DEFINITIONS OF TERMS USED IN THE DATASHEETS

COLUMN #	ITEMS	DESCRIPTIONS
A	System Identification	System description (System Code)
В	Group Identification	Group # - Group description (Group Code)
С	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
Н	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
Μ	Operating Pressure	Full power pressure in psi
Ν	Operating Flow	Full power flow in gpm, or other units
0	Design Temperature	Design temperature in degree F
Р	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
Т	Residual Stress	Estimated residual stress due to welding in ksi (Sy for thicker pipes and 1.3
U	Normal Stress	Actual or estimated (allowable = 1.5 Sm or 1.2 Sy) normal operating stress
V	Faulted Stress	Actual or estimated (allowable = 3 Sm or 2.4 Sy) faulted condition stress in
W	CUF	40-year cumulative usage factor due to plant transients and cyclic loadings
Х	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 pla
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	Seemless
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
		Sm	Material allowable design stress-intensity value at given temperature (column

3 Sy for thinner pipes) s in ksi in ksi

ants

for ASME Class 2 or 3 components 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 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	Cc
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+ d Note, stainless steel susceptible to therm
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; Westinghouse plants stainless pipe. CF8, to thermal aging than other Westinghouse
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		
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		
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		
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		
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		
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		
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)	Cold Leg Piping (CL)	RCS-CL-	18	3 BRANCH NOZZLE - 3"X1.5" REDUCER FROM BIT	3	0.438	GR.F316N	55 TP 308	(FITTING)	Snop	556 to 559	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	23.3	31.5	31.5		
Coolant System (RCS)	Cold Leg Piping (CL)	KCO-CE-	15	27.5 GEFIFE	21.5	2.21 19199	GR.TP304N (SMLS PIPE)				330 10 339	2230	33 W#/TIK	000	2465	55 W#/T IIX		Containment Air		24.0	24.0		Westinghouse plants stainless pipe. CF8/ to thermal aging that other Westinghouse
Reactor Coolant System (RCS)	Group 1 - RCS Cold Leg Piping (CL)	RCS-CL-	20	LARGE BORE PIPE BRANCH NOZZLE (3" AND LARGER)	3 AND LAR- GER		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 sta susceptible to therm cast pipe.
Reactor Coolant System (RCS)	Group 1 - RCS Cold Leg Piping (CL)	RCS-CL-	23	3"X1-1/2" REDUCER	3	0.0411	SA403 GR.WP316 (FITTING)	0.0 70	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		

Faulted	CUF	Stress	Operating	General
Stress in ksi		Comments	Experience	Comments
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)
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	
24.6				
25.5				
24.6				NOT IN ISI LIST FOR CL. THIS WELD IS IDENTIFIED AS 2" SWEEPOLET IN HL FOR LOOP 3.
24.6				
25.5				
30.51				304 SST CASTING
25.5				304 SST CASTING
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.
24.27				304 SST CASTING
24.6				ALTERNATE CHARGING (LOOP 1); NORMAL CHARGING (LOOP 2); LETDOWN (LOOP3)
24.6				
24.6	3.37 / 5.06			
31.5				
24.6				
24.6				
31.5				
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.		
31.5				
31.5				
25.5		Probably a CF8A static casting, which is more susceptible to thermal aging than centrifugally cast pipe.		
25.5				
20.12				304 SST CASTING

35 M#/HR Reactor Coolant Containment Air 25.5 25.5 Cast stainless steel elbow, where in some 304 SST CASTING Westinghouse plants can have very high ferritc 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.
