 GPM Max.	Pond (Raw) Water	CONT. Bldg.Air	39.00	28.05	56.10	Not calculated	No secondary stress included - Design stress only	LER 272-90-026: Inlet flange weld cracked of the service water system (SW Component side) Heat Exchanger (CC) due to erosion-corrosion	
Support Systems (SS)	Group 30 - Service Water Containment Fan (SWCONT)	SS-SWCONT-	44	FLANGE - PIPE	10	0.365"	SA105 GR.II		SA106 GR.B (SMLS)	Shop	100	100	Load-specific	125	100	2660 GPM Max.	Pond (Raw) Water	CONT. Bldg.Air	54.00	32.85	65.70	Not calculated	No secondary stress included - Design stress only	LER 261-87-029: flange leak of Service Water line from the motor cooler of Containment Air Recirculation cooling unit HVH2 inside the Containment Vessel. carbon steel and stainless steel bolts had been used for flange. The carbon steel showed evidence	
Support Systems (SS)	Group 30 - Service Water Containment Fan (SWCONT)	SS-SWCONT-	45	PIPE - PIPE	10	0.365"	SA106 GR.B (SMLS)		SA106 GR.B (SMLS)	Field	100	100	Load-specific	125	100	2660 GPM Max.	Pond (Raw) Water	CONT. Bldg.Air	45.50	30.00	60.00	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 30 - Service Water Containment Fan (SWCONT)	SS-SWCONT-	46	PIPE - 10"X4"REDUCER	10	0.365"	SA106 GR.B (SMLS)		SA234 GR.WPB	Shop	100	100	Load-specific	125	100	2660 GPM Max.	Pond (Raw) Water	CONT. Bldg.Air	45.50	30.00	60.00	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 30 - Service Water Containment Fan (SWCONT)	SS-SWCONT-	47	Straight TEE - PIPE	4	0.237"	SA234 GR.WPB		SA106 GR.B (SMLS)	Field	100	100	Load-specific	125	100	2660 GPM Max.	Pond (Raw) Water	CONT. Bldg.Air	39.00	28.05	56.10	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 30 - Service Water Containment Fan (SWCONT)	SS-SWCONT-	48	10"x4" weldolet - Pipe	4	0.237"	SA234 GR.WPB		SA106 GR.B (SMLS)	Field	100	100	Load-specific	125	100	2660 GPM Max.	Pond (Raw) Water	CONT. Bldg.Air	39.00	28.05	56.10	Not calculated	No secondary stress included - Design stress only	LER247-95-014: Leak due to galvanic corrosion on the weld for Fan Cooler Unit (FCU) #22 Service Water discharge flow transmitter instrument line. The leak was on the welded connection between the stainless steel instrument line and the 10" discharge head	
Support Systems (SS)	Group 30 - Service Water Containment Fan (SWCONT)	SS-SWCONT-	49	Pipe	4	0.237"	SA106 GR.B (SMLS)		Not Applicable		100	100	Load-specific	125	100	2660 GPM Max.	Pond (Raw) Water	CONT. Bldg.Air		30.00	60.00	Not calculated	No secondary stress included - Design stress only	LER 213-88-021: Corroded threaded Vent Nipple on the Service Water discharge piping from the #2 CAR Fan cooler.	
Support Systems (SS)	Group 30 - Service Water Containment Fan (SWCONT)	SS-SWCONT-	50	Pipe - Pipe	4	0.237"	SA106 GR.B (SMLS)		SA106 GR.B (SMLS)	Field	100	100	Load-specific	125	100	2660 GPM Max.	Pond (Raw) Water	CONT. Bldg.Air	45.50	30.00	60.00	Not calculated	No secondary stress included - Design stress only	INP01660 - through wall leak was found at the socket weld of pipe, the discharge of the charging pump at the inlet to check valve due to MIC	
Support Systems (SS)	Group 30 - Service Water Containment Fan (SWCONT)	SS-SWCONT-	51	Pipe - Elbow	4	0.237"	SA106 GR.B (SMLS)		SA234 GR.WPB	Field	100	100	Load-specific	125	100	2660 GPM Max.	Pond (Raw) Water	CONT. Bldg.Air	45.50	30.00	60.00	Not calculated	No secondary stress included - Design stress only	LER247-91-012: pinhole leak due to MIC was detected in the 2" Service Water System piping (90% Cu; 10% Ni) supplying cooling water to the motor of fan cooler unit (FCU) #23. The location of the leak was approximately 1/8" from a weld.	LER 247-01-006: A service water leak on the motor cooler outlet discharge piping from Fan Cooler. The leakage was a hole (approximately 1/8 to 3/16 inch diameter) near a pipe to elbow weld on a two inch diameter, copper nickel Alloy 706 service water pip
Support Systems (SS)	Group 30 - Service Water Containment Fan (SWCONT)	SS-SWCONT-	52	Elbow	4	0.237"	SA234 GR.WPB		Not Applicable		100	100	Load-specific	125	100	2660 GPM Max.	Pond (Raw) Water	CONT. Bldg.Air		28.05	56.10	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 30 - Service Water Containment Fan (SWCONT)	SS-SWCONT-	53	Pipe - 4"x3" Reducer	4	0.237"	SA106 GR.B (SMLS)		SA234 GR.WPB	Field	100	100	Load-specific	125	100	2660 GPM Max.	Pond (Raw) Water	CONT. Bldg.Air	45.50	30.00	60.00	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 30 - Service Water Containment Fan (SWCONT)	SS-SWCONT-	54	4"x3" Reducer	3	0.216"	SA234 GR.WPB		Not Applicable		100	100	Load-specific	125	100	2660 GPM Max.	Pond (Raw) Water	CONT. Bldg.Air		28.05	56.10	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 30 - Service Water Containment Fan (SWCONT)	SS-SWCONT-	55	Reducer- Elbow	3	0.216"	SA234 GR.WPB		SA234 GR.WPB	Shop	100	100	Load-specific	125	100	2660 GPM Max.	Pond (Raw) Water	CONT. Bldg.Air	39.00	28.05	56.10	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 30 - Service Water Containment Fan (SWCONT)	SS-SWCONT-	56	Elbow - Fan Cooler Nozzle	3	0.216"	SA234 GR.WPB		SA234 GR.WPB (Assumed)	Field	100	100	Load-specific	125	100	2660 GPM Max.	Pond (Raw) Water	CONT. Bldg.Air	39.00	28.05	56.10	Not calculated	No secondary stress included - Design stress only		

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in oF	Operating Pressure in psi	Operating Flow	Design Temperature in oF	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Support Systems (SS)	Group 32 - CVCS Normal Letdown Line (CVLD)	SS-CVLD-1	1	CL 3 Letdown Nozzle - Elbow	3	0.438"	SA182 GR.F316N		SA403 GR.WP304 (SMLS)	Field	560	2250	75-120 GPM	650	2485	150 GPM	Reactor Coolant	Cont. Bldg. Air	24.44	25.5	51			Insulation - Type B - 2 1/2"	
Support Systems (SS)	Group 32 - CVCS Normal Letdown Line (CVLD)	SS-CVLD-2	2	Elbow	3	0.438"	SA403 GR.WP304 (SMLS)		Not Applicable		560	2250	75-120 GPM	650	2485	150 GPM	Reactor Coolant	Cont. Bldg. Air		24.6	49.2			Insulation - Type B - 2 1/2"	
Support Systems (SS)	Group 32 - CVCS Normal Letdown Line (CVLD)	SS-CVLD-3	3	Elbow - Pipe	3	0.438"	SA403 GR.WP304 (SMLS)		SA376 GR.TP304 (SMLS)	Shop	560	2250	75-120 GPM	650	2485	150 GPM	Reactor Coolant	Cont. Bldg. Air	23.79	24.6	49.2			Insulation - Type B - 2 1/2"	
Support Systems (SS)	Group 32 - CVCS Normal Letdown Line (CVLD)	SS-CVLD-4	4	Straight Pipe	3	0.438"	SA376 GR.TP304 (SMLS)		Not Applicable		560	2250	75-120 GPM	650	2485	150 GPM	Reactor Coolant	Cont. Bldg. Air		24.6	49.2			Insulation - Type B - 2 1/2"	
Support Systems (SS)	Group 32 - CVCS Normal Letdown Line (CVLD)	SS-CVLD-5	5	Pipe - Elbow (< 90 degrees)	3	0.438"	SA376 GR.TP304 (SMLS)		SA403 GR.WP304 (SMLS)	Shop	560	2250	75-120 GPM	650	2485	150 GPM	Reactor Coolant	Cont. Bldg. Air	23.66	24.6	49.2			Insulation - Type B - 2 1/2"	
Support Systems (SS)	Group 32 - CVCS Normal Letdown Line (CVLD)	SS-CVLD-6	6	Elbow (< 90 degrees)	3	0.438"	SA403 GR.WP304 (SMLS)		Not Applicable		560	2250	75-120 GPM	650	2485	150 GPM	Reactor Coolant	Cont. Bldg. Air		24.6	49.2			Insulation - Type B - 2 1/2"	
Support Systems (SS)	Group 32 - CVCS Normal Letdown Line (CVLD)	SS-CVLD-7	7	Pipe - Valve 1RC8085	3	0.438"	SA376 GR.TP304 (SMLS)		SA182 GR.F316	Field	560	2250	75-120 GPM	650	2485	150 GPM	Reactor Coolant	Cont. Bldg. Air	23.66	24.6	49.2			Insulation - Type B - 2 1/2"	
Support Systems (SS)	Group 32 - CVCS Normal Letdown Line (CVLD)	SS-CVLD-8	8	Valve RC8085	3	0.438"	SA182 GR.F316		Not Applicable		560	2250	75-120 GPM	650	2485	150 GPM	Reactor Coolant	Cont. Bldg. Air		25.5	51		LER 315-1987-004: Packing leak on air operated valve	Insulation - Type B - 2 1/2"	
Support Systems (SS)	Group 32 - CVCS Normal Letdown Line (CVLD)	SS-CVLD-9	9	Valve 1CVLCV460	3	0.438"	SA182 GR.F316		Not Applicable		560	2250	75-120 GPM	650	2485	150 GPM	Reactor Coolant	Cont. Bldg. Air		25.5	51			Insulation - Type B - 2 1/2"	
Support Systems (SS)	Group 32 - CVCS Normal Letdown Line (CVLD)	SS-CVLD-10	10	Pipe - Pipe	3	0.438"	SA376 GR.TP304 (SMLS)		SA376 GR.TP304 (SMLS)	Field	560	2250	75-120 GPM	650	2485	150 GPM	Reactor Coolant	Cont. Bldg. Air	23.66	24.6	49.2			Insulation - Type B - 2 1/2"	
Support Systems (SS)	Group 32 - CVCS Normal Letdown Line (CVLD)	SS-CVLD-11	11	Elbow - Elbow	3	0.438"	SA403 GR.WP304 (SMLS)		SA403 GR.WP304 (SMLS)	Shop	560	2250	75-120 GPM	650	2485	150 GPM	Reactor Coolant	Cont. Bldg. Air	23.79	24.6	49.2			Insulation - Type B - 2 1/2"	
Support Systems (SS)	Group 32 - CVCS Normal Letdown Line (CVLD)	SS-CVLD-12	12	Valve 1CVLCV459	3	0.438"	SA182 GR.F316		Not Applicable		560	2250	75-120 GPM	650	2485	150 GPM	Reactor Coolant	Cont. Bldg. Air		25.5	51			Insulation - Type B - 2 1/2"	
Support Systems (SS)	Group 32 - CVCS Normal Letdown Line (CVLD)	SS-CVLD-13	13	Pipe - 3 x 3/4 Weldolet	3	0.438"	SA376 GR.TP304 (SMLS)		SA403 GR.WP304 (SMLS)	Field	560	2250	Normally stagnant (no flow)	650	2485	High point vent	Reactor Coolant	Cont. Bldg. Air	23.66	24.6	49.2			Insulation - Type B - 2 1/2"	
Support Systems (SS)	Group 32 - CVCS Normal Letdown Line (CVLD)	SS-CVLD-14	14	3 x 3/4 Weldolet	3 x 3/4	0.438"	SA403 GR.WP304 (SMLS)		Not Applicable		560	2250	Normally stagnant (no flow)	650	2485	High point vent	Reactor Coolant	Cont. Bldg. Air		24.6	49.2			Insulation - Type B - 2 1/2"	
Support Systems (SS)	Group 32 - CVCS Normal Letdown Line (CVLD)	SS-CVLD-15	15	Weldolet - Valve 1CV215	3/4"	0.438"	SA403 GR.WP304 (SMLS)		SA182 GR.F316	Field	560	2250	Normally stagnant (no flow)	650	2485	High point vent	Reactor Coolant	Cont. Bldg. Air	23.79	24.6	49.2			Insulation - Type B - 2 1/2"	
Support Systems (SS)	Group 32 - CVCS Normal Letdown Line (CVLD)	SS-CVLD-16	16	Valve 1CV215	3/4"	0.438"	SA182 GR.F316		Not Applicable		560	2250	Normally stagnant (no flow)	650	2485	High point vent	Reactor Coolant	Cont. Bldg. Air		25.5	51			Insulation - Type B - 2 1/2"	
Support Systems (SS)	Group 32 - CVCS Normal Letdown Line (CVLD)	SS-CVLD-17	17	Valve - Pipe	3/4"	0.438"	SA182 GR.F316		SA376 GR.TP304 (SMLS)		560	2250	Normally stagnant (no flow)	650	2485	High point vent	Reactor Coolant	Cont. Bldg. Air	24.44	25.5	51			Insulation - Type B - 2 1/2"	
Support Systems (SS)	Group 32 - CVCS Normal Letdown Line (CVLD)	SS-CVLD-18	18	Cap (threaded)	3/4"	0.438"	SA403 GR.WP304 (SMLS)		Not Applicable		560	2250	Normally stagnant (no flow)	650	2485	High point vent	Reactor Coolant	Cont. Bldg. Air		24.6	49.2			Insulation - Type B - 2 1/2"	
Support Systems (SS)	Group 32 - CVCS Normal Letdown Line (CVLD)	SS-CVLD-19	19	Tee	3	0.438"	SA403 GR.WP304 (SMLS)		SA403 GR.WP304 (SMLS)		560	2250	75-120 GPM	650	2485	150 GPM	Reactor Coolant	Cont. Bldg. Air	23.79	24.6	49.2			Insulation - Type B - 2 1/2"	
Support Systems (SS)	Group 32 - CVCS Normal Letdown Line (CVLD)	SS-CVLD-20	20	Tee - Pipe	3	0.438"	SA403 GR.WP304 (SMLS)		SA376 GR.TP304 (SMLS)	Field	560	2250	75-120 GPM	650	2485	150 GPM	Reactor Coolant	Cont. Bldg. Air	23.79	24.6	49.2			Insulation - Type B - 2 1/2"	
Support Systems (SS)	Group 32 - CVCS Normal Letdown Line (CVLD)	SS-CVLD-21	21	Valve 1CV8389A	3	0.438"	SA182 GR.F316		Not Applicable		560	2250	75-120 GPM	650	2485	150 GPM	Reactor Coolant	Cont. Bldg. Air		25.5	49.2			Insulation - Type B - 2 1/2"	
Support Systems (SS)	Group 32 - CVCS Normal Letdown Line (CVLD)	SS-CVLD-22	22	Pipe - 1" Socketlet w/plug	3" - 1"	0.438"	SA376 GR.TP304 (SMLS)		SA403 GR.WP304 (SMLS)	Field	560	2250	75-120 GPM	650	2485	150 GPM	Reactor Coolant	Cont. Bldg. Air	23.66	24.6	49.2		LER 280-1989-042: Cyclic fatigue at fillet weld on a 3/4" socket tee connection	Insulation - Type B - 2 1/2"	
Support Systems (SS)	Group 32 - CVCS Normal Letdown Line (CVLD)	SS-CVLD-23	23	Pipe - Reg. HX Inlet Nozzle	3	0.438"	SA376 GR.TP304 (SMLS)		SA312 GR. 304 (SMLS)	Field	560	2250	75-120 GPM	650	2485	150 GPM	Reactor Coolant	Cont. Bldg. Air	23.66	24.6	49.2			Insulation - Type B - 2 1/2"	
Support Systems (SS)	Group 32 - CVCS Normal Letdown Line (CVLD)	SS-CVLD-24	24	Reg. HX Inlet Nozzle Weld (Charging) Tube Side	8.625	0.437	SA312 GR. 304 (SMLS)		SA312 GR. 304 (SMLS)		115/517	2250	37.3K lb/hr(Shell) / 27.4K lb/hr(Tube)	650	2485 (Shell) / 3100 (Tube)	150 GPM	Reactor Coolant	Cont. Bldg. Air	23.92	24.6	49.2			Insulation - Type B - 2 1/2"	
Support Systems (SS)	Group 32 - CVCS Normal Letdown Line (CVLD)	SS-CVLD-25	25	Reg. HX Outlet Nozzle Weld (Letdown) Shell Side on Saddle	3	0.437	SA312 GR. 304 (SMLS)		SA312 GR. 304 (SMLS)		560/290	2250	37.3K lb/hr(Shell) / 27.4K lb/hr(Tube)	650	2485 (Shell) / 3100 (Tube)	150 GPM	Reactor Coolant	Cont. Bldg. Air	23.92	24.6	49.2			4" Insulation	
Support Systems (SS)	Group 32 - CVCS Normal Letdown Line (CVLD)	SS-CVLD-26	26	Reg. HX Vertical to Horizontal Bottom Weld	8.625		SA312 GR. 304 (SMLS)		SA312 GR. 304 (SMLS)		560/290	2250	37.3K lb/hr(Shell) / 27.4K lb/hr(Tube)	650	2485 (Shell) / 3100 (Tube)	150 GPM	Reactor Coolant	Cont. Bldg. Air	23.92	24.6	49.2			4" Insulation	
Support Systems (SS)	Group 32 - CVCS Normal Letdown Line (CVLD)	SS-CVLD-27	27	Reg. HX Body End Weld	10.75		SA312 GR. 304 (SMLS)		SA312 GR. 304 (SMLS)		560/290	2250	37.3K lb/hr(Shell) / 27.4K lb/hr(Tube)	650	2485 (Shell) / 3100 (Tube)	150 GPM	Reactor Coolant	Cont. Bldg. Air	23.92	24.6	49.2			4" Insulation	
Support Systems (SS)	Group 32 - CVCS Normal Letdown Line (CVLD)	SS-CVLD-28	28	Reg. HX Body End Weld	10.75		SA312 GR. 304 (SMLS)		SA312 GR. 304 (SMLS)		560/290	2250	37.3K lb/hr(Shell) / 27.4K lb/hr(Tube)	650	2485 (Shell) / 3100 (Tube)	150 GPM	Reactor Coolant	Cont. Bldg. Air	23.92	24.6	49.2			4" Insulation	
Support Systems (SS)	Group 32 - CVCS Normal Letdown Line (CVLD)	SS-CVLD-29	29	Reg. HX Vertical to Horizontal Bottom Weld	8.625		SA312 GR. 304 (SMLS)		SA312 GR. 304 (SMLS)		560/290	2250	37.3K lb/hr(Shell) / 27.4K lb/hr(Tube)	650	2485 (Shell) / 3100 (Tube)	150 GPM	Reactor Coolant	Cont. Bldg. Air	23.92	24.6	49.2			4" Insulation	
Support Systems (SS)	Group 32 - CVCS Normal Letdown Line (CVLD)	SS-CVLD-30	30	Reg. HX Inlet Nozzle Weld (Letdown) Shell Side on Saddle	3	0.437	SA312 GR. 304 (SMLS)		SA312 GR. 304 (SMLS)		560/290	2250	37.3K lb/hr(Shell) / 27.4K lb/hr(Tube)	650	2485 (Shell) / 3100 (Tube)	150 GPM	Reactor Coolant	Cont. Bldg. Air	23.92	24.6	49.2			4" Insulation	
Support Systems (SS)	Group 32 - CVCS Normal Letdown Line (CVLD)	SS-CVLD-31	31	Reg. HX Outlet Nozzle Weld (Charging) Tube Side	8.625	0.437	SA312 GR. 304 (SMLS)		SA312 GR. 304 (SMLS)		115/517	2250	37.3K lb/hr(Shell) / 27.4K lb/hr(Tube)	650	2485 (Shell) / 3100 (Tube)	150 GPM	Reactor Coolant	Cont. Bldg. Air	23.92	24.6	49.2			Insulation - Type B - 2 1/2"	
Support Systems (SS)	Group 32 - CVCS Normal Letdown Line (CVLD)	SS-CVLD-32	32	Reg. HX Tubes			SA213AW SS304		Not Applicable		115/517	2250	37.3K lb/hr(Shell) / 27.4K lb/hr(Tube)	650	2485 (Shell) / 3100 (Tube)	150 GPM	Reactor Coolant	Cont. Bldg. Air		24.3	48.6				
Support Systems (SS)	Group 32 - CVCS Normal Letdown Line (CVLD)	SS-CVLD-33	33	Reg. HX Tubesheet			SA182 SS304		Not Applicable		115/517	2250	37.3K lb/hr(Shell) / 27.4K lb/hr(Tube)	650	2485 (Shell) / 3100 (Tube)	150 GPM	Reactor Coolant	Cont. Bldg. Air		20.85	41.7				
Support Systems (SS)	Group 32 - CVCS Normal Letdown Line (CVLD)	SS-CVLD-34	34	Reg. HX Fittings			SA182 SS304		Not Applicable		115/517	2250	37.3K lb/hr(Shell) / 27.4K lb/hr(Tube)	650	2485 (Shell) / 3100 (Tube)	150 GPM	Reactor Coolant	Cont. Bldg. Air		20.85	41.7			Insulation - Type B - 2 1/2"	
Support Systems (SS)	Group 32 - CVCS Normal Letdown Line (CVLD)	SS-CVLD-35	35	Reg. HX Outside Supports			SA515-70 CS		Not Applicable		Cont. Air with Insulation	2250	37.3K lb/hr(Shell) / 27.4K lb/hr(Tube)	650	2485 (Shell) / 3100 (Tube)	150 GPM	Reactor Coolant	Cont. Bldg. Air		29.1	58.2			Insulation - Type B - 2 1/2"	