35 M#/HR Reactor Coolant Containment Air 18.8 25.5 25.5
35 M#/HR Reactor Coolant Containment Air 31.5 31.5 304 SST CASTING
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), hncone buttered and stainless filled welds, or Inconel buttered and Inconel filled welds (newest plants). Inconel welds not stress relieved, but buttering could
35 M#/ 35 M#. 35 M#

System Identification	Group Identification	Part Identification	Pai Num	art Part nber Description	Part Size in inches	Part Thickness i inches	n Material A	Material W	Material B	Weld Type °F	Operating n Pressure in psi	Operating Flow	Design Temperature °F	Design in Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in CUF ksi	Stress Comments	Operating Experience	General Comments
Reactor Coolant System (RCS)	Group 2 - RCS Crossover Leg Piping (XL)	RCS-XL	L- 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 w 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	L- 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	Birnetallic weld in some Westinghouse plants were eith 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	L- 3	SG OUTLET NOZZLE SAFE END	31	3.688"	SA366 GR.F316/LM	v	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	L- 4	SG OUTLET NOZZLE SAFE END - ELBOW (<90)	31	3.688"	SA366 GR.F316/LM	NSS 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	L- 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 ferrite numbers and be highly susceptible thermal aging - material close to being britt in fully aged condition at operating temperature. CF8A no as bad as CF8M.		304 SST CASTING
Reactor Coolant System (RCS)	Group 2 - RCS Crossover Leg Piping (XL)	RCS-XL	L- 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	L- 7	31" XL PIPE		2.48"MW	SA376 GR.TP304N (SMLS PIPE)	1	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	L- 8	31" XL PIPE - ELBOW	31	2.48"MW	SA376 GR.TP304N (SMLS PIPE)	I 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	L- 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 ferritc numbers and be highly susceptible to thermal aging - material close to being brittl in fully aged condition at operating temperature.		304 SST CASTING
Reactor Coolant System (RCS)	Group 2 - RCS Crossover Leg Piping (XL)	RCS-XL	L- 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	L- 11	31" XL PIPE		2.48"MW	SA376 GR.TP304N (SMLS PIPE)	1	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	L- 12	31* XL PIPE - 2* SWEEPOLET	2	0.344"	SA376 GR.TP304N (SMLS PIPE)	I 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 43 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	L- 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	L- 14	31" XL PIPE - 2" SWEEEPOLET	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	L- 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	L- 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	L- 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 ferritc numbers and be highly susceptible to thermal aging - material close to being brittl in fully aged condition at operating temperature.		304 SST CASTING
Reactor Coolant System (RCS)	Group 2 - RCS Crossover Leg Piping (XL)	RCS-XL	L- 18	31" XL ELBOW - RCP SUCTION NOZZLE	31	2.48"MW	SA351 GR.CF8A (CASTING)	SS TP 308	SA351 GR.CF8 (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	n A	Material W	Material B	Weld Type	Operating Temperature in °F	Operating Pressure in psi	Operating Flow	Design Temperature in °F	Design n Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ks	Normal Stress in ksi	Faulted Stress in ksi	CUF	с
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+ dea stainless steel weld m aging, but will not age static casting.
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		
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 Westing cast stainless pipe. C thermal aging than CF 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	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	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	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		Not Applicable		610 to 620	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air		25.5	26.25		1
Reactor Coolant System (RCS)	Group 3 - RCS Hot Leg Piping (HL)	RCS-HL-	9	29" HL PIPE - HL STOP VALVE 1RC80014	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	6.87	18.24		
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		
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		
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		
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	Shop	610 to 620	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	24.44	25.5	26.25		
Reactor Coolant System (RCS)	Group 3 - RCS Hot Leg Piping (HL)	RCS-HL-	- 14	BRANCH CONNECTION - THERMOWELL	2.5	0.375"	SA182 GR.F316N	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		
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		610 to 620	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	24.44	25.5	26.25		
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	Shop	610 to 620	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	24.44	25.5	26.25		
Reactor Coolant System (RCS)	Group 3 - RCS Hot Lag Piping (HL)	RCS-HL-	17	SMALL BORE BRANCH NOZZLE			5A182 GR.F316N		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-	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 ell Westinghouse plants on numbers and be highly material close to being operating temperature
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	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		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	SS TP 308	SA508 CL.3 (FORG.)	BWI	610 to 620	2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	1	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		

Stress Comments	Operating Experience	General Comments
Stress= pressure+ deadweight + thermal. Note, stainless steel weld metals also susceptible to therm aging, but will not age as badly as high ferrite numbe static casting.		ALL WELD FILLER MATERIAL TP 308 (W-LR REPORT,PG. 57)
	LER 395 2000-008: PWSCC	
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.		
		304 SST CASTING
		304 SST CASTING
		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
		304 SST CASTING
	LER 362 1997-002: PWSCC	
		304 SST CASTING
		304 SST CASTING
	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 hol leg pipe. The nozzle was attached to th OD by a j grows partial penetration weld with a filler ap. Aloy 192 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 hol teg piping. Also, boron build up and cracks indicated. LER 368 2000-001: Alloy 600 temperature detector nozzle experienced PWSCC	•
Last stanless steel elbow, where in some Westinghouse plants can have very high ferrito numbers and be highly susceptible to thermal aging- material close to being brittle in fully aged condition a operating temperature. CF8A not as bad as CF8M.	e.	304 SST CASTING
		NOT CLEAR OF THIS CONNECTION

System Identification	Group Identification	Part Par Identification Num	rt Part ber Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Type	Operating Temperature °F	Operatin in Pressure psi	g in Operating Flow	Design Temperature in °F	Design Pressure in ps	Design Flow	Inside Environme	Outside Re ent Environment Stre	sidual Stress ss in ksi ksi	nal Faulte s in Stress i ksi	in CUF	Stress Comments	Operating Experience	General Comments
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR- 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 Coola	ant 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	SHELL - SHELL	91.5	3.9375"	SA533 GR.A CL.2	E9018	SA533 GR.A CL.2		653	2250	250 GPM	680	2485	GPM	Reactor Coola	ant Containment Air 58.9	45	45				SS CLADDING WITH 309L. PRESSURE
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR- 3	SHELL - SHELL	84	3.750"	(PLATE) SA533 GR.A CL.2	E9018	(PLATE) SA533 GR.A CL.2		653	2250	250 GPM	680	2485	GPM	Reactor Coola	ant Containment Air 58.9	45	45				SS CLADDING WITH 309L PRESSURE
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR- 4	SHELL - SHELL	91.5	3.9375"	(PLATE) SA533 GR.A CL.2	E9018	(PLATE) SA533 GR.A CL.2		653	2250	250 GPM	680	2485	GPM	Reactor Coola	ant Containment Air 58.9	45	45				BOUNDARY WELD MATERIAL E9018 SS CLADDING WITH 309L. PRESSURE
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-P7R-5	SHELL - UPPER HEAD	91.5	2.0625"	(PLATE) SA533 GR.A CI 2	E9018	(PLATE) SA533 GR A CI 2		653	2250	250 GPM	680	2485	GPM	Reactor Cools	ant Containment Air 58 9	45	45	_			BOUNDARY WELD MATERIAL E9018 SS CLADDING WITH 3091 PRESSURE
Reader Coolant Cystem (ROC)	Oroup 4 Procounted (P2P)	R00 F2R 0		01.0	0.00251	(PLATE)	50010	(PLATE)		050	2200	200 01 11	000	2400	0.11	Deserve Ocean		10	40				BOUNDARY WELD MATERIAL E9018