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in oF	Operating Pressure in psi	Operating Flow in gpm	Design Temperature in oF	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-1		Flange - Elbow	3	0.216	SA182 GR.F304		SA403 GR.WP304		115	285	75-120 GPM	250	585	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60			3"- 600 # RFWN Flange/Bolts - SA193 GR. B16; Nuts - SA194 GR.4; Gasket - 1/8"gap, Flexitallic, Style CG	
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-2		Elbow	3	0.216	SA403 GR.WP304		Not Applicable		115	285	75-120 GPM	250	585	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60			Operating flow 75-120 gpm from B/B-UFSAR 9.3-72	
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-3		Elbow - Pipe	3	0.216	SA403 GR.WP304		SA312 GR.TP304 (SMLS)		115	285	75-120 GPM	250	585	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60			Design flow is based on filter design flow of 150 gpm per B/B-UFSAR 9.3-79	
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-4		Straight Pipe	3	0.216	SA312 GR.TP304 (SMLS)		Not Applicable		115	285	75-120 GPM	250	585	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-5		Pipe - 3 x 3/4 3000 lb Weldolet	3	0.216	SA312 GR.TP304 (SMLS)		SA403 GR.WP304	Shop	115	285	75-120 GPM	250	585	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-6		3 x 3/4 3000 lb Weldolet	3x3/4	0.216	SA403 GR.WP304		Not Applicable		115	285	Normally Stagnant (no flow)	250	585		High point vent ?	Reactor Coolant	Aux. Bldg. Air		30	60			
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-7		Weldolet - Valve 1CV229	3/4"	0.216	SA403 GR.WP304		SA182 GR.F316	Shop	115	285	Normally Stagnant (no flow)	250	585		High point vent ?	Reactor Coolant	Aux. Bldg. Air	39	30	60			
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-8		Valve 1CV229	3/4"	0.216	SA182 GR.F316		Not Applicable		115	285	Normally Stagnant (no flow)	250	585		High point vent ?	Reactor Coolant	Aux. Bldg. Air		30	60			
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-9		Valve 1CV229 - Pipe	3/4"	0.216	SA182 GR.F316		SA312 GR.TP304 (SMLS)		115	285	Normally Stagnant (no flow)	250	585		High point vent ?	Reactor Coolant	Aux. Bldg. Air	39	30	60			
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-10		Straight Pipe	3/4"	0.216	SA312 GR.TP304 (SMLS)		Not Applicable		115	285	Normally Stagnant (no flow)	250	585		High point vent ?	Reactor Coolant	Aux. Bldg. Air		30	60			
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-11		Pipe Cap	3/4"	0.216	SA403 GR.WP304		Not Applicable		115	285	Normally Stagnant (no flow)	250	585		High point vent ?	Reactor Coolant	Aux. Bldg. Air		30	60			
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-12		Pipe - Pipe	3	0.216	SA312 GR.TP304 (SMLS)		SA312 GR.TP304 (SMLS)	Shop	115	285	75-120 GPM	250	585	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-13		Elbow - Check Valve 1CV8466A	3	0.216	SA403 GR.WP304		SA182 GR.F316	Field	115	285	75-120 GPM	250	585	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-14		Check Valve 1CV8466A	3	0.216	SA182 GR.F316		Not Applicable		115	285	75-120 GPM	250	585	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-15		Valve 1CV8466A - Valve 1CV8467A	3	0.216	SA182 GR.F316		SA182 GR.F316	Field	115	285	75-120 GPM	250	585	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-16		Valve 1CV8467A	3	0.216	SA182 GR.F316		Not Applicable		115	285	75-120 GPM	250	585	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-17		Pipe - Tee	3	0.216	SA312 GR.TP304 (SMLS)		SA403 GR.WP304	Shop	115	285	75-120 GPM	250	585	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-18		Tee	3	0.216	SA403 GR.WP304		Not Applicable		115	285	75-120 GPM	250	585	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-19		Elbow-Elbolet	3 x 1-1/4	0.216	SA403 GR.WP304		SA403 GR.WP304	Shop	115	285	75-120 GPM	250	585	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-20		Pipe - Flange	3	0.216	SA312 GR.TP304 (SMLS)		SA182 GR.F304		115	285	75-120 GPM	250	585	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-21		Flange	3	0.216	SA182 GR.F304		Not Applicable		115	285	75-120 GPM	250	585	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60			3"- 600 # RFWN Orifice Flange; Bolts - SA193 GR. B16; Nuts - SA194 GR.4; Gasket - 1/8"gap, Flexitallic, Style CG	
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-22		Valve 1CV8408A	3	0.216	SA182 GR.F316		Not Applicable		115	285	75-120 GPM	250	585	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-23		Valve 1CV131	3	0.216	SA182 GR.F316		Not Applicable		115	285	75-120 GPM	250	585	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-24		Valve 1CV8408B	3	0.216	SA182 GR.F316		Not Applicable		115	285	75-120 GPM	250	585	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-25		Flange bolted to Valve 1CV129	3	0.216	SA182 GR.F304		SA182 GR.F316		115	285	75-120 GPM	250	585	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60			3"- 300 # RFWN Flange; Bolts - SA193 GR. B7; Nuts - SA194 GR.2H; Gasket - 1/8"gap, Flexitallic, Style CG	
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-26		3 Way Valve 1CV129	3	0.216	SA182 GR.F316		Not Applicable		115	285	75-120 GPM	140	300	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60			Valve bolted on all three sides.	
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-27		Elbow-Elbow	3	0.216	SA403 GR.WP304		SA403 GR.WP304	Field	115	285	75-120 GPM	140	300	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-28		Check Valve 1CV8496	3	0.216	SA182 GR.F316		Not Applicable		115	285	75-120 GPM	140	300	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-29		Valve 1CV8524A	3	0.216	SA182 GR.F316		Not Applicable		115	285	75-120 GPM	140	300	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-30		Elbow - Mixed Bed Inlet Nozzle	3	0.216	SA403 GR.WP304		SA312 GR.TP304 (SMLS)	Field	115	285	75-120 GPM	140	300	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-31		Pipe - 45 degree Elbow	3	0.216	SA312 GR.TP304 (SMLS)		SA403 GR.WP304	Shop	115	285	75-120 GPM	140	300	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-32		45 degree Elbow	3	0.216	SA403 GR.WP304		Not Applicable		115	285	75-120 GPM	140	300	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-33		Pipe - Lug	3	0.216	SA312 GR.TP304 (SMLS)		Carbon Steel?		115	285	75-120 GPM	140	300	150 GPM	Not Applicable	Aux. Bldg. Air		30	60			Pipe lug shown on Phillips, Getschow dwg. 1A-CV-37 Sheet 2	
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-34		Valve 1CV8421	3	0.216	SA182 GR.F316		Not Applicable		115	285	75-120 GPM	140	300	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-35		Valve 1CV8425	3	0.216	SA182 GR.F316		Not Applicable		115	285	75-120 GPM	140	300	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-36		Pipe - Filter Inlet Nozzle	3	0.216	SA312 GR.TP304 (SMLS)		SA479 304	Field	115	285	75-120 GPM	140	300	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-37		Filter Outlet Nozzle -Pipe	3	0.216	SA312 TP304 ?		SA312 GR.TP304 (SMLS)	Field	115	285	75-120 GPM	140	300	150 GPM	Reactor Coolant	Aux. Bldg. Air							
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-38		Valve 1CV8422	3	0.216	SA182 GR.F316		Not Applicable		115	285	75-120 GPM	140	300	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-39		Check Valve 1CV8454	3	0.216	SA182 GR.F316		Not Applicable		115	285	75-120 GPM	140	300	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-40		Three Way Valve 1CV112A	3	0.216	SA182 GR.F316		Not Applicable		115	285	75-120 GPM	140	300	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60			Valve bolted on all three sides.	
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-41		Check Valve 1CV8420	3	0.216	SA182 GR.F316		Not Applicable		115	285	75-120 GPM	140	300	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-42		Check Valve 1CV8417	3	0.216	SA182 GR.F316		Not Applicable		115	75	75-120 GPM	140	300	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-43		Valve 1CV8416	3	0.216	SA182 GR.F316		Not Applicable		115	75	75-120 GPM	140	300	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-44		Elbow - VCT Inlet Nozzle	3	0.216	SA403 GR.WP304		SA182 F304	Field	115	75	75-120 GPM	140	300	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-45		Filter Inlet Head - Filter Shell	7	0.165 Shell	SA479 304		SA312 TP304	Shop	115	75	75-120 GPM	250	300	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60			Design flow, temp, press. from B/B-UFSAR 9.3-79	
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-46		Filter Shell - Filter Outlet Nozzle	7" shell 3" nozzle	0.165 Shell	SA312 TP304		SA312 TP304 ?	Shop	115	75	75-120 GPM	250	300	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-47		Filter Shell - Filter Seal Ring	7	0.165 Shell	SA312 TP304		SA182 F304	Shop	115	75	75-120 GPM	250	300	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-48		Filter Seal Ring bolted to Filter Cover			SA182 F304		SA240 304		115	75	75-120 GPM	250	300	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60			Dy. Four - 5/8-11 UNC Stud bolts in Seal Ring; Stud bolts SA453 GR.660	
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-49		VCT Inlet Nozzle - VCT Upper Head	3	0.312	SA182 F304		SA240 304	Shop	115	75	75-120 GPM	250	75	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60			Design flow, temp., press., from Westinghouse dwg. 145/F57 Sheet 1 of 2	
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-50		VCT Upper Head - VCT Cylinder	90	0.312 - 0.25	SA240 304		SA240 304	Shop	115	75	75-120 GPM	250	75	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60			VCT volume - 400 cubic feet from B/B - UFSAR pg. 9.3-79 (Table 9.3.3)	
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-51		VCT Cylinder - VCT Cylinder	90	0.25	SA240 304		SA240 304	Shop	115	75	75-120 GPM	250	75	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHXVCT-52		VCT Cylinder - VCT Lower Head	90	0.25 - 0.312	SA240 304		SA240 304	Shop	115	75	75-120 GPM	250	75	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT (LHXVCT)	SS-LHX																							