Reactor Cobiant System (RCS)	Gloup 4 - Plessuitzei (PZR)	RC3-FZR-6	SHELL LONG SEAM	91.5	3.9375	(PLATE)	29010	(PLATE)		655	2230	250 GPW	660	2400	GFM	Reactor Coola	ant Containment Air 56.9	40	40				BOUNDARY WELD MATERIAL E9018
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR- 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 Coola	ant 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	SHELL LONG SEAM	91.5	3.9375"	SA533 GR.A CL.2 (PLATE)	E9018	SA533 GR.A CL.2		653	2250	250 GPM	680	2485	GPM	Reactor Coola	ant Containment Air 58.9	45	45				SS CLADDING WITH 309L. PRESSURE
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR- 9	SHELL LONG SEAM	91.5	3.9375"	SA533 GR.A CL.2	E9018	SA533 GR.A CL.2		653	2250	250 GPM	680	2485	GPM	Reactor Coola	ant Containment Air 58.9	45	45				SS CLADDING WITH 309L. PRESSURE
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR- 10	PRESSURIZER HEATER	0	N/A	(PLATE) SA533 GR.A CL.2		(PLATE) SA182 GR.F316		> 653	2250	250 GPM	680	2485	GPM	Reactor Coola	ant Containment Air 58.9	45	45	-	Frequently partial penetration Inconel J-	IN 90-10: ALLOY 600 PWSCC.	BOUNDARY WELD MATERIAL E9018 Subgroup 4.8 parts 5, 6, 7, 13, and 16 are neither
			PENETRATION			(PLATE)		(FORG.)													welds in many PWR plants, where J-weld may not be stress relieved.	fs	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
Poactor Coolant Suctom (PCS)	Group 4 - Processizer (PZP)	PCS-P7P- 11		E 14	2 750"	SA522 GP A CL 2		SA508 CL 24 (EOPG)		652	2250	250 GPM	690	2495	C PM	Reactor Cools	ont Containment Air 59.9	46	45				as > 653.
Reactor Coolant System (RCS)	Gloup 4 - Flessunzer (FZK)	KG3-F2R-11	FRESSURIZER - SURGE NOZZLE	E 14	2.750	(PLATE)		SASUS CL2A (FORG.)		655	2250	250 GPM	600	2403	Grim	Reactor Coola	ant Containment Air 56.9	40	45		In older Westinghouse plant might be stainless weld (?), or Inconel buttered we with stainless filler. Buttered inconel laye probably stress relieved.	- Id rs	NOZZLE BUILDUP WITH INCOMEL 162
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR- 12	PRESSURIZER - SPRAY NOZZLE	4	2.0625"	\$A533 GR.A CL.2		SA508 CL.2A (FORG.)	,	653	2250	250 GPM	680	2485	GPM	Reactor Coola	ant Containment Air 58.9	45	45	-	See above comment.		NOZZLE BUILDUP WITH INCONEL 182
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZP)	RCS-P7R- 12	PRESSURIZER - RELIEF NOZZI F	F 6	2 0625"	(PLATE) SA533 GR A CL 2		SA508 CL 24 (FORC)		653	2250	250 GPM	680	2485	GPM	Reactor Cools	ant Containment Air 59 0	45	45		See above comment		NOZZI E BUILDUP WITH INCONFL 182
RUS)	Crosspreter (FZR)	NOS-F2R- 13			2.0023	(PLATE)		CASOD CL.2A (FORG.)		000	22.00	250 GFW	300	2.100	OF	Desciol Coola	and Oontaininent All 158.9	40			Our above comment.		
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR- 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 Coola	ant Containment Air 58.9	45	45		See above comment.		NOZZLE BUILDUP WITH INCONEL 182
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR- 15	PRESSURIZER - SAFETY NOZZI F	6	2.0625"	SA533 GR.A CL.2 (PLATE)		SA508 CL.2A (FORG.))	653	2250	250 GPM	680	2485	GPM	Reactor Coola	ant Containment Air 58.9	45	45		See above comment.		NOZZLE BUILDUP WITH INCONEL 182
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR- 16	PRESSURIZER - SAFETY	6	2.0625"	SA533 GR.A CL.2		SA508 CL.2A (FORG.))	653	2250	250 GPM	680	2485	GPM	Reactor Coola	ant Containment Air 58.9	45	45		See above comment.		NOZZLE BUILDUP WITH INCONEL 182
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR- 17	NUZZLE PZR SURGE NOZZLE - SAFE	14	1.310"	(PLATE) SA508 CL.2A (FORG.)		SA182 GR.F316L	+	653	2250	250 GPM	680	2485	GPM	Reactor Coola	ant Containment Air 42.1	45	45	-			
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZP)	RCS-P7R- 19	END PZR SAFETY NOZZI E - SAFE	6	1.025"	SA508 CL 24 (FORG)		(FORG.) SA182 GR E316I	+	653	2250	250 GPM	680	2485	GPM	Reactor Code	ant Containment Air 42.4	45	45	_			
	Comp 4 December (FZR)	100-F2R-10	END	Č	1.020	2.000 OL26 (FORG.)		(FORG.)		050	22.00	250 GFW	000		0.00	Desets 0		-10					
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR- 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 Coola	ant Containment Air 42.1	45	45				
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR- 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 Coola	ant Containment Air 42.1	45	45				
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR- 21	PZR SPRAY NOZZLE - SAFE END	D 4	1.235"	SA508 CL.2A (FORG.)		SA182 GR.F316L	1	653	2250	250 GPM	680	2485	GPM	Reactor Coola	ant Containment Air 42.1	45	45				
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR- 22	PZR RELIEF NOZZLE - SAFE	6	1.235"	SA508 CL.2A (FORG.)	-	SA182 GR.F316L	+	653	2250	250 GPM	680	2485	GPM	Reactor Coola	ant Containment Air 42.1	45	45				+
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR- 23	END PZR UPPER HEAD			SA533 GR.A CL.2		(FORG.) Not Applicable		653	2250	250 GPM	680	2485	GPM	Reactor Coola	ant Containment Air	45	45				LER 302 2003-003: light boric acid deposits and
						(PLATE)													-				stains on the pressurizer carbon steel shell
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR- 24	PZR LOWER HEAD	-		SA533 GR.A CL.2		Not Applicable	+	653	2250	250 GPM	680	2485	GPM	Reactor Coola	ant Containment Air	45	45	-			+
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR- 25	PZR SUPPORT SKIRT AND		+	(PLATE) SA516 GR.70 (PLATE)	E9018/E7018	Not Applicable	+	ambient	ambient	-			-	Reactor Conla	ant Containment Air	34.95	34.95				SKIRT TO HEAD WITH E-9018 AND TO FLANGE
Pearter Coolant Sustem (PCO)	Group 4 - Processing (070)	PC9.070 06	FLANGE		+	SA212 CB 246 (SMI C	ee 2001	Not Applicable		> 652	2250	250 CDM	690	2495	CPM	Poneter Ce 1	ant Containment Air	000	25.00			Source Hostor close failures of ANO 9. Descend Alter 200 host	E-7018 WELD MATERIALS
																						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 Cahvrd D - Alloy 600 sleeve indicated PVSCC. Circumferential bulge approximately 0.5 inches long and 0.019 inches high (diametrical in the area of the borica cid leaks, adial acoring showed, evidence of surface metal smearing and cold work associated with remove of stuck same: sulfur compounds on the surfaces, with the highest concentrations at the crack tips.	area. Parts 10, 26, 27, 28, and 29 are heater parts and could be subject to higher temperature. If Therefore, temperatures for these parts are replaced as > 553.