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in oF	Operating Pressure in psi	Operating Flow in gpm	Design Temperature in oF	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-1		Nozzle - Elbow	3	0.216	SA312 GR.TP304 (SMLS)		SA182 GR.F304	Field	115	285		140	300	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60			Design flow from B/B-UFSAR 9.3-78	
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-2		Elbow	3	0.216	SA182 GR.F304		Not Applicable		115	285		140	300	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-3		Elbow - Pipe	3	0.216	SA182 GR.F304		SA312 GR.TP304 (SMLS)		115	285		140	300	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-4		Straight Pipe	3	0.216	SA312 GR.TP304 (SMLS)		Not Applicable		115	285		140	300	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-5		Pipe - Tee	3	0.216	SA312 GR.TP304 (SMLS)		SA182 GR.F304		115	285		140	300	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-6		Tee	3	0.216	SA182 GR.F304		Not Applicable		115	285		140	300	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-7		Pipe - Valve 1CV8522A	3	0.216	SA312 GR.TP304 (SMLS)		SA351 GR.CF8	Field	115	285		140	300	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-8		Valve 1CV8522A	3	0.216	SA351 GR.CF8		Not Applicable		115	285		140	300	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-9		Valve 1CV8522A - Elbow	3	0.216	SA351 GR.CF8		SA182 GR.F304	Field	115	285		140	300	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-10		Elbow - Elbow	3	0.216	SA182 GR.F304		SA182 GR.F304		115	285		140	300	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-11		Pipe - Pipe	3	0.216	SA312 GR.TP304 (SMLS)		SA312 GR.TP304 (SMLS)	Shop	115	285		140	300	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-12		Valve 1CV8514	3	0.216	SA351 GR.CF8		Not Applicable		115	285		140	300	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-13		Lug - Valve 1CV8514	3	0.216	Carbon Steel		SA351 GR.CF8		115	285		140	300	150 GPM	Not applicable	Aux. Bldg. Air						Pipe lug shown on Phillips, Getschow dwg. 1A-CV-08	
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-14		Pipe - Weldolet	3	0.216	SA312 GR.TP304 (SMLS)		SA182 GR.F304	Shop	115	285		140	300	High point vent	Reactor Coolant	Aux. Bldg. Air	39	30	60			This branch line normally has no flow	
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-15		3 x 3/4 Weldolet	3 x 3/4	0.216	SA182 GR.F304		Not Applicable		115	285		140	300	High point vent	Reactor Coolant	Aux. Bldg. Air		30	60			This branch line normally has no flow	
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-16		Weldolet - Valve 1CV231	3/4"	0.216	SA182 GR.F304		SA351 GR.CF8	Shop	115	285		140	300	High point vent	Reactor Coolant	Aux. Bldg. Air	39	30	60			This branch line normally has no flow	
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-17		Valve 1CV231	3/4"	0.216	SA351 GR.CF8		Not Applicable		115	285		140	300	High point vent	Reactor Coolant	Aux. Bldg. Air		30	60			This branch line normally has no flow	
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-18		Tee - Reducer	3	0.216	SA182 GR.F304		SA182 GR.F304		115	285		140	300	75 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60			Cation design flow is 75 GPM per B/B - UFSAR 9.3-78	
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-19		3 x 2 Reducer	3 x 2	0.216	SA182 GR.F304		Not Applicable		115	285		140	300	75 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-20		Reducer - Coupling	2	0.154	SA182 GR.F304		SA182 GR.F304		115	285		140	300	75 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-21		Coupling	2	0.154	SA182 GR.F304		Not Applicable		115	285		140	300	75 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-22		Coupling - Pipe	2	0.154	SA182 GR.F304		SA312 GR.TP304 (SMLS)		115	285		140	300	75 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60			LER 247-1996-024: Toe of socket weld leak (weld defect) indicated by single pit of less than 1/32 inch diameter with dry boric acid residue.	
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-23		Straight Pipe	2	0.154	SA312 GR.TP304 (SMLS)		Not Applicable		115	285		140	300	75 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-24		Pipe with 90 degree bend	2	0.154	SA312 GR.TP304 (SMLS)		Not Applicable		115	285		140	300	75 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-25		Pipe - Flange	2	0.154	SA312 GR.TP304 (SMLS)		SA182 GR.F304	Field	115	285		140	300	75 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-26		Flange	2	0.154	SA182 GR.F304		Not Applicable		115	285		140	300	75 GPM	Reactor Coolant	Aux. Bldg. Air		30	60			LER 255-1998-001: Flange gasket material rated for only 100 psi whereas the system design pressure is 150 psi. Gasket as not made as a one piece gasket, but as a three piece gasket.	2" 300 lb Orifice Flange; 5/8" Stud Bolts (SA193 GR.B7); 5/8" Nuts (SA194 GR.2H); Flexitlastic Gasket
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-27		Pipe - Elbow	2	0.154	SA312 GR.TP304 (SMLS)		SA182 GR.F304	Field	115	285		140	300	75 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-28		Elbow	2	0.154	SA182 GR.F304		Not Applicable		115	285		140	300	75 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-29		Pipe - Valve 1CV8516	2	0.154	SA312 GR.TP304 (SMLS)		SA351 GR.CF8	Field	115	285		140	300	75 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-30		Valve 1CV8516	2	0.154	SA351 GR.CF8		Not Applicable		115	285		140	300	75 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-31		45 degree Elbow	2	0.154	SA182 GR.F304		Not Applicable		115	285		140	300	75 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-32		45 degree Elbow - Pipe	2	0.154	SA182 GR.F304		SA312 GR.TP304 (SMLS)	Field	115	285		140	300	75 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-33		Elbow - Coupling	2	0.154	SA182 GR.F304		SA182 GR.F304	Field	115	285		140	300	75 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-34		Reducer - Nozzle	3	0.216	SA182 GR.F304		Not Applicable	Field	115	285		140	300	75 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-35		Nozzle - Pipe	3	0.216	SA182 GR.F316		SA312 GR.TP304 (SMLS)		115	285		140	300	75 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-36		Valve 1CV8518	2	0.154	SA351 GR.CF8		Not Applicable		115	285		140	300	75 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-37		Valve 1CV8512	3	0.216	SA351 GR.CF8		Not Applicable		115	285		140	300	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-38		Valve 1CV8542	3	0.216	SA351 GR.CF8		Not Applicable		115	285		140	300	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-39		Valve 1CV8511	3	0.216	SA351 GR.CF8		Not Applicable		115	285		140	300	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-40		Valve 1CV8511 - Tee	3	0.216	SA351 GR.CF8		SA182 GR.F304	Field	115	285		140	300	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60			LER 336-1995-023: OD initiated stress corrosion cracking in tee fittings in the Boric Acid section of the CVCS.	
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-41		Mixed Bed Inlet Nozzle - Mixed Bed Upper Head	3	0.216 - 0.465	SA312 GR.TP304 (SMLS)		SA240 GR.TP304	Shop	115	285		250	300	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-42		Mixed Bed Upper Head - Mixed Bed Shell	32	0.465 - 0.278	SA240 GR.TP304		SA240 GR.TP304	Shop	115	285		250	300	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-43		Mixed Bed Shell - Mixed Bed Lower Head	22	0.278 - 0.465	SA240 GR.TP304		SA240 GR.TP304	Shop	115	285		250	300	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-44		Mixed Bed Lower Head - Mixed Bed Outlet Nozzle	3	0.465 - 0.216	SA240 GR.TP304		SA312 GR.TP304 (SMLS)	Shop	115	285		250	300	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-45		Cation Bed Inlet Nozzle - Cation Bed Upper Head	3	0.216 - 0.372	SA312 GR.TP304 (SMLS)		SA240 GR.TP304	Shop	115	285		250	300	75 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-46		Cation Bed Upper Head - Cation Bed Shell	26	0.372 - 0.226	SA240 GR.TP304		SA240 GR.TP304	Shop	115	285		250	300	75 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-47		Cation Bed Shell - Cation Bed Lower Head	26	0.226 - 0.372	SA240 GR.TP304		SA240 GR.TP304	Shop	115	285		250	300	75 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR-48		Cation Bed Lower Head - Cation Bed Outlet Nozzle	3	0.372 - 0.216	SA240 GR.TP304		SA312 GR.TP304 (SMLS)	Shop	115	285		250	300	75 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in oF	Operating Pressure in psi	Operating Flow in gpm	Design Temperature in oF	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTCVP)	SS-VCTCVP-	58	Flange	2	0.154	SA182 GR.F304		Not Applicable		160	95	75 - 120	250	150	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				2" 300 lb SWRF Orifice Flange; Bolts - SA193 GR.B7; Nuts - SA194 GR.2H; Gasket - 300 lb Flexitallic
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTCVP)	SS-VCTCVP-	59	Valve 1CV8479B	2	0.343	SA182 GR.F316		Not Applicable		115	2250	75 - 120	140	2485	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				Drawings indicate 2600 operating and 2485 design pressures
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTCVP)	SS-VCTCVP-	60	Valve 1CV8479B - Pipe	2	0.343	SA182 GR.F316		SA376 GR.TP304		115	2250	75 - 120	140	2485	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				Drawings indicate 2600 operating and 2485 design pressures
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTCVP)	SS-VCTCVP-	61	Straight Pipe	2	0.343	SA376 GR.TP304		Not Applicable		115	2250	75 - 120	140	2485	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				Drawings indicate 2600 operating and 2485 design pressures
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTCVP)	SS-VCTCVP-	62	Valve 1CV8116	2	0.343	SA182 GR.F316		Not Applicable		115	2250	75 - 120	140	2485	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				Drawings indicate 2600 operating and 2485 design pressures
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTCVP)	SS-VCTCVP-	63	Pipe - Elbow	2	0.343	SA376 GR.TP304		SA182 GR.F304		115	2250	75 - 120	140	2485	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				Drawings indicate 2600 operating and 2485 design pressures
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTCVP)	SS-VCTCVP-	64	Elbow	2	0.343	SA182 GR.F304		Not Applicable		115	2250	75 - 120	140	2485	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				Drawings indicate 2600 operating and 2485 design pressures
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTCVP)	SS-VCTCVP-	65	Valve 1CV8110-1	2	0.343	SA182 GR.F316		Not Applicable		115	2250	75 - 120	140	2485	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				Drawings indicate 2600 operating and 2485 design pressures
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTCVP)	SS-VCTCVP-	66	Pipe - Coupling	2	0.343	SA376 GR.TP304		SA182 GR.F304		115	2250	75 - 120	140	2485	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				Drawings indicate 2600 operating and 2485 design pressures
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTCVP)	SS-VCTCVP-	67	Coupling	2	0.343	SA182 GR.F304		Not Applicable		115	2250	75 - 120	140	2485	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				Drawings indicate 2600 operating and 2485 design pressures
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTCVP)	SS-VCTCVP-	68	Pipe with 90 degree Bend	2	0.343	SA376 GR.TP304		Not Applicable		115	2250	75 - 120	140	2485	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				Drawings indicate 2600 operating and 2485 design pressures
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTCVP)	SS-VCTCVP-	69	Valve 1CV-03MB		0.343	SA182 GR.F316		Not Applicable		115	2250	75 - 120	140	2485	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				Drawings indicate 2600 operating and 2485 design pressures
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTCVP)	SS-VCTCVP-	70	Check Valve 1CV8480B	2	0.343	SA182 GR.F304		Not Applicable		115	2250	75 - 120	140	2485	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				Drawings indicate 2600 operating and 2485 design pressures

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in oF	Operating Pressure in psi	Operating Flow in gpm	Design Temperature in oF	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	1	Flange - Elbow	4	0.531	SA182 GR.F304		SA403 GR.WP 304/316 SMLS		130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air	30	30	60			Operating flow and Design flow from B/B-UFSAR 9.3-72. Drawings however indicate 2600 operating pressure and 2735 design pressure	
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	2	Elbow	4	0.531	SA403 GR.WP 304/316 SMLS		Not Applicable		130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air	30	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	3	Elbow - Pipe	4	0.531	SA403 GR.WP 304/316 SMLS		SA376 GR.TP304 (SMLS)		130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air	30	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	4	Pipe - Check Valve 1CV8481B	4	0.531	SA376 GR.TP304 (SMLS)		SA182 GR.F316		130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air	30	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	5	Check Valve 1CV8481B	4	0.531	SA182 GR.F316		Not Applicable		130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air	30	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	6	Check Valve 1CV8481B - Elbow	4	0.531	SA182 GR.F316		SA403 GR.WP 304/316 SMLS	Field	130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air	30	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	7	Elbow - Tee	4	0.531	SA403 GR.WP 304/316 SMLS		SA403 GR.WP 304/316 SMLS	Shop	130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air	30	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	8	Tee	4	0.531	SA403 GR.WP 304/316 SMLS		Not Applicable		130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air	30	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	9	Tee - Valve 1CV8485B	4	0.531	SA403 GR.WP 304/316 SMLS		SA182 GR.F316	Field	130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air	30	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	10	Valve 1CV8485B	4	0.531	SA182 GR.F316		Not Applicable		130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air	30	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	11	Straight Pipe	4	0.531	SA376 GR.TP304 (SMLS)		Not Applicable		130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air	30	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	12	Pipe - Weldolet	4	0.531	SA376 GR.TP304 (SMLS)		SA403 GR.WP 304/316 SMLS	Shop	130	2235	Normally stagnant (no flow)	200	2485	High point vent	Reactor Coolant	Aux. Bldg. Air	30	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	13	4 x 3/4 Weldolet	4 x 3/4	0.531	SA403 GR.WP 304/316 SMLS		Not Applicable		130	2235	Normally stagnant (no flow)	200	2485	High point vent	Reactor Coolant	Aux. Bldg. Air	30	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	14	Weldolet - Valve 1CV207	3/4"	0.218	SA403 GR.WP 304/316 SMLS		SA182 GR.F316	Shop	130	2235	Normally stagnant (no flow)	200	2485	High point vent	Reactor Coolant	Aux. Bldg. Air	39	30	60			LER 336-2002-004: High cycle vibration fatigue at socket welds at a tee and elbow connection.	
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	15	Valve 1CV207	3/4"	0.218	SA182 GR.F316		Not Applicable		130	2235	Normally stagnant (no flow)	200	2485	High point vent	Reactor Coolant	Aux. Bldg. Air	30	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	16	Pipe - Pipe	4	0.531	SA376 GR.TP304 (SMLS)		SA376 GR.TP304 (SMLS)	Field	130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air	30	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	17	Pipe - Tee	4	0.531	SA376 GR.TP304 (SMLS)		SA403 GR.WP 304/316 SMLS		130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air	30	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	18	Tee - Reducer	4	0.531	SA403 GR.WP 304/316 SMLS		SA403 GR.WP 304/316 SMLS		130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air	30	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	19	4 x 3 Reducer	4 x 3	0.531	SA403 GR.WP 304/316 SMLS		Not Applicable		130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air	30	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	20	Reducer - Elbow	3	0.437	SA403 GR.WP 304/316 SMLS		SA403 GR.WP 304/316 SMLS	Shop	130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	21	Elbow - Valve 1CV8483A	3	0.437	SA403 GR.WP 304/316 SMLS		SA182 GR.F316		130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	22	Valve 1CV8483A	3	0.437	SA182 GR.F316		Not Applicable		130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air	30	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	23	Valve 1CV8483A - Valve 1CV121	3	0.437	SA182 GR.F316		SA182 GR.F316	Field	130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	24	Valve 1CV121	3	0.437	SA182 GR.F316		Not Applicable		130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air	30	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	25	Valve 1CV8483B	3	0.437	SA182 GR.F316		Not Applicable		130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air	30	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	26	Valve 1CV8483B - 45 degree Elbow	3	0.437	SA182 GR.F316		SA403 GR.WP 304/316 SMLS	Field	130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	27	45 degree Elbow	3	0.437	SA403 GR.WP 304/316 SMLS		Not Applicable		130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air	30	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	28	Straight Pipe	3	0.437	SA376 GR.TP304 (SMLS)		Not Applicable		130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air	30	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	29	45 degree Elbow - Pipe	3	0.437	SA403 GR.WP 304/316 SMLS		SA376 GR.TP304 (SMLS)	Shop	130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	30	Pipe - Tee	3	0.437	SA376 GR.TP304 (SMLS)		SA403 GR.WP 304/316 SMLS		130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	31	Tee	3	0.437	SA403 GR.WP 304/316 SMLS		Not Applicable		130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air	30	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	32	Tee - Elbow	3	0.437	SA403 GR.WP 304/316 SMLS		SA403 GR.WP 304/316 SMLS		130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	33	Pipe - Flange	3	0.437	SA376 GR.TP304 (SMLS)		SA182 GR.F316		130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	34	Flange	3	0.437	SA182 GR.F316		Not Applicable		130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air	30	30	60			3" - 1500 lb Orifice Flange; Bolts - SA193 GR.B-16; Nuts SA194 GR.4; Flexitatic Gasket 1/8" Gap; Style "CG"	
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	35	Pipe - Valve 1CV8402B	3	0.437	SA376 GR.TP304 (SMLS)		SA182 GR.F316	Field	130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	36	Valve 1CV8402B	3	0.437	SA182 GR.F316		Not Applicable		130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air	30	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	37	Valve 1CV182	3	0.437	SA182 GR.F316		Not Applicable		130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air	30	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	38	Valve 1CV8402A	3	0.437	SA182 GR.F316		Not Applicable		130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air	30	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	39	Valve 1CV8402A - Tee	3	0.437	SA182 GR.F316		SA403 GR.WP 304/316 SMLS	Field	130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	40	Valve 1CV8106-1	3	0.437	SA182 GR.F316		Not Applicable		130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air	30	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	41	Valve 1CV8106-2	3	0.437	SA182 GR.F316		Not Applicable		130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air	30	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	42	Straight Pipe	3	0.437	SA376 GR.TP304 (SMLS)		Not Applicable		130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Cont. Bldg. Air	30	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	43	Pipe - Elbow	3	0.437	SA376 GR.TP304 (SMLS)		SA403 GR.WP 304/316 SMLS		130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Cont. Bldg. Air	39	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	44	Elbow	3	0.437	SA403 GR.WP 304/316 SMLS		Not Applicable		130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Cont. Bldg. Air	30	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	45	Pipe - Pipe	3	0.437	SA376 GR.TP304 (SMLS)		SA376 GR.TP304 (SMLS)	Shop	130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Cont. Bldg. Air	39	30	60				
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX	46	Pipe - 45 degree Elbow	3	0.437	SA376 GR.TP304 (SMLS)		SA403 GR.WP 304/316 SMLS		130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Cont. Bldg. Air	39	30					

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in oF	Operating Pressure in psi	Operating Flow in gpm	Design Temperature in oF	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Support Systems (SS)	Group 38 - CVCS Regenerative HX to Cold Leg (RHXCL)	SS-RHXCL	1	Nozzle - Elbow	3	0.437	SA312 GR.F304 SMLS		SA403 GR.WP304 SMLS	Field	517	2305	55-100 GPM	550	2485	100 GPM	Reactor Coolant	Cont. Bldg. Air	23.66	24.6	49.2				Operating and Design flows from B/B-UFSAR 9.3-72, Type B (2-1/2") piping insulation.
Support Systems (SS)	Group 38 - CVCS Regenerative HX to Cold Leg (RHXCL)	SS-RHXCL	2	Elbow	3	0.437	SA403 GR.WP304 SMLS		Not Applicable		517	2305	55-100 GPM	550	2485	100 GPM	Reactor Coolant	Cont. Bldg. Air		24.6	49.2				
Support Systems (SS)	Group 38 - CVCS Regenerative HX to Cold Leg (RHXCL)	SS-RHXCL	3	Elbow - Pipe	3	0.437	SA403 GR.WP304 SMLS		SA376 GR.TP304 (SMLS)	Shop	517	2305	55-100 GPM	550	2485	100 GPM	Reactor Coolant	Cont. Bldg. Air	23.79	24.6	49.2				
Support Systems (SS)	Group 38 - CVCS Regenerative HX to Cold Leg (RHXCL)	SS-RHXCL	4	Pipe - 45 degree Elbow	3	0.437	SA376 GR.TP304 (SMLS)		SA403 GR.WP304 SMLS	Shop	517	2305	55-100 GPM	550	2485	100 GPM	Reactor Coolant	Cont. Bldg. Air	23.66	24.6	49.2				
Support Systems (SS)	Group 38 - CVCS Regenerative HX to Cold Leg (RHXCL)	SS-RHXCL	5	45 degree Elbow	3	0.437	SA403 GR.WP304 SMLS		Not Applicable		517	2305	55-100 GPM	550	2485	100 GPM	Reactor Coolant	Cont. Bldg. Air		24.6	49.2				
Support Systems (SS)	Group 38 - CVCS Regenerative HX to Cold Leg (RHXCL)	SS-RHXCL	6	Straight Pipe	3	0.437	SA376 GR.TP304 (SMLS)		Not Applicable		517	2305	55-100 GPM	550	2485	100 GPM	Reactor Coolant	Cont. Bldg. Air		24.6	49.2				
Support Systems (SS)	Group 38 - CVCS Regenerative HX to Cold Leg (RHXCL)	SS-RHXCL	7	Pipe - Valve 1CV8321A	3	0.437	SA376 GR.TP304 (SMLS)		SA182 GR.F316	Field	517	2305	55-100 GPM	550	2485	100 GPM	Reactor Coolant	Cont. Bldg. Air	23.66	24.6	49.2				
Support Systems (SS)	Group 38 - CVCS Regenerative HX to Cold Leg (RHXCL)	SS-RHXCL	8	Valve 1CV8321A	3	0.437	SA182 GR.F316		Not Applicable		517	2305	55-100 GPM	550	2485	100 GPM	Reactor Coolant	Cont. Bldg. Air		25.5	51				
Support Systems (SS)	Group 38 - CVCS Regenerative HX to Cold Leg (RHXCL)	SS-RHXCL	9	Check Valve 1CV8320A	3	0.437	SA182 GR.F316		Not Applicable		517	2305	55-100 GPM	550	2485	100 GPM	Reactor Coolant	Cont. Bldg. Air		25.5	51				
Support Systems (SS)	Group 38 - CVCS Regenerative HX to Cold Leg (RHXCL)	SS-RHXCL	10	Pipe - Tee	3	0.437	SA376 GR.TP304 (SMLS)		SA376 GR.TP304 (SMLS)	Shop	517	2305	55-100 GPM	550	2485	100 GPM	Reactor Coolant	Cont. Bldg. Air	23.66	24.6	49.2				
Support Systems (SS)	Group 38 - CVCS Regenerative HX to Cold Leg (RHXCL)	SS-RHXCL	11	Pipe - Tee	3	0.437	SA376 GR.TP304 (SMLS)		SA403 GR.WP304 SMLS		517	2305	55-100 GPM	550	2485	100 GPM	Reactor Coolant	Cont. Bldg. Air	23.66	24.6	49.2				
Support Systems (SS)	Group 38 - CVCS Regenerative HX to Cold Leg (RHXCL)	SS-RHXCL	12	Tee	3	0.437	SA403 GR.WP304 SMLS		Not Applicable		517	2305	55-100 GPM	550	2485	100 GPM	Reactor Coolant	Cont. Bldg. Air		24.6	49.2				
Support Systems (SS)	Group 38 - CVCS Regenerative HX to Cold Leg (RHXCL)	SS-RHXCL	13	Tee - Elbow	3	0.437	SA403 GR.WP304 SMLS		SA403 GR.WP304 SMLS	Shop	517	2305	55-100 GPM	550	2485	100 GPM	Reactor Coolant	Cont. Bldg. Air	23.79	24.6	49.2				
Support Systems (SS)	Group 38 - CVCS Regenerative HX to Cold Leg (RHXCL)	SS-RHXCL	14	Pipe - Nipolet	3 x 3/4	0.437	SA376 GR.TP304 (SMLS)		SA403 GR.WP304 SMLS	Shop	517	2305	Normally stagnant (no flow)	550	2485	High point vent	Reactor Coolant	Cont. Bldg. Air	23.66	24.6	49.2				
Support Systems (SS)	Group 38 - CVCS Regenerative HX to Cold Leg (RHXCL)	SS-RHXCL	15	3/4 Nipolet	3/4"	0.218	SA403 GR.WP304 SMLS		Not Applicable		517	2305	Normally stagnant (no flow)	550	2485	High point vent	Reactor Coolant	Cont. Bldg. Air		24.6	49.2				
Support Systems (SS)	Group 38 - CVCS Regenerative HX to Cold Leg (RHXCL)	SS-RHXCL	16	Nipolet - Valve 1CV226	3/4"	0.218	SA403 GR.WP304 SMLS		SA182 GR.F316	Shop	517	2305	Normally stagnant (no flow)	550	2485	High point vent	Reactor Coolant	Cont. Bldg. Air	23.79	24.6	49.2				
Support Systems (SS)	Group 38 - CVCS Regenerative HX to Cold Leg (RHXCL)	SS-RHXCL	17	Valve 1CV226	3/4"	0.218	SA182 GR.F316		Not Applicable		517	2305	Normally stagnant (no flow)	550	2485	High point vent	Reactor Coolant	Cont. Bldg. Air		25.5	51				
Support Systems (SS)	Group 38 - CVCS Regenerative HX to Cold Leg (RHXCL)	SS-RHXCL	18	Valve 1CV226 - Pipe	3/4"	0.218	SA182 GR.F316		SA376 GR.TP304 (SMLS)		517	2305	Normally stagnant (no flow)	550	2485	High point vent	Reactor Coolant	Cont. Bldg. Air	24.44	25.5	51				
Support Systems (SS)	Group 38 - CVCS Regenerative HX to Cold Leg (RHXCL)	SS-RHXCL	19	Straight Pipe	3/4"	0.218	SA376 GR.TP304 (SMLS)		Not Applicable		517	2305	Normally stagnant (no flow)	550	2485	High point vent	Reactor Coolant	Cont. Bldg. Air		24.6	49.2				
Support Systems (SS)	Group 38 - CVCS Regenerative HX to Cold Leg (RHXCL)	SS-RHXCL	20	Cap (Threaded)	3/4"	0.218	SA403 GR.WP304 SMLS		Not Applicable		517	2305	Normally stagnant (no flow)	550	2485	High point vent	Reactor Coolant	Cont. Bldg. Air		24.6	49.2				
Support Systems (SS)	Group 38 - CVCS Regenerative HX to Cold Leg (RHXCL)	SS-RHXCL	21	Valve 1CV8146	3	0.437	SA182 GR.F316		Not Applicable		517	2305	55-100 GPM	550	2485	100 GPM	Reactor Coolant	Cont. Bldg. Air		25.5	51				
Support Systems (SS)	Group 38 - CVCS Regenerative HX to Cold Leg (RHXCL)	SS-RHXCL	22	Check Valve 1CV8378B	3	0.437	SA182 GR.F316		Not Applicable		517	2305	55-100 GPM	550	2485	100 GPM	Reactor Coolant	Cont. Bldg. Air		25.5	51				
Support Systems (SS)	Group 38 - CVCS Regenerative HX to Cold Leg (RHXCL)	SS-RHXCL	23	Check Valve 1CV8378A	3	0.437	SA182 GR.F316		Not Applicable		517	2305	55-100 GPM	550	2485	100 GPM	Reactor Coolant	Cont. Bldg. Air		25.5	51				
Support Systems (SS)	Group 38 - CVCS Regenerative HX to Cold Leg (RHXCL)	SS-RHXCL	24	Pipe - CL 2 Charging Nozzle	3	0.437	SA376 GR.TP304 (SMLS)		SA376 GR. TP304		517	2305	55-100 GPM	550	2485	100 GPM	Reactor Coolant	Cont. Bldg. Air	23.66	24.6	49.2				

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in °F	Operating Pressure in psi	Operating Flow in gpm	Design Temperature in °F	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	1	Straight Pipe	3	0.437	SA376 GR.TP304 SMLS		Not Applicable		130	2550	32 GPM	200	2735		Reactor Coolant	Aux. Bldg. Air		30	60				Operating flow 32 GPM for main supply pipe from B/B-UFSAR 9.3-72. P & T taken from drawings
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	2	Pipe - Elbow	3	0.437	SA376 GR.TP304 SMLS		SA403 GR.WP304 SMLS		130	2550	32 GPM	200	2735		Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	3	Elbow	3	0.437	SA403 GR.WP304 SMLS		Not Applicable		130	2550	32 GPM	200	2735		Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	4	Pipe - Weldolet	3	0.437	SA376 GR.TP304 SMLS		SA403 GR.WP304 SMLS	Shop	130	2550	Normally Stagnant (no flow)	200	2735	High point vent	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	5	3 x 3/4 6000 lb Weldolet	3 x 3/4	0.437	SA403 GR.WP304 SMLS		Not Applicable		130	2550	Normally Stagnant (no flow)	200	2735	High point vent	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	6	Weldolet - Valve 1CV205	3/4"	0.218	SA403 GR.WP304 SMLS		SA182 GR.F316	Shop	130	2550	Normally Stagnant (no flow)	200	2735	High point vent	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	7	Valve 1CV205	3/4"	0.218	SA182 GR.F316		Not Applicable		130	2550	Normally Stagnant (no flow)	200	2735	High point vent	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	8	Valve 1CV205 - Pipe	3/4"	0.218	SA182 GR.F316		SA376 GR.TP304 SMLS		130	2550	Normally Stagnant (no flow)	200	2735	High point vent	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	9	Straight Pipe	3/4"	0.218	SA376 GR.TP304 SMLS		Not Applicable		130	2550	Normally Stagnant (no flow)	200	2735	High point vent	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	10	Pipe Cap	3/4"	0.218	SA403 GR.WP304 SMLS		Not Applicable		130	2550	Normally Stagnant (no flow)	200	2735	High point vent	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	11	Pipe - Pipe	3	0.437	SA376 GR.TP304 SMLS		SA403 GR.WP304 SMLS	Shop	130	2550	32 GPM	200	2735		Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	12	Pipe - 45 degree Elbow	3	0.437	SA376 GR.TP304 SMLS		SA403 GR.WP304 SMLS		130	2550	32 GPM	200	2735		Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	13	45 degree Elbow	3	0.437	SA403 GR.WP304 SMLS		Not Applicable		130	2550	32 GPM	200	2735		Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	14	Pipe - Tee	3	0.437	SA376 GR.TP304 SMLS		SA376 GR.TP304 SMLS		130	2550	32 GPM	200	2735		Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	15	Tee	3	0.437	SA403 GR.WP304 SMLS		Not Applicable		130	2550	32 GPM	200	2735		Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	16	Tee - Elbow	3	0.437	SA403 GR.WP304 SMLS		SA403 GR.WP304 SMLS		130	2550	32 GPM	200	2735		Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	17	Pipe - Reducer	3	0.437	SA376 GR.TP304 SMLS		SA403 GR.WP304 SMLS		130	2550	32 GPM	200	2735		Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	18	3 x 2 Reducer	3 x 2	0.437	SA403 GR.WP304 SMLS		Not Applicable		130	2550	32 GPM	200	2735		Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	19	Reducer - Coupling	2	0.343	SA403 GR.WP304 SMLS		SA403 GR.WP304 SMLS		130	2550	32 GPM	200	2735		Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	20	Coupling 6000 lb	2	0.343	SA403 GR.WP304 SMLS		Not Applicable		130	2550	32 GPM	200	2735		Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	21	Coupling - Pipe	2	0.343	SA403 GR.WP304 SMLS		SA376 GR.TP304 SMLS		130	2550	32 GPM	200	2735		Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	22	Pipe	2	0.343	SA376 GR.TP304 SMLS		Not Applicable		130	2550	32 GPM	200	2735		Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	23	Pipe - Valve 1CV8384A	2	0.343	SA376 GR.TP304 SMLS		SA182 GR.F316	Field	130	2550	32 GPM	200	2735		Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	24	Valve 1CV8384A	2	0.343	SA182 GR.F316		Not Applicable		130	2550	32 GPM	200	2735		Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	25	Pipe - Elbow	2	0.343	SA376 GR.TP304 SMLS		SA403 GR.WP304 SMLS	Field	130	2550	32 GPM	200	2735		Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	26	Elbow	2	0.343	SA403 GR.WP304 SMLS		Not Applicable		130	2550	32 GPM	200	2735		Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	27	Pipe - Tee	2	0.343	SA376 GR.TP304 SMLS		SA403 GR.WP304 SMLS	Field	130	2550	32 GPM	200	2735		Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	28	Tee	2	0.343	SA403 GR.WP304 SMLS		Not Applicable		130	2550	32 GPM	200	2735		Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	29	Pipe - Coupling	2	0.343	SA376 GR.TP304 SMLS		SA403 GR.WP304 SMLS	Field	130	2550	32 GPM	200	2735		Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	30	Coupling 6000 lb	2	0.343	SA403 GR.WP304 SMLS		Not Applicable		130	2550	32 GPM	200	2735		Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	31	Coupling - Nozzle	2	0.343	SA403 GR.WP304 SMLS		Not Applicable		130	2550	32 GPM	200	2735		Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	32	Nozzle - Elbow	2	0.343	SA403 GR.WP304 SMLS		SA403 GR.WP304 SMLS	Field	130	2550	32 GPM	200	2735		Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	33	Pipe - Pipe	2	0.343	SA376 GR.TP304 SMLS		SA376 GR.TP304 SMLS	Field	130	2550	32 GPM	200	2735		Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	34	Valve 1CV8382A	2	0.343	SA182 GR.F316		Not Applicable		130	2550	32 GPM	200	2735		Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	35	Pipe - Flange	2	0.343	SA376 GR.TP304 SMLS		SA182 GR.F316	Field	130	2550	8 GPM	200	2735		Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	36	Flange	2	0.343	SA182 GR.F316		Not Applicable		130	2550	8 GPM	200	2735		Reactor Coolant	Aux. Bldg. Air		30	60				2" - 1500 # RFWN Flange ,Bolts - SA193 GR. B16; Nuts - SA194 GR.4; Gasket - 1500 lb Flexitallic
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	37	Pipe - Reducer	2	0.343	SA376 GR.TP304 SMLS		SA403 GR.WP304 SMLS	Field	130	2550	8 GPM	200	2735		Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	38	2 x 1 Reducer	2 x 1	0.343	SA403 GR.WP304 SMLS		Not Applicable		130	2550	8 GPM	200	2735		Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	39	Reducer - Pipe	1	0.25	SA403 GR.WP304 SMLS		SA376 GR.TP304 SMLS	Field	130	2550	8 GPM	200	2735		Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	40	Pipe	1	0.25	SA376 GR.TP304 SMLS		Not Applicable		130	2550	8 GPM	200	2735		Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	41	Pipe - Valve 1CV8369D	1	0.25	SA376 GR.TP304 SMLS		SA182 GR.F316	Field	130	2550	8 GPM	200	2735		Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	42	Valve 1CV8369D	1	0.25	SA182 GR.F316		Not Applicable		130	2550	8 GPM	200	2735		Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	43	Valve 1CV8355D	2	0.343	SA182 GR.F316		Not Applicable		130	2550	8 GPM	200	2735		Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	44	Pipe - 45 degree Elbow	2	0.343	SA376 GR.TP304 SMLS		SA403 GR.WP304 SMLS	Field	130	2550	8 GPM	200	2735		Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	45	45 degree Elbow	2	0.343	SA403 GR.WP304 SMLS		Not Applicable		130	2550	8 GPM	200	2735		Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	46	Pipe - Elbow	2	0.343	SA376 GR.TP304 SMLS		SA403 GR.WP304 SMLS	Field	130	2550	8 GPM	200	2735		Reactor Coolant	Cont. Bldg. Air	39	30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	47	Elbow	2	0.343	SA403 GR.WP304 SMLS		Not Applicable		130	2550	8 GPM	200	2735		Reactor Coolant	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	48	Pipe	2	0.343	SA376 GR.TP304 SMLS		Not Applicable		130	2550	8 GPM	200	2735		Reactor Coolant	Cont. Bldg. Air		30	60				

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in oF	Operating Pressure in psi	Operating Flow in gpm	Design Temperature in oF	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	58	Check Valve 1CV8367D	2	0.343	SA182 GR.F316		Not Applicable		130	2550	8 GPM	200	2735		Reactor Coolant	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	59	Check Valve 1CV8372D	2	0.343	SA182 GR.F316		Not Applicable		130	2550	8 GPM	200	2735		Reactor Coolant	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	60	Elbow - Reducer	2	0.343	SA403 GR.WP304 SMLS		SA403 GR.WP304 SMLS	Field	130	2550	8 GPM	200	2735		Reactor Coolant	Cont. Bldg. Air	39	30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	61	2 x 1-1/2 Reducer	2 x 1-1/2	0.343	SA403 GR.WP304 SMLS		Not Applicable		130	2550	8 GPM	200	2735		Reactor Coolant	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	62	Reducer - Pipe	1-1/2"	0.281	SA403 GR.WP304 SMLS		SA376 GR.TP304 SMLS	Field	130	2550	8 GPM	200	2735		Reactor Coolant	Cont. Bldg. Air	39	30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	63	Pipe	1-1/2"	0.281	SA376 GR.TP304 SMLS		Not Applicable		130	2550	8 GPM	200	2735		Reactor Coolant	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	64	Pipe - Flange	1-1/2"	0.281	SA376 GR.TP304 SMLS		SA182 GR.F316	Field	130	2550	8 GPM	200	2735		Reactor Coolant	Cont. Bldg. Air	39	30	60			LER 395-1987-013: Crack initiating at weld root in RCP thermal barrier flange.	
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPINJ	65	Flange	1-1/2"	0.281	SA182 GR.F316		Not Applicable		130	2550	8 GPM	200	2735		Reactor Coolant	Cont. Bldg. Air		30	60			LER 395-1994-006: Defects in root pass of weld connecting RCP seal injection line to thermal barrier flange.	1-1/2" - 1500 # RFWN Flange ; Bolts - SA193 GR. B16; Nuts - SA194 GR.4; Gasket - 1500 lb Flexitallic

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in oF	Operating Pressure in psi	Operating Flow in gpm	Design Temperature in oF	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-1	1	Flange	3/4"	0.218	SA182 GR.F316		Not Applicable		250	2185	3 GPM	250	2485		Reactor Coolant	Cont. Bldg. Air		30	60			3/4" RFSW 1500 lb Flange; Bolts - 3/4" SA193 GR.B16; 3/4" Nuts - SA194 GR.4; 1500 lb Flexitallc Gasket	
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-2	2	Flange - Pipe	3/4"	0.218	SA182 GR.F316		SA376 GR.TP304 (SMLS)	Field	250	2185	3 GPM	250	2485		Reactor Coolant	Cont. Bldg. Air	32.5	30	60			Operating flows from B/B-UFSAR 9.3-72. Insulation Type B 1" Thick	
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-3	3	Pipe with Bend	3/4"	0.218	SA376 GR.TP304 (SMLS)		Not Applicable		250	2185	3 GPM	250	2485		Reactor Coolant	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-4	4	Straight Pipe	3/4"	0.218	SA376 GR.TP304 (SMLS)		Not Applicable		250	2185	3 GPM	250	2485		Reactor Coolant	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-5	5	Pipe - Tee	3/4"	0.218	SA376 GR.TP304 (SMLS)		SA182 GR.F304	Field	250	2185	3 GPM	250	2485		Reactor Coolant	Cont. Bldg. Air	32.5	30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-6	6	Tee	3/4"	0.218	SA182 GR.F304		Not Applicable		250	2185	3 GPM	250	2485		Reactor Coolant	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-7	7	Pipe - Elbow	3/4"	0.218	SA376 GR.TP304 (SMLS)		SA182 GR.F304	Field	250	2185	3 GPM	250	2485		Reactor Coolant	Cont. Bldg. Air	32.5	30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-8	8	Elbow	3/4"	0.218	SA182 GR.F304		Not Applicable		250	2185	3 GPM	250	2485		Reactor Coolant	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-9	9	Pipe - Coupling	3/4"	0.218	SA376 GR.TP304 (SMLS)		SA182 GR.F304	Field	250	2185	3 GPM	250	2485		Reactor Coolant	Cont. Bldg. Air	32.5	30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-10	10	Coupling 6000 lb	3/4"	0.218	SA182 GR.F304		Not Applicable		250	2185	3 GPM	250	2485		Reactor Coolant	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-11	11	Pipe - Orifice 1CV04MD	3/4"	0.218	SA376 GR.TP304 (SMLS)		SA479 GR.304	Field	250	2185	3 GPM	250	2485		Reactor Coolant	Cont. Bldg. Air	32.5	30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-12	12	Orifice 1CV04MD	3/4"	0.218	SA479 GR.304		Not Applicable		250	2185	3 GPM	250	2485		Reactor Coolant	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-13	13	Pipe - Check Valve 1CV8359D	3/4"	0.218	SA376 GR.TP304 (SMLS)		SA182 GR.F316	Field	250	2185	3 GPM	250	2485		Reactor Coolant	Cont. Bldg. Air	32.5	30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-14	14	Check Valve 1CV8359D	3/4"	0.218	SA182 GR.F316		Not Applicable		250	2185	3 GPM	250	2485		Reactor Coolant	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-15	15	Pipe - Reducer	3/4"	0.218	SA376 GR.TP304 (SMLS)		SA182 GR.F304	Field	250	2185	3 GPM	250	2485		Reactor Coolant	Cont. Bldg. Air	32.5	30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-16	16	3/4 x 2 Reducer	3/4 x 2	0.343	SA182 GR.F304		Not Applicable		250	2185	3 GPM	250	2485		Reactor Coolant	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-17	17	Reducer - Coupling	2	0.343	SA182 GR.F304		SA182 GR.F304	Field	250	2185	3 GPM	250	2485		Reactor Coolant	Cont. Bldg. Air	32.5	30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-18	18	Coupling 6000 lb	2	0.343	SA182 GR.F304		Not Applicable		250	2185	3 GPM	250	2485		Reactor Coolant	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-19	19	Coupling - Pipe	2	0.343	SA182 GR.F304		SA376 GR.TP304 (SMLS)	Field	250	2185	3 GPM	250	2485		Reactor Coolant	Cont. Bldg. Air	32.5	30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-20	20	Straight Pipe	2	0.343	SA376 GR.TP304 (SMLS)		Not Applicable		250	2185	3 GPM	250	2485		Reactor Coolant	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-21	21	Pipe - Flange	2	0.343	SA376 GR.TP304 (SMLS)		SA182 GR.F316	Field	250	2185	3 GPM	250	2485		Reactor Coolant	Cont. Bldg. Air	32.5	30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-22	22	Flange	2	0.343	SA182 GR.F316		Not Applicable		250	2185	12 GPM	250	2485		Reactor Coolant	Cont. Bldg. Air		30	60			2" RFSW 1500 lb Flange; Bolts - 7/8" SA193 GR.B16; Nuts - 7/8" SA194 GR.4; 1500 lb Flexitallc Gasket	
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-23	23	Valve 1CV8142	3/4"	0.218	SA182 GR.F316		Not Applicable		250	2185	12 GPM	250	2485		Reactor Coolant	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-24	24	Valve 1CV8142 - Pipe	3/4"	0.113	SA182 GR.F316		SA312 GR.TP304 (SMLS)	Field	160	95	12 GPM	250	150		Reactor Coolant	Cont. Bldg. Air	39	30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-25	25	Straight Pipe	3/4"	0.113	SA312 GR.TP304 (SMLS)		Not Applicable		160	95	12 GPM	250	150		Reactor Coolant	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-26	26	Pipe - Reducer	3/4"	0.113	SA312 GR.TP304 (SMLS)		SA182 GR.F304	Field	160	95	12 GPM	250	150		Reactor Coolant	Cont. Bldg. Air	39	30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-27	27	3/4 x 2 Reducer	3/4 x 2	0.154	SA182 GR.F304		Not Applicable		160	95	12 GPM	250	150		Reactor Coolant	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-28	28	Reducer - Tee	2	0.154	SA182 GR.F304		SA182 GR.F304	Field	160	95	12 GPM	250	150		Reactor Coolant	Cont. Bldg. Air	39	30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-29	29	Tee	2	0.154	SA182 GR.F304		Not Applicable		160	95	12 GPM	250	150		Reactor Coolant	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-30	30	Tee - Pipe	2	0.154	SA182 GR.F304		SA312 GR.TP304 (SMLS)	Field	160	95	12 GPM	250	150		Reactor Coolant	Cont. Bldg. Air	39	30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-31	31	Straight Pipe	2	0.154	SA312 GR.TP304 (SMLS)		Not Applicable		160	95	12 GPM	250	150		Reactor Coolant	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-32	32	Pipe - Elbow	2	0.154	SA312 GR.TP304 (SMLS)		SA182 GR.F304	Field	160	95	12 GPM	250	150		Reactor Coolant	Cont. Bldg. Air	39	30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-33	33	Elbow	2	0.154	SA182 GR.F304		Not Applicable		160	95	12 GPM	250	150		Reactor Coolant	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-34	34	Pipe - Valve 1CV236	2	0.154	SA312 GR.TP304 (SMLS)		SA182 GR.F316	Field	160	95	12 GPM	250	150		Reactor Coolant	Cont. Bldg. Air	39	30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-35	35	Valve 1CV236	2	0.154	SA182 GR.F316		Not Applicable		160	95	12 GPM	250	150		Reactor Coolant	Cont. Bldg. Air		30	60			Critical Control Room P&ID drawing M-64 sheet 2 indicates this valve number is 1CV101	
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-36	36	Valve 1CV8112	2	0.154	SA182 GR.F316		Not Applicable		160	95	12 GPM	250	150		Reactor Coolant	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-37	37	Pipe - Valve 1CV8100	2	0.154	SA312 GR.TP304 (SMLS)		SA182 GR.F316	Field	160	95	12 GPM	250	150		Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-38	38	Valve 1CV8100	2	0.154	SA182 GR.F316		Not Applicable		160	95	12 GPM	250	150		Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-39	39	Pipe with Bend	2	0.154	SA376 GR.TP304 (SMLS)		Not Applicable		160	95	12 GPM	250	150		Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-40	40	Pipe - Elbow	2	0.154	SA312 GR.TP304 (SMLS)		SA182 GR.F304	Field	160	95	12 GPM	250	150		Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-41	41	Elbow	2	0.154	SA182 GR.F316		Not Applicable		160	95	12 GPM	250	150		Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-42	42	Pipe - 45 degree Elbow	2	0.154	SA312 GR.TP304 (SMLS)		SA182 GR.F304	Field	160	95	12 GPM	250	150		Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-43	43	45 degree Elbow	2	0.154	SA182 GR.F304		Not Applicable		160	95	12 GPM	250	150		Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-44	44	Straight Pipe	2	0.154	SA312 GR.TP304 (SMLS)		Not Applicable		160	95	12 GPM	250	150		Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-45	45	Pipe - Coupling	2	0.154	SA312 GR.TP304 (SMLS)		SA182 GR.F304		160	95	12 GPM	250	150		Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET-46	46	Coupling 3000 lb	2	0.154	SA182 GR.F304		Not Applicable		160	95	12 GPM	250	150		Reactor Coolant	Aux. Bldg. Air		30	60				

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in °F	Operating Pressure in psi	Operating Flow in gpm	Design Temperature in °F	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	1	Nozzle - Pipe	4	0.237	SA53 GR. B SMLS		SA106 GR. B SMLS	Field	130	150	Stagnant (no flow)	200	150		Treated Water	Aux. Bldg. Air	39	30	60			System operating/design data taken from plant drawings and B-1 UFSAR Section 9.2.	
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	2	Pipe - Elbow	4	0.237	SA106 GR. B SMLS		SA234 GR. WPB	Shop	130	150	Stagnant (no flow)	200	150		Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	3	Elbow	4	0.237	SA234 GR. WPB		Not Applicable		130	150	Stagnant (no flow)	200	150		Treated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	4	Straight Pipe	4	0.237	SA106 GR. B SMLS		Not Applicable		130	150	Stagnant (no flow)	200	150		Treated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	5	Elbow - Tee	4	0.237	SA234 GR. WPB		SA182 GR. F304		130	150	Stagnant (no flow)	200	150		Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	6	Tee	4	0.237	SA234 GR. WPB		Not Applicable		130	150	Stagnant (no flow)	200	150		Treated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	7	Tee - Pipe	4	0.237	SA234 GR. WPB		SA106 GR. B SMLS		130	150	Stagnant (no flow)	200	150		Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	8	Pipe - Valve 1CC9456A	4	0.237	SA106 GR. B SMLS		SA105 GR. II	Field	130	150	Stagnant (no flow)	200	150		Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	9	Valve 1CC9456A	4	0.237	SA105 GR. II		Not Applicable		130	150	Stagnant (no flow)	200	150		Treated Water	Aux. Bldg. Air		32.85	32.85				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	10	Embedded Pipe	4	0.237	SA106 GR. B SMLS		Not Applicable		130	150	Stagnant (no flow)	200	150		Treated Water	Embedded in Concrete		30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	11	Pipe - 45 degree Elbow	4	0.237	SA106 GR. B SMLS		SA234 GR. WPB	Shop	130	150	Stagnant (no flow)	200	150		Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	12	45 degree Elbow	4	0.237	SA234 GR. WPB		Not Applicable		130	150	Stagnant (no flow)	200	150		Treated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	13	Pipe - Pipe	4	0.237	SA106 GR. B SMLS		SA106 GR. B SMLS	Shop	130	150	Stagnant (no flow)	200	150		Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	14	Pipe - Weldolet	4	0.237	SA106 GR. B SMLS		SA234 GR. WPB		130	150	Stagnant (no flow)	200	150		Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	15	4 x 16 Weldolet	4 x 16	0.237	SA234 GR. WPB		Not Applicable		130	150	Stagnant (no flow)	200	150		Treated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	16	Weldolet - Pipe	16	0.375	SA234 GR. WPB		SA106 GR. B SMLS		130	150	Stagnant (no flow)	200	150		Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	17	Straight Pipe	16	0.375	SA106 GR. B SMLS		Not Applicable		130	150	12,035 (max)	200	150		Treated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	18	Pipe - Pipe	16	0.375	SA106 GR. B SMLS		SA106 GR. B SMLS		130	150	12,035 (max)	200	150		Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	19	Pipe - Elbow	16	0.375	SA106 GR. B SMLS		SA234 GR. WPB	Field	130	150	12,035 (max)	200	150		Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	20	Elbow	16	0.375	SA234 GR. WPB		Not Applicable		130	150	12,035 (max)	200	150		Treated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	21	Pipe - 45 degree Elbow	16	0.375	SA106 GR. B SMLS		SA234 GR. WPB	Field	130	150	12,035 (max)	200	150		Treated Water	Aux. Bldg. Air	45.5	30	60			INPO - 162: Weld cracking due to intergranular stress corrosion cracking.	
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	22	45 degree Elbow	16	0.375	SA234 GR. WPB		Not Applicable		130	150	12,035 (max)	200	150		Treated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	23	Pipe Lug - Pipe	16	0.375	Carbon Steel ?		SA106 GR. B SMLS		130	150	12,035 (max)	200	150		Not Applicable	Aux. Bldg. Air	45.5	30	60			Assumed SA106 GR. B SMLS	
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	24	90 degree Elbow - 45 degree Elbow	16	0.375	SA234 GR. WPB		SA234 GR. WPB		130	150	12,035 (max)	200	150		Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	25	Pipe - Tee	16	0.375	SA106 GR. B SMLS		SA234 GR. WPB		130	150	12,035 (max)	200	150		Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	26	Tee	16	0.375	SA234 GR. WPB		Not Applicable		130	150	12,035 (max)	200	150		Treated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	27	Tee - Elbow	16	0.375	SA234 GR. WPB		SA234 GR. WPB		130	150	12,035 (max)	200	150		Treated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	28	Tee - Valve	16	0.375	SA234 GR. WPB		SA105 GR. II	Field	130	150	12,035 (max)	200	150		Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	29	Valve 1CC9459A	16	0.375	SA105 GR. II		Not Applicable		130	150	12,035 (max)	200	150		Treated Water	Aux. Bldg. Air		32.85	65.7				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	30	Reducing Tee (16 x 16 x 12)	16 x 12	0.375	SA234 GR. WPB		Not Applicable		130	150	12,035 (max)	200	150		Treated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	31	Straight Pipe	12	0.375	SA106 GR. B SMLS		Not Applicable		130	150		200	150	4800 GPM	Treated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	32	Pipe - Elbow	12	0.375	SA106 GR. B SMLS		SA234 GR. WPB		130	150		200	150	4800 GPM	Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	33	Elbow	12	0.375	SA234 GR. WPB		Not Applicable		130	150		200	150	4800 GPM	Treated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	34	Pipe - Valve 1CC9460B	12	0.375	SA106 GR. B SMLS		SA105 GR. II	Field	130	150		200	150	4800 GPM	Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	35	Valve 1CC9460B	12	0.375	SA105 GR. II		Not Applicable		130	150		200	150	4800 GPM	Treated Water	Aux. Bldg. Air		32.85	65.7				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	36	Pipe - Reducer	2	0.375	SA106 GR. B SMLS		SA234 GR. WPB	Field	130	150		200	150	4800 GPM	Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	37	12 x 14 Eccentric Reducer	12 x 14	0.375	SA234 GR. WPB		Not Applicable		130	150		200	150	4800 GPM	Treated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	38	Reducer - Flange	14	0.375	SA234 GR. WPB		Not Applicable		130	150		200	150	4800 GPM	Treated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	39	Flange	14	0.375	SA181 GR. II		Not Applicable		130	150		200	150	4800 GPM	Treated Water	Aux. Bldg. Air		30	60			150 lb. RFWN Flange; Bolts - SA193 GR. B7; Nuts - SA194 GR. 2H; 1/8" Thick Flexitall Gasket	
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	40	Straight Pipe	14	0.375	SA106 GR. B SMLS		Not Applicable	Shop	130	150		200	150	4800 GPM	Treated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	41	Flange	12	0.375	SA181 GR. II		Not Applicable		130	150		200	150	4800 GPM	Treated Water	Aux. Bldg. Air		30	60			150 lb. RFWN Flange; Bolts - SA193 GR. B7; Nuts - SA194 GR. 2H; 1/8" Thick Flexitall Gasket	
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	42	Flange - Elbow	12	0.375	SA181 GR. II		SA234 GR. WPB	Shop	130	150		200	150	4800 GPM	Treated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	43	Pipe - Check Valve 1CC9463B	12	0.375	SA106 GR. B SMLS		SA105 GR. II	Field	130	150		200	150	4800 GPM	Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	44	Check Valve 1CC9463B	12	0.375	SA105 GR. II		Not Applicable		130	150		200	150	4800 GPM	Treated Water	Aux. Bldg. Air		32.85	65.7				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	45	Valve 1CC9463B - Valve 1CC9466B	12	0.375	SA105 GR. II		SA105 GR. II	Shop	130	150		200	150	4800 GPM	Treated Water	Aux. Bldg. Air	46.8	32.85	65.7				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	46	Valve 1CC9466B	12	0.375	SA105 GR. II		Not Applicable		130	150		200	150	4800 GPM	Treated Water	Aux. Bldg. Air		32.85	65.7				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	47	Valve 1CC9466B - Elbow	12	0.375	SA105 GR. II		SA234 GR. WPB	Field	130	150		200	150	4800 GPM	Treated Water	Aux. Bldg. Air	46.8	32.85	65.7				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	48	Pipe - Tee	12	0.375	SA106 GR. B SMLS		SA234 GR. WPB		130	150		200	150	4800 GPM	Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	49	Tee - Pipe	16	0.375	SA234 GR. WPB		SA106 GR. B SMLS		130	150		200	150	3.07 x 10 ⁶ lb/hr	Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	50	Valve 1CC9470B	16	0.375	SA105 GR. II		Not Applicable		130	150													

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in oF	Operating Pressure in psi	Operating Flow in gpm	Design Temperature in oF	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX-	58	Threaded Cap	3/4"	0.375	SA234 GR. WPB		Not Applicable		130	150	Normally Stagnant (no flow)	200	150	High point vent	Treated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX-	59	Pipe - Reducer	16	0.375	SA106 GR. B SMLS		SA234 GR. WPB		130	150		200	150	3.07 x 10 ⁶ lb/hr	Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX-	60	16 x 18 Reducer	16 x 18	0.375	SA234 GR. WPB		Not Applicable		130	150		200	150	3.07 x 10 ⁶ lb/hr	Treated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX-	61	Reducer - Elbow	18	0.375	SA234 GR. WPB		SA234 GR. WPB		130	150		200	150	3.07 x 10 ⁶ lb/hr	Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX-	62	Elbow	18	0.375	SA234 GR. WPB		Not Applicable		130	150		200	150	3.07 x 10 ⁶ lb/hr	Treated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX-	63	Elbow - Pipe	18	0.375	SA234 GR. WPB		SA106 GR. B SMLS		130	150		200	150	3.07 x 10 ⁶ lb/hr	Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX-	64	Pipe - Nozzle	18	0.375	SA106 GR. B SMLS		Carbon Steel ?	Field	130	150		200	150	3.07 x 10 ⁶ lb/hr	Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX-	65	Surge Tank Head - Shell	60	0.500 - 0.281	SA285C		SA285C	Shop	130	150	Stagnant (no flow)	200	100		Treated Water	Aux. Bldg. Air	39	27.45	54.9			Surge Tank volume is 2000 gal. Surge Tank ratings from B/B UFSAR 9.2-65 (Table 9.2.3).	
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX-	66	Surge Tank Shell Seam	60	0.281	SA285C		SA285C	Shop	130	150	Stagnant (no flow)	200	100		Treated Water	Aux. Bldg. Air	39	27.45	54.9				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX-	67	Surge Tank Hatch - Shell	16	0.500 - 0.281	SA285C		SA285C	Shop	130	150	Stagnant (no flow)	200	100		Treated Water	Aux. Bldg. Air	39	27.45	54.9				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX-	68	Surge Tank Head - Shell	60	0.500 - 0.281	SA285C		SA285C	Shop	130	150	Stagnant (no flow)	200	100		Treated Water	Aux. Bldg. Air	39	27.45	54.9				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX-	69	Surge Tank Shell - Outlet Nozzle	4	0.281-0.237	SA285C		SA53 GR. B SMLS	Shop	130	150	Stagnant (no flow)	200	100		Treated Water	Aux. Bldg. Air	39	27.45	54.9				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX-	70	CCW Pump Casing			Cast Iron		Not Applicable		130	150		200	200	4800 GPM	Treated Water	Aux. Bldg. Air						CCW pump has carbon steel internals and shafts; pump casing is cast iron per B/B UFSAR 9.2-66 (Table 9.2.3).	
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX-	71	CCW HX Shell Side Nozzles	18	0.375	Carbon Steel		Not Applicable		130	150		200	150	3.07 x 10 ⁶ lb/hr	Treated Water (CCW)	Aux. Bldg. Air		30	60			Assumed SA106 GR. B SMLS	
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX-	72	CCW HX Tube Side Nozzles	30	0.5	Carbon Steel		Not Applicable		130	150		200	150	9.96 x 10 ⁶ lb/hr	Service Water	Aux. Bldg. Air		30	60			Assumed SA106 GR. B SMLS	

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in oF	Operating Pressure in psi	Operating Flow in gpm	Design Temperature in oF	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments	
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	1	Nozzle - Elbow	18	0.375	Carbon Steel ?		SA234 GR.WPB	Field	105	150		200	150	3.07 x 10 ⁶ lb/hr	Treated Water	Aux. Bldg. Air	39	30	60				System operating/design data taken from plant drawings and B/B - UFSAR Section 9.2.	
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	2	Elbow	18	0.375	SA234 GR.WPB		Not Applicable		105	150		200	150	3.07 x 10 ⁶ lb/hr	Treated Water	Aux. Bldg. Air		30	60					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	3	Elbow - Reducer	18	0.375	SA234 GR.WPB		SA234 GR.WPB		105	150		200	150	3.07 x 10 ⁶ lb/hr	Treated Water	Aux. Bldg. Air	45.5	30	60					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	4	18 x 16 Reducer	18 x 16	0.375	SA234 GR.WPB		Not Applicable		105	150		200	150	3.07 x 10 ⁶ lb/hr	Treated Water	Aux. Bldg. Air		30	60					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	5	Reducer - Pipe	16	0.375	SA234 GR.WPB		SA106 Gr.B SMLS		105	150		200	150	3.07 x 10 ⁶ lb/hr	Treated Water	Aux. Bldg. Air	45.5	30	60					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	6	Straight Pipe	16	0.375	SA106 Gr.B SMLS		Not Applicable		105	150		200	150	3.07 x 10 ⁶ lb/hr	Treated Water	Aux. Bldg. Air		30	60					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	7	Pipe - Valve 1CC9470A	16	0.375	SA106 Gr.B SMLS		SA105 GR. II	Field	105	150		200	150	3.07 x 10 ⁶ lb/hr	Treated Water	Aux. Bldg. Air	45.5	30	60					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	8	Valve 1CC9470A	16	0.375	SA105 GR. II		Not Applicable		105	150		200	150	3.07 x 10 ⁶ lb/hr	Treated Water	Aux. Bldg. Air		32.85	65.7					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	9	Valve 1CC9470A - Tee	16	0.375	SA105 GR. II		SA234 GR.WPB	Field	105	150		200	150	3.07 x 10 ⁶ lb/hr	Treated Water	Aux. Bldg. Air	46.8	32.85	65.7					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	10	16 x 16 x 12 Reducing Tee	16	0.375	SA234 GR.WPB		Not Applicable		105	150		200	150	3.07 x 10 ⁶ lb/hr	Treated Water	Aux. Bldg. Air		30	60					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	11	Tee - Elbow	12	0.375	SA403 GR.WP304		SA234 GR.WPB		105	150	5000	200	150		Treated Water	Aux. Bldg. Air	39	30	60					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	12	Pipe - 45 degree Elbow	12	0.375	SA106 Gr.B SMLS		SA234 GR.WPB	Field	105	150	5000	200	150		Treated Water	Aux. Bldg. Air	45.5	30	60					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	13	45 degree Elbow	12	0.375	SA234 GR.WPB		Not Applicable		105	150	5000	200	150		Treated Water	Aux. Bldg. Air		30	60					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	14	Straight Pipe	12	0.375	SA106 Gr.B SMLS		Not Applicable		105	150	5000	200	150		Treated Water	Aux. Bldg. Air		30	60					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	15	Pipe - Elbow	12	0.375	SA106 Gr.B SMLS		SA234 GR.WPB		105	150	5000	200	150		Treated Water	Aux. Bldg. Air	45.5	30	60					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	16	Elbow	12	0.375	SA234 GR.WPB		Not Applicable		105	150	5000	200	150		Treated Water	Aux. Bldg. Air		30	60					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	17	Valve 1CC9467A	16	0.375	SA105 GR. II		Not Applicable		105	150	5500	200	150		Treated Water	Aux. Bldg. Air		32.85	65.7					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	18	Valve 1CC9467A - Elbow	16	0.375	SA105 GR. II		SA234 GR.WPB	Field	105	150	5500	200	150		Treated Water	Aux. Bldg. Air	46.8	32.85	65.7					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	19	Elbow	16	0.375	SA234 GR.WPB		Not Applicable		105	150	5500	200	150		Treated Water	Aux. Bldg. Air		30	60					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	20	Pipe - Tee	16	0.375	SA106 Gr.B SMLS		SA234 GR.WPB		105	150	5500	200	150		Treated Water	Aux. Bldg. Air	45.5	30	60					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	21	Valve 1CC9467B	16	0.375	SA105 GR. II		Not Applicable		105	150	5500	200	150		Treated Water	Aux. Bldg. Air		32.85	65.7					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	22	Pipe - Pipe	16	0.375	SA106 Gr.B SMLS		SA106 Gr.B SMLS		105	150	5500	200	150		Treated Water	Aux. Bldg. Air	45.5	30	60					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	23	Pipe - Elbow	16	0.375	SA106 Gr.B SMLS		SA234 GR.WPB	Field	105	150	5500	200	150		Treated Water	Aux. Bldg. Air	45.5	30	60					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	24	45 degree Elbow	16	0.375	SA234 GR.WPB		Not Applicable		105	150	5500	200	150		Treated Water	Aux. Bldg. Air		30	60					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	25	Lug - pipe	16	0.375	Carbon Steel ?		SA106 Gr.B SMLS		105	150	5500	200	150		Not Applicable	Aux. Bldg. Air	45.5	30	60					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	26	Pipe - Pipe	12	0.375	SA106 Gr.B SMLS		SA106 Gr.B SMLS	Field	105	150	5000	200	150		Treated Water	Aux. Bldg. Air	45.5	30	60					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	27	Elbow - Valve 1CC9504B	12	0.375	SA234 GR.WPB		SA105 GR. II	Field	105	150	5000	200	150		Treated Water	Aux. Bldg. Air	45.5	30	60					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	28	Valve 1CC9504B	12	0.375	SA105 GR. II		Not Applicable		105	150	5000	200	150		Treated Water	Aux. Bldg. Air		32.85	65.7					150 # RFWN Flange;Bolts - SA193 GR. B7; Nuts - SA194 GR.2H; Gasket - 1/8"gap, Flexitallic, Style CG
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	29	Elbow - Reducer	12	0.375	SA234 GR.WPB		SA234 GR.WPB		105	150	5000	200	150		Treated Water	Aux. Bldg. Air	45.5	30	60					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	30	12 x 18 Reducer	12 x 18	0.375	SA403 GR.WP304		Not Applicable		105	150	5000	200	150		Treated Water	Aux. Bldg. Air		30	60					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	31	Reducer - Flange	18	0.375	SA234 GR.WPB		SA105 150 lb RFWN		105	150	5000	200	150		Treated Water	Aux. Bldg. Air	45.5	30	60					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	32	Flange	18	0.375	SA105 150 lb RFWN		Not Applicable		105	150	5000	200	150		Treated Water	Aux. Bldg. Air		32.85	65.7					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	33	Valve 1CC9502A	16	0.375	SA105 GR. II		Not Applicable		105	150	5500	200	150		Treated Water	Aux. Bldg. Air		32.85	65.7					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	34	Elbow - Nozzle	18	0.375	SA234 GR.WPB		Not Applicable	Field	105	150	5500	200	150		Treated Water	Aux. Bldg. Air		30	60					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	35	Pipe - Socket	3/4"	0.154	SA106 Gr.B SMLS		SA105 3000 lb S.W.		105	150	10	200	150		Treated Water	Aux. Bldg. Air	45.5	30	60					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	36	3/4 Socket	3/4"	0.154	SA105 3000 lb S.W.		Not Applicable		105	150	10	200	150		Treated Water	Aux. Bldg. Air		32.85	65.7					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	37	Socket - Pipe	3/4"	0.154	SA105 3000 lb S.W.		SA106 Gr.B SMLS	Field	105	150	10	200	150		Treated Water	Aux. Bldg. Air	46.8	32.85	65.7					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	38	Pipe with Bend	3/4"	0.154	SA106 Gr.B SMLS		Not Applicable		105	150	10	200	150		Treated Water	Aux. Bldg. Air		30	60					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	39	Straight Pipe	3/4"	0.154	SA106 Gr.B SMLS		Not Applicable		105	150	10	200	150		Treated Water	Aux. Bldg. Air		30	60					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	40	Pipe - Elbow	3/4"	0.154	SA106 Gr.B SMLS		SA105 3000 lb S.W.	Field	105	150	10	200	150		Treated Water	Aux. Bldg. Air	45.5	30	60					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	41	Elbow	3/4"	0.154	SA105 3000 lb S.W.		Not Applicable		105	150	10	200	150		Treated Water	Aux. Bldg. Air		32.85	65.7					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	42	Pipe - Coupling	3/4"	0.154	SA106 Gr.B SMLS		SA105 3000 lb S.W.	Field	105	150	10	200	150		Treated Water	Aux. Bldg. Air	45.5	30	60					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	43	Coupling	3/4"	0.154	SA105 3000 lb S.W.		Not Applicable		105	150	10	200	150		Treated Water	Aux. Bldg. Air		32.85	65.7					
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	44	Pipe - 45 degree Elbow	3/4"	0.154	SA106 Gr.B SMLS		SA105 3000 lb S.W.	Field	105	150	10	200	150		Treated Water	Aux. Bldg. Air	45.5	30	60					

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in oF	Operating Pressure in psi	Operating Flow in gpm	Design Temperature in oF	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	45	45 degree Elbow	3/4"	0.154	SA105 3000 lb S.W.		Not Applicable		105	150	10	200	150		Treated Water	Aux. Bldg. Air		32.85	65.7				
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	46	Pipe - Valve 1CC9474B	3/4"	0.154	SA106 Gr.B SMLS		SA105 GR. II		105	150	10	200	150		Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	47	Valve 1CC9474B	3/4"	0.154	SA105 GR. II		Not Applicable		105	150	10	200	150		Treated Water	Aux. Bldg. Air		32.85	65.7				
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	48	Pipe - Flange	3/4"	0.154	SA106 Gr.B SMLS		SA105 150 lb RFWN	Field	105	150	10	200	150		Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	49	Flange	3/4"	0.154	SA105 150 lb RFWN		Not Applicable		105	150	10	200	150		Treated Water	Aux. Bldg. Air		32.85	65.7				150 # RFWN Flange;Bolts - SA193 GR. B7; Nuts - SA194 GR.2H; Gasket - 1/8"gap, Flexitallic, Style CG
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	50	Pipe - Nozzle	3/4"	0.154	SA106 Gr.B SMLS		Carbon Steel ?	Field	105	150	10	200	150		Treated Water	Aux. Bldg. Air	45.5	30	60				

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in oF	Operating Pressure in psi	Operating Flow in gpm	Design Temperature in oF	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-1	1	Elbow	12	0.375	SA234 GR.WPB		Not Applicable		105	150	204,675 lb/hr	200	150	498,000 lb/hr	Treated Water	Aux. Bldg. Air		30	60			System operating/design data taken from plant drawings and B.B - UFSAR Section 9.2.	
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-2	2	Elbow - Pipe	12	0.375	SA234 GR.WPB		SA106 GR.B SMLS		105	150	204,675 lb/hr	200	150	498,000 lb/hr	Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-3	3	Straight Pipe	12	0.375	SA106 GR.B SMLS		Not Applicable		105	150	204,675 lb/hr	200	150	498,000 lb/hr	Treated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-4	4	Pipe - Tee	12	0.375	SA106 GR.B SMLS		SA234 GR.WPB		105	150	204,675 lb/hr	200	150	498,000 lb/hr	Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-5	5	12 x 12 x 8 Reducing Tee	12	0.375	SA234 GR.WPB		Not Applicable		105	150	204,675 lb/hr	200	150	498,000 lb/hr	Treated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-6	6	Tee - Pipe	8	0.322	SA234 GR.WPB		SA106 GR.B SMLS		105	150	204,675 lb/hr	200	150	498,000 lb/hr	Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-7	7	Pipe - Elbow	8	0.322	SA106 GR.B SMLS		SA234 GR.WPB		105	150	204,675 lb/hr	200	150	498,000 lb/hr	Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-8	8	Elbow	8	0.322	SA234 GR.WPB		Not Applicable		105	150	204,675 lb/hr	200	150	498,000 lb/hr	Treated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-9	9	Pipe - Tee	8	0.322	SA106 GR.B SMLS		SA234 GR.WPB		105	150	204,675 lb/hr	200	150	498,000 lb/hr	Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-10	10	8 x 8 x 8 Reducing Tee	8	0.322	SA234 GR.WPB		Not Applicable		105	150	204,675 lb/hr	200	150	498,000 lb/hr	Treated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-11	11	Tee - Pipe	6	0.28	SA234 GR.WPB		SA106 GR.B SMLS		105	150	204,675 lb/hr	200	150	498,000 lb/hr	Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-12	12	Pipe - Valve 1CC9452C	6	0.28	SA106 GR.B SMLS		SA105 GR.II		105	150	204,675 lb/hr	200	150	498,000 lb/hr	Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-13	13	Valve 1CC9452C	6	0.28	SA105 GR.II		Not Applicable		105	150	204,675 lb/hr	200	150	498,000 lb/hr	Treated Water	Aux. Bldg. Air		32.85	65.7				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-14	14	Valve 1CC9452C - Elbow	6	0.28	SA105 GR.II		SA234 GR.WPB		105	150	204,675 lb/hr	200	150	498,000 lb/hr	Treated Water	Aux. Bldg. Air	46.8	32.85	65.7				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-15	15	Elbow	6	0.28	SA234 GR.WPB		Not Applicable		105	150	204,675 lb/hr	200	150	498,000 lb/hr	Treated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-16	16	Elbow - 45 degree Elbow	6	0.28	SA234 GR.WPB		SA234 GR.WPB		105	150	204,675 lb/hr	200	150	498,000 lb/hr	Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-17	17	45 degree Elbow	6	0.28	SA234 GR.WPB		Not Applicable		105	150	204,675 lb/hr	200	150	498,000 lb/hr	Treated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-18	18	Pipe - Reducer	6	0.28	SA106 GR.B SMLS		SA234 GR.WPB		105	150	204,675 lb/hr	200	150	498,000 lb/hr	Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-19	19	6 x 8 Reducer	6 x 8	0.322	SA234 GR.WPB		Not Applicable		105	150	204,675 lb/hr	200	150	498,000 lb/hr	Treated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-20	20	Reducer - Elbow	8	0.322	SA234 GR.WPB		SA234 GR.WPB		105	150	204,675 lb/hr	200	150	498,000 lb/hr	Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-21	21	Elbow - Nozzle	8	0.322	SA234 GR.WPB		Carbon Steel		105	150	204,675 lb/hr	200	150	498,000 lb/hr	Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-22	22	Nozzle - Elbow	6	0.28	Carbon Steel		SA234 GR.WPB		130	150	204,675 lb/hr	200	150	498,000 lb/hr	Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-23	23	Pipe - Socket	6 x 1	0.133	SA106 GR.B SMLS		SA105/SA181 GR.II		130	150	Stagnant (no flow)	200	150	Plugged socket	Treated Water	Aux. Bldg. Air	45.5	30	60			INPO - 159: Pin hole leak in 3/4" line due to stress corrosion cracking.	
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-24	24	1" 3000lb Socket	1	0.133	SA105/SA181 GR.II		Not Applicable		130	150	Stagnant (no flow)	200	150	Plugged socket	Treated Water	Aux. Bldg. Air		32.85	65.7				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-25	25	Socket - Plug	1	0.133	SA105/SA181 GR.II		SA105/SA181 GR.II		130	150	Stagnant (no flow)	200	150	Plugged socket	Treated Water	Aux. Bldg. Air	46.8	32.85	65.7			LER 301-1996-002: Low load/high cycle vibration fatigue at heat affected zone of a 1 inch inlet pipe.	
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-26	26	Plug	1	0.133	SA105/SA181 GR.II		Not Applicable		130	150	Stagnant (no flow)	200	150	Plugged socket	Treated Water	Aux. Bldg. Air		32.85	65.7				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-27	27	Pipe - Flange	6	0.28	SA106 GR.B SMLS		SA105 300 lb RFWN		130	150	204,675 lb/hr	200	150	498,000 lb/hr	Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-28	28	Flange	6	0.28	SA105 300 lb RFWN		Not Applicable		130	150	204,675 lb/hr	200	150	498,000 lb/hr	Treated Water	Aux. Bldg. Air		32.85	65.7			300 # RFWN Flange/Bolts - SA193 GR. B7; Nuts - SA194 GR.2H; Gasket - 1/8"gap, Flexitallc, Style CG	
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-29	29	Valve 1CC130B	6	0.28	SA105 GR.II		Not Applicable		130	150	204,675 lb/hr	200	150	498,000 lb/hr	Treated Water	Aux. Bldg. Air		32.85	65.7				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-30	30	Valve 1CC9452D	6	0.28	SA105 GR.II		Not Applicable		130	150	204,675 lb/hr	200	150	498,000 lb/hr	Treated Water	Aux. Bldg. Air		32.85	65.7				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-31	31	Valve 1CC9452D - Tee	6	0.28	SA105 GR.II		SA234 GR.WPB		130	150	204,675 lb/hr	200	150	498,000 lb/hr	Treated Water	Aux. Bldg. Air	46.8	32.85	65.7				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-32	32	Tee - Pipe	10	0.365	SA234 GR.WPB		SA106 GR.B SMLS		130	150	204,675 lb/hr	200	150	498,000 lb/hr	Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-33	33	Straight Pipe	10	0.365	SA106 GR.B SMLS		Not Applicable		130	150	204,675 lb/hr	200	150	498,000 lb/hr	Treated Water	Aux. Bldg. Air		30	60			INPO - 121: Through the wall pipe leak due to erosion/corrosion process, microbiologically induced corrosion mechanical process.	
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-34	34	Pipe - Pipe	10	0.365	SA106 GR.B SMLS		SA106 GR.B SMLS		130	150	204,675 lb/hr	200	150	498,000 lb/hr	Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-35	35	Pipe - 45 degree Elbow	10	0.365	SA106 GR.B SMLS		SA234 GR.WPB		130	150	204,675 lb/hr	200	150	498,000 lb/hr	Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-36	36	45 degree Elbow	10	0.365	SA234 GR.WPB		Not Applicable		130	150	204,675 lb/hr	200	150	498,000 lb/hr	Treated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-37	37	Flange	18	0.375	SA105 150 lb RFWN		Not Applicable		130	150	5000	200	150	5000	Treated Water	Aux. Bldg. Air		32.85	65.7			INPO - 16: CCW HX outlet leak due to fatigue.	
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-38	38	Flange - Reducer	18	0.375	SA105 150 lb RFWN		SA234 GR.WPB		130	150	5000	200	150	5000	Treated Water	Aux. Bldg. Air	46.8	32.85	65.7			150 # RFWN Flange/Bolts - SA193 GR. B7; Nuts - SA194 GR.2H; Gasket - 1/8"gap, Flexitallc, Style CG	
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-39	39	18 x 12 Reducer	18 x 12	0.375	SA234 GR.WPB		Not Applicable		130	150	5000	200	150	5000	Treated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-40	40	Reducer - Pipe	12	0.375	SA234 GR.WPB		SA106 GR.B SMLS		130	150	5000	200	150	5000	Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-41	41	Elbow - Elbow	12	0.375	SA234 GR.WPB		SA234 GR.WPB		130	150	5000	200	150	5000	Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-42	42	Lug - pipe	12	0.375	Carbon Steel ?		SA106 GR.B SMLS		130	150	5000	200	150	5000	Not Applicable	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-43	43	Elbow - Flange	12	0.375	SA234 GR.WPB		SA105 150 lb RFWN		130	150	5000	200	150	5000	Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-44	44	Flange	12	0.375	SA105 150 lb RFWN		Not Applicable		130	150	5000	200	150	5000	Treated Water	Aux. Bldg. Air		32.85	65.7			150 # RFWN Flange/Bolts - SA193 GR. B7; Nuts - SA194 GR.2H; Gasket - 1/8"gap, Flexitallc, Style CG	
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-45	45	Valve 1CC9507B	12	0.375	SA105 GR.II		Not Applicable		130	150	5000	200	150	5000	Treated Water	Aux. Bldg. Air		32.85	65.7				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-46	46	Flange - Valve 1CC9412B	12	0.375	SA105 150 lb RFWN		SA105 GR.II		130	150	5000	200	150	5000	Treated Water	Aux. Bldg. Air	46.8	32.85	65.7				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLDS-47	47	Valve 1CC9412B	12	0.375	SA105 GR.II		Not Applicable		130	150	5000	200	150	5000	Treated Water	Aux. Bldg. Air		32.85	65.7				

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in oF	Operating Pressure in psi	Operating Flow in gpm	Design Temperature in oF	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	1	Valve 1CC9413B-2	6	0.28	SA105 GR. II		Not Applicable		105	150	704	200	150		Treated Water	Aux. Bldg. Air	32.85	65.7				System operating/design data taken from plant drawings and BB UFSAR Section 9.2.	
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	2	Valve 1CC9413B-2 - Pipe	6	0.28	SA105 GR. II		SA106 GR.B SMLS		105	150	704	200	150		Treated Water	Aux. Bldg. Air	46.8	32.85	65.7				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	3	Straight Pipe	6	0.28	SA106 GR.B SMLS		Not Applicable		105	150	704	200	150		Treated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	4	Valve 1CC9413A-1	6	0.28	SA105 GR. II		Not Applicable		105	150	704	200	150		Treated Water	Aux. Bldg. Air	32.85	65.7					
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	5	Valve 1CC9413A-1 - Elbow	6	0.28	SA105 GR. II		SA234 GR.WPB SMLS		105	150	704	200	150		Treated Water	Aux. Bldg. Air	46.8	32.85	65.7				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	6	Elbow	6	0.28	SA234 GR.WPB SMLS		Not Applicable		105	150	704	200	150		Treated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	7	Elbow - Pipe	6	0.28	SA234 GR.WPB SMLS		SA106 GR.B SMLS		105	150	704	200	150		Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	8	Pipe - Pipe	6	0.28	SA106 GR.B SMLS		SA106 GR.B SMLS		105	150	704	200	150		Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	9	Pipe - Check Valve 1CC9486	6	0.28	SA106 GR.B SMLS		SA105 GR. II		105	150	704	200	150		Treated Water	Cont. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	10	Check Valve 1CC9486	6	0.28	SA105 GR. II		Not Applicable		105	150	704	200	150		Treated Water	Cont. Bldg. Air		32.85	65.7				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	11	Check Valve 1CC9486 - Elbow	6	0.28	SA105 GR. II		SA234 GR.WPB SMLS		105	150	704	200	150		Treated Water	Cont. Bldg. Air	46.8	32.85	65.7				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	12	Elbow	6	0.28	SA234 GR.WPB SMLS		Not Applicable		105	150	704	200	150		Treated Water	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	13	Pipe - Elbow	6	0.28	SA106 GR.B SMLS		SA234 GR.WPB SMLS		105	150	704	200	150		Treated Water	Cont. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	14	Straight Pipe	6	0.28	SA106 GR.B SMLS		Not Applicable		105	150	704	200	150		Treated Water	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	15	Pipe with Bend	6	0.28	SA106 GR.B SMLS		Not Applicable		105	150	704	200	150		Treated Water	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	16	Pipe - Tee	6	0.28	SA106 GR.B SMLS		SA234 GR.WPB SMLS		105	150	704	200	150		Treated Water	Cont. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	17	Tee	6	0.28	SA234 GR.WPB SMLS		Not Applicable		105	150	704	200	150		Treated Water	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	18	Pipe - Weldolet	6	0.28	SA106 GR.B SMLS		SA234 GR.WPB SMLS		105	150	Stagnant (no flow)	200	150	High point vent	Treated Water	Cont. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	19	6 x 3/4 Weldolet	6 x 3/4	0.28	SA105 3000 lb S.W.		Not Applicable		105	150	Stagnant (no flow)	200	150	High point vent	Treated Water	Cont. Bldg. Air	32.85	65.7					
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	20	Weldolet - Valve 1CC151	3/4"	0.113	SA105 3000 lb S.W.		SA105 GR. II		105	150	Stagnant (no flow)	200	150	High point vent	Treated Water	Cont. Bldg. Air	46.8	32.85	65.7				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	21	Valve 1CC151	3/4"	0.113	SA105 GR. II		Not Applicable		105	150	Stagnant (no flow)	200	150	High point vent	Treated Water	Cont. Bldg. Air		32.85	65.7				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	22	Valve 1CC151 - Pipe	3/4"	0.113	SA105 GR. II		SA106 GR.B SMLS		105	150	Stagnant (no flow)	200	150	High point vent	Treated Water	Cont. Bldg. Air	46.8	32.85	65.7				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	23	Straight Pipe	3/4"	0.113	SA106 GR.B SMLS		Not Applicable		105	150	Stagnant (no flow)	200	150	High point vent	Treated Water	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	24	Threaded Cap	3/4"	0.113	SA105 3000 lb S.W.		Not Applicable		105	150	Stagnant (no flow)	200	150	High point vent	Treated Water	Cont. Bldg. Air		32.85	65.7				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	25	Tee - Reducer	6	0.28	SA234 GR.WPB SMLS		SA234 GR.WPB SMLS		105	150	352	200	150		Treated Water	Cont. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	26	6 x 4 Reducer	6 x 4	0.28	SA234 GR.WPB SMLS		Not Applicable		105	150	352	200	150		Treated Water	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	27	Reducer - Pipe	4	0.237	SA234 GR.WPB SMLS		SA106 GR.B SMLS		105	150	352	200	150		Treated Water	Cont. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	28	Pipe with Bend	4	0.237	SA106 GR.B SMLS		Not Applicable		105	150	352	200	150		Treated Water	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	29	Pipe - Pipe	4	0.237	SA106 GR.B SMLS		SA106 GR.B SMLS		105	150	352	200	150		Treated Water	Cont. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	30	Pipe - Tee	4	0.237	SA106 GR.B SMLS		SA234 GR.WPB SMLS		105	150	176	200	150		Treated Water	Cont. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	31	4 x 4 x 3 Reducing Tee	4	0.237	SA234 GR.WPB SMLS		Not Applicable		105	150	176	200	150		Treated Water	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	32	Tee - Elbow	3	0.216	SA234 GR.WPB SMLS		SA234 GR.WPB SMLS		105	150	176	200	150		Treated Water	Cont. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	33	Elbow	3	0.216	SA234 GR.WPB SMLS		Not Applicable		105	150	176	200	150		Treated Water	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	34	Elbow - Pipe	3	0.216	SA234 GR.WPB SMLS		SA106 GR.B SMLS		105	150	176	200	150		Treated Water	Cont. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	35	Straight Pipe	3	0.216	SA106 GR.B SMLS		Not Applicable		105	150	176	200	150		Treated Water	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	36	Pipe - Valve 1CC9487B	3	0.216	SA106 GR.B SMLS		SA105 GR. II		105	150	176	200	150		Treated Water	Cont. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	37	Valve 1CC9487B	3	0.216	SA105 GR. II		Not Applicable		105	150	176	200	150		Treated Water	Cont. Bldg. Air		32.85	65.7				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	38	Pipe - Pipe	3	0.216	SA106 GR.B SMLS		SA106 GR.B SMLS		105	150	176	200	150		Treated Water	Cont. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	39	45 degree Elbow	3	0.216	SA234 GR.WPB SMLS		Not Applicable		105	150	176	200	150		Treated Water	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	40	45 degree Elbow - Pipe	3	0.216	SA234 GR.WPB SMLS		SA106 GR.B SMLS		105	150	176	200	150		Treated Water	Cont. Bldg. Air	45.5	30	60			LER 280-1991-019: Through the wall crack which originated in the toe of a weld in a 3 inch line.	
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	41	Pipe - Reducer	3	0.216	SA106 GR.B SMLS		SA234 GR.WPB SMLS		105	150	40	200	150		Treated Water	Cont. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	42	3 x 2 Reducer	3 x 2	0.216	SA234 GR.WPB SMLS		Not Applicable		105	150	40	200	150		Treated Water	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	43	Reducer - Coupling	2	0.218	SA105 3000 lb S.W.		SA105 3000 lb S.W.		105	150	40	200	150		Treated Water	Cont. Bldg. Air	46.8	32.85	65.7				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	44	Coupling	2	0.218	SA105 3000 lb S.W.		Not Applicable		105	150	40	200	150		Treated Water	Cont. Bldg. Air		32.85	65.7				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	45	Coupling - Pipe	2	0.218	SA105 3000 lb S.W.		SA106 GR.B SMLS		105	150	40	200	150		Treated Water	Cont. Bldg. Air	46.8	32.85	65.7				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	46	Straight Pipe	2	0.218	SA106 GR.B SMLS		Not Applicable		105	150	40	200	150		Treated Water	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	47	Pipe - Flange	2	0.218	SA106 GR.B SMLS		SA105 1500LB RFSW		105	150	40	200	150		Treated Water	Cont. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	48	Flange	2	0.218	SA105 1500LB RFSW		Not Applicable		105	150	40	200	150		Treated Water	Cont. Bldg. Air		32.85	65.7			1500 lb RFSW Flange; Bolts - SA193 GR. B7; Nuts - SA194 GR. 2H; 1500lb Flexitallc Gasket	
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	49	Pipe - Elbow	2	0.218	SA106 GR.B SMLS		SA105 3000 lb S.W.		105	150	40	200	150		Treated Water	Cont. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	50	Elbow	2	0.218	SA105 3000 lb S.W.		Not Applicable		105	150	40	200	150		Treated Water	Cont. Bldg. Air		32.85	65.7				
Support Systems (SS)	Group 44 - CCW to RCP Inside Containment (CCWRCP)	SS-CCWRCP-	51	Pipe - Check Valve 1CC9495B	2	0.218	SA106 GR.B SMLS		SA105 GR. II		105	150													

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in oF	Operating Pressure in psi	Operating Flow in gpm	Design Temperature in oF	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-1	1	Nozzle - Pipe	12	0.375	Stainless Steel?		A312 GR.TP304 SMLS		70 - 110	65		200	150	4350	Borated Water	Fuel Handling Bldg. Air		30	60			System operating/design data taken from plant drawings and B/UFSAR Section 9.1.	
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-2	2	Pipe - Elbow	12	0.375	A312 GR.TP304 SMLS		A403 GR.WP304		70 - 110	65		200	150	4350	Borated Water	Fuel Handling Bldg. Air		30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-3	3	Straight Pipe	12	0.375	A312 GR.TP304 SMLS		Not Applicable		70 - 110	65		200	150	4350	Borated Water	Fuel Handling Bldg. Air		30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-4	4	Elbow	12	0.375	A403 GR.WP304		Not Applicable		70 - 110	65		200	150	4350	Borated Water	Fuel Handling Bldg. Air		30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-5	5	Pipe - Weldolet	12	0.375	A312 GR.TP304 SMLS		A403 GR.WP304		70 - 110	65	Stagnant (no flow)	200	150	Capped line	Borated Water	Fuel Handling Bldg. Air		30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-6	6	12 x 3 Weldolet	12 x 3	0.375	A403 GR.WP304		Not Applicable		70 - 110	65	Stagnant (no flow)	200	150	Capped line	Borated Water	Fuel Handling Bldg. Air		30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-7	7	Weldolet - Pipe	3	0.216	A403 GR.WP304		A312 GR.TP304 SMLS		70 - 110	65	Stagnant (no flow)	200	150	Capped line	Borated Water	Fuel Handling Bldg. Air		30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-8	8	Straight Pipe	3	0.216	A312 GR.TP304 SMLS		Not Applicable		70 - 110	65	Stagnant (no flow)	200	150	Capped line	Borated Water	Fuel Handling Bldg. Air		30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-9	9	Pipe - Cap	3	0.216	A312 GR.TP304 SMLS		A403 GR.WP304		70 - 110	65	Stagnant (no flow)	200	150	Capped line	Borated Water	Fuel Handling Bldg. Air	39	30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-10	10	Cap	3	0.216	A403 GR.WP304		Not Applicable		70 - 110	65	Stagnant (no flow)	200	150	Capped line	Borated Water	Fuel Handling Bldg. Air		30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-11	11	Pipe - Valve 1FC8756	12	0.375	A312 GR.TP304 SMLS		A182 GR.F304		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-12	12	Valve 1FC8756	12	0.375	A182 GR.F304		Not Applicable		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-13	13	Valve 1FC8756 - Elbow	12	0.375	A182 GR.F304		A403 GR.WP304		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-14	14	Pipe - Flange	12	0.375	A312 GR.TP304 SMLS		A182 GR.F304		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-15	15	Flange	12	0.375	A182 GR.F304		Not Applicable		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air	39	30	60			150 lb RFWN Flange; Bolts - SA193 GR. B7; Nuts - SA194 GR. 2H; 150lb Flexitallic Gasket	
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-16	16	Flange - Reducer	12	0.375	A182 GR.F304		A403 GR.WP304		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-17	17	12 x 14 Reducer	12 x 14	0.375	A403 GR.WP304		Not Applicable		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-18	18	Reducer - Elbow	14	0.375	A403 GR.WP304		A403 GR.WP304		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-19	19	Elbow	14	0.375	A403 GR.WP304		Not Applicable		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-20	20	Elbow - Flange	14	0.375	A403 GR.WP304		A182 GR.F304		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-21	21	Flange	14	0.375	A182 GR.F304		Not Applicable		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air		30	60			150 lb RFWN Flange; Bolts - SA193 GR. B7; Nuts - SA194 GR. 2H; 150lb Flexitallic Gasket	
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-22	22	Flange	12	0.375	A182 GR.F304		Not Applicable		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air		30	60			150 lb RFWN Flange; Bolts - SA193 GR. B7; Nuts - SA194 GR. 2H; 150lb Flexitallic Gasket	
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-23	23	Flange - Reducer	12	0.375	A182 GR.F304		A403 GR.WP304		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-24	24	12 x 10 Reducer	12 x 10	0.375	A403 GR.WP304		Not Applicable		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-25	25	Reducer - Pipe	10	0.365	A403 GR.WP304		A312 GR.TP304 SMLS		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air	45.5	30	60			Assumed SA106 grB	
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-26	26	Pipe - Elbows	10	0.365	A312 GR.TP304 SMLS		A403 GR.WP304		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air	39	30	60			Assumed A182 GR.F304	
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-27	27	Elbow	10	0.365	A403 GR.WP304		Not Applicable		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-28	28	Elbow - Valve 1FC8793	10	0.365	A403 GR.WP304		A182 GR.F304		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-29	29	Valve 1FC8793	10	0.365	A182 GR.F304		Not Applicable		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-30	30	Valve 1FC8793 - Pipe	10	0.365	A182 GR.F304		A312 GR.TP304 SMLS		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-31	31	Straight Pipe	10	0.365	A312 GR.TP304 SMLS		Not Applicable		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-32	32	Lug - pipe	10	0.365	Carbon Steel ?		A312 GR.TP304 SMLS		70 - 110	65		200	150	4350	Not Applicable	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-33	33	Valve 1FC8762A	10	0.365	A182 GR.F304		Not Applicable		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-34	34	Valve 1FC8762A - Elbow	10	0.365	A182 GR.F304		A403 GR.WP304		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-35	35	10 x 16 Reducer	10 x 16	0.375	A403 GR.WP304		Not Applicable		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air	39	30	60			Assumed A182 GR.F304	
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-36	36	Reducer - Elbow	16	0.375	A403 GR.WP304		A403 GR.WP304		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-37	37	45 degree Elbow	16	0.375	A403 GR.WP304		Not Applicable		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-38	38	45 degree Elbow - Elbow	16	0.375	A403 GR.WP304		A403 GR.WP304		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air		30	60			Assumed A182 GR.F304	
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-39	39	Elbow - Flange	16	0.375	A403 GR.WP304		A182 GR.F304		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-40	40	Flange	16	0.375	A182 GR.F304		Not Applicable		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air	39	30	60			150 lb RFWN Flange; Bolts - SA193 GR. B7; Nuts - SA194 GR. 2H; 150lb Flexitallic Gasket	
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-41	41	Valve 1FC8762B	10	0.365	A182 GR.F304		Not Applicable		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-42	42	Pipe - 45 degree Elbow	10	0.365	A312 GR.TP304 SMLS		A403 GR.WP304		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-43	43	45 degree Elbow	10	0.365	A403 GR.WP304		Not Applicable		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air		30	60			Assumed SA106 grB	
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-44	44	Pipe - Reducer	10	0.365	A312 GR.TP304 SMLS		A403 GR.WP304		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air		30	60			Assumed SA106 grB	
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-45	45	10 x 14 Reducer	10 x 14	0.375	A403 GR.WP304		Not Applicable		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-46	46	Reducer - Tee	14	0.375	A403 GR.WP304		A403 GR.WP304		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-47	47	Tee	14	0.375	A403 GR.WP304		Not Applicable		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-48	48	Tee - Pipe	14	0.375	A403 GR.WP304		A312 GR.TP304 SMLS		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCCLG)	SS-SFPCLG-49	49	Tee - Flange	14	0.375	A403 GR.WP304		A182 GR.F304		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air		30	60			Assumed	

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in oF	Operating Pressure in psi	Operating Flow in gpm	Design Temperature in oF	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCLG)	SS-SFPCLG	58	SFP HX Tubeshet			Stainless Steel?		Not Applicable		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCLG)	SS-SFPCLG	59	SFP HX Tubes			Stainless Steel?		Not Applicable		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCLG)	SS-SFPCLG	60	SFP HX Shell			Carbon Steel ?		Not Applicable		70 - 110	65		200	150	4350	Treated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCLG)	SS-SFPCLG	61	SFP HX Shellside Nozzles	18		Carbon Steel ?		Not Applicable		70 - 110	65		200	150	4350	Treated Water	Aux. Bldg. Air		30	60			LER 213-1996-028: Flaws in 2 inch tee to pipe welds in the service water return from the SFP HX due to MIC(Pik plant uses CCW water). LER 213-1997-008: Wall thinning in service water return	
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCLG)	SS-SFPCLG	62	SFP Pump Casing			Stainless Steel?		Not Applicable		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCLG)	SS-SFPCLG	63	Pipe - SFP Strainer	12		Stainless Steel?		Stainless Steel?		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCLG)	SS-SFPCLG	64	SFP Strainer Screen			Stainless Steel?		Not Applicable		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCLG)	SS-SFPCLG	65	SFP Strainer Supports			Stainless Steel?		Not Applicable		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCLG)	SS-SFPCLG	66	SFP Strainer Bottom Ring			Stainless Steel?		Not Applicable		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air	39	30	60				

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature in oF	Operating Pressure in psi	Operating Flow in gpm	Design Temperature in oF	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	1	Pipe - Weldolet	3	0.216	A312 GR.TP304/316 SMLS OR Welded		A403 GR.WP304/316 SMLS OR Welded		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air	39	30	60			System operating/design data taken from plant drawings and BFB - UFSAR Section 9.1.	
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	2	10 x 3 Weldolet	3	0.216	A403 GR.WP304/316 SMLS OR Welded		Not Applicable		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air		30	60			Line 1FC21A (Deminerizer to outlet filter) not included in the drawing set but covered by this table with no additional Part Numbers.	
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	3	Weldolet - Pipe	3	0.216	A403 GR.WP304/316 SMLS OR Welded		A312 GR.TP304/316 SMLS OR Welded		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	4	Straight Pipe	3	0.216	A312 GR.TP304/316 SMLS OR Welded		Not Applicable		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	5	Pipe - Valve 1FC8794	3	0.216	A312 GR.TP304/316 SMLS OR Welded		A 182 GR.F304		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	6	Valve 1FC8794	3	0.216	A 182 GR.F304		Not Applicable		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	7	Pipe - Elbow	3	0.216	A312 GR.TP304/316 SMLS OR Welded		A403 GR.WP304/316 SMLS OR Welded		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	8	Elbow	3	0.216	A403 GR.WP304/316 SMLS OR Welded		Not Applicable		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	9	Pipe - Pipe	3	0.216	A312 GR.TP304/316 SMLS OR Welded		A312 GR.TP304/316 SMLS OR Welded		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	10	Pipe - 45 degree Elbow	3	0.216	A312 GR.TP304/316 SMLS OR Welded		A403 GR.WP304/316 SMLS OR Welded		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	11	45 degree Elbow	3	0.216	A403 GR.WP304/316 SMLS OR Welded		Not Applicable		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	12	Pipe - Tee	3	0.216	A312 GR.TP304/316 SMLS OR Welded		A403 GR.WP304/316 SMLS OR Welded		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	13	Tee	3	0.216	A403 GR.WP304/316 SMLS OR Welded		Not Applicable		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	14	Tee - Valve 1FC8774	3	0.216	A403 GR.WP304/316 SMLS OR Welded		A 182 GR.F304		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	15	Valve 1FC8774	3	0.216	A 182 GR.F304		Not Applicable		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	16	Valve 1 FC8774 - Elbow	3	0.216	A 182 GR.F304		A403 GR.WP304/316 SMLS OR Welded		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	17	Elbow - Elbow	3	0.216	A403 GR.WP304/316 SMLS OR Welded		A403 GR.WP304/316 SMLS OR Welded		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	18	Valve 1FC8771B	3	0.216	A 182 GR.F304		Not Applicable		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	19	Pipe - Nozzle	3	0.216	A312 GR.TP304/316 SMLS OR Welded		SA479 GR.304		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	20	Nozzle - Pipe	3	0.216	SA312 GR.TP304		A312 GR.TP304/316 SMLS OR Welded		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	21	Valve 1FC015	3	0.216	A 182 GR.F304		Not Applicable		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	22	Elbow - Nozzle	3	0.216	A403 GR.WP304/316 SMLS OR Welded		SA312 GR.TP304		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	23	Nozzle - Pipe	3	0.216	SA312 GR.TP304		A312 GR.TP304/316 SMLS OR Welded		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	24	Pipe - Reducer	3	0.216	A312 GR.TP304/316 SMLS OR Welded		A403 GR.WP304/316 SMLS OR Welded		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	25	3 x 2 Reducer	3 x 2	0.216	A403 GR.WP304/316 SMLS OR Welded		Not Applicable		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	26	Reducer - Coupling	2	0.154	A403 GR.WP304/316 SMLS OR Welded		A 182 GR.F304		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	27	Coupling	2	0.154	A 182 GR.F304		Not Applicable		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	28	Coupling - Pipe	2	0.154	A403 GR.WP304/316 SMLS OR Welded		A312 GR.TP304/316 SMLS OR Welded		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	29	Straight Pipe	2	0.154	A312 GR.TP304/316 SMLS OR Welded		Not Applicable		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	30	Pipe - Elbow	2	0.154	A312 GR.TP304/316 SMLS OR Welded		A 182 GR.F304		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	31	Elbow	2	0.154	A 182 GR.F304		Not Applicable		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	32	Pipe - Tee	2	0.154	A312 GR.TP304/316 SMLS OR Welded		A 182 GR.F304		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	33	Tee	2	0.154	A 182 GR.F304		Not Applicable		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	34	Valve 1FC014	3	0.216	A 182 GR.F304		Not Applicable		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	35	Tee - Elbow	3	0.216	A403 GR.WP304/316 SMLS OR Welded		A403 GR.WP304/316 SMLS OR Welded		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	36	Pipe - Flange	3	0.216	A312 GR.TP304/316 SMLS OR Welded		A 182 GR.F304		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	37	Flange	3	0.216	A 182 GR.F304		Not Applicable		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air		30	60			300 lb RFWN Flange; Bolts - SA193 GR. B7; Nuts - SA194 GR. 2H; 300lb Flexitatic Gasket	
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	38	Valve 1FC8765	3	0.216	A 182 GR.F304		Not Applicable		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	39	SFP Mixed Bed Inlet Nozzle - Head	3	0.216 - 0.465	SA312 GR.304		SA240 GR.304		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	40	SFP Mixed Bed Head - Shell	32	0.465 - 0.278	SA240 GR.304		SA240 GR.304		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	41	SFP Mixed Bed Shell - Head	32	0.278 - 0.465	SA240 GR.304		SA240 GR.304		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	42	SFP Mixed Bed Head - Outlet Nozzle	3	0.465 - 0.216	SA240 GR.304		SA312 GR.304		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	43	SFP Filter Cover - Head	3	1.0 Cover	SA240 GR.304		SA479 GR.304		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air	30	30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	44	SFP Filter Head - Shell	3	0.165 Shell	SA479 GR.304		SA312 GR.TP304		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	45	SFP Filter Shell - Head	3	0.165 Shell	SA312 GR.TP304		SA479 GR.304		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN	46	SFP Filter Shell - Outlet Nozzle	3	0.165 - 0.216	SA312 GR.TP304		SA312 GR.TP304		70 - 110	65	80	200	150	100	Borated Water	Aux. Bldg. Air	39	30	60				