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR- 27	PZR IMMERSION HEATER			SA213 GR.316 (SMLS		Not Applicable		> 653	2250	250 GPM	680	2485	GPM	Reactor Coola	ant Containment Air	25.5	25.5			LER 336 2003-004: PWSCC	Subgroup 4.8 parts 5, 6, 7, 13, and 16 are neither
						TUBE)																	heater steeve 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	PZR HTR SUPPORT PLATE			SA240 GR.TP304 (PLATE)		Not Applicable		> 653	2250	250 GPM	680	2485	GPM	Reactor Coola	ant Containment Air	24.6	24.6				Subgroup 4.8 parts 5, 6, 7, 13, and 16 are neither beater sleeve parts nor located in the beater well
						(FERE)																	neares. 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	PZR PZR HTR SUPPORT PLATE BRACKET			SA240 GR.TP304 (PLATE)		Not Applicable		> 653	2250	250 GPM	680	2485	GPM	Reactor Coola	ant Containment Air	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 replace $\sigma_{c} \approx e^{5.2}$
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR- 30	PZR SURGE NOZZLE	-		SA508 CL.2A (FORG.)		Not Applicable		653	2250	250 GPM	680	2485	GPM	Reactor Coola	ant Containment Air	45	45				INCONEL WELD BUILDUP, SA-240 THERMAL
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR- 31	PZE SURGE NOZZLE THERMAL SLEEVE			SA240 (PLATE)		Not Applicable		653	2250	250 GPM	680	2485	GPM	Reactor Coola	ant Containment Air	24.6	24.6				SLEEVE, INCONEL WELD SEE EDSK 379429B 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	PZR SURGE NOZZLE SAFE END			SA182 GR.F316L (FORG.)		Not Applicable		653	2250	250 GPM	680	2485	GPM	Reactor Coola	ant Containment Air	21	21				
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR- 33	PZR INSTRUMENT NOZZLE			SA213 TP316		Not Applicable		653	2250	250 GPM	680	2485	GPM	Reactor Coola	ant Containment Air	25.5	25.5			INSTRUMENT PENETRATION NOZZLE: Alloy 600 subject to PWSCC LER 313 1990-021: axial crack in the nozzle inner surface which extended to the annulus between the nozzle and the pressurizer shell and breached the outside diameter (OD) of the nozzle at the toe of the nozzle to vessel weld.	1" TUBE WELDED TO SS CLADDING
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR- 34	PZR LIFTING TRUNNION	1		LAS		Not Applicable		ambient	ambient				1	Reactor Coola	ant Containment Air						LAS EQUIVALENT TO SHELL BUILDUP WITH E-
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR- 35	BUILDUP PZR SEISMIC SUPPORT LUG			\$A533 GR.A CL.2		Not Applicable	+	ambient	ambient					Reactor Coola	ant Containment Air	45	45				9018 WELD MATERIAL
Reactor Coolant System (PCS)	Group 4 - Processing (PZP)	BCS-P7P- 26	PZR VALVE SUPPOPT PRACE	r		(PLATE)		Not Applicable		ambient	ambiont					Reactor Coole	ant Containment Air	46	45				
RUS)	Sissip 4 - Freasurizer (FZR)	N03-F2R-30	21 TALVE SUFFORT BRAUKET			(PLATE)		Nor Applicable		amoiofit	amulent					CODIA		40	40				
Reactor Coolant System (RCS) Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR) Group 4 - Pressurizer (PZR)	RCS-PZR- 37 RCS-PZR- 38	PZR SPRAY NOZZLE PZR SPRAY NOZZLE THERMAL SLEEVE			SA508 CL.2 (FORG.) SA213 GR.304 (SMLS TUBE)		Not Applicable Not Applicable		653 653	2250 2250	250 GPM 250 GPM	680 680	2485 2485	GPM GPM	Reactor Coola Reactor Coola	ant Containment Air ant Containment Air	45 25.5	45 25.5	+			THERMAL SLEEVE WELDED TO SAFE END AND THE WELD IS FOR 45 DEGREE ON ITS
Reactor Coolant System (PCS)	Group 4 - Processing (PZP)	RCS_P7P. 20				S&182 GR E2161		Not Applicable		653	2250	250 CPM	680	2485	GPM	Reactor Control	ant Containment Air	24	21	_			CIRCUMFERENCE. SEE EDSK 379445B
	- Jop - Freedounzer (FZR)		TER OF THE PAPE END			(FORG.)					22.00	230 GPM			0. W			21	£ '				
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	KCS-PZR- 40	PZR SAFETY AND RELIEF NOZZLES			SA508 CL.2 (FORG.)		Not Applicable		653	2250	250 GPM	680	2485	GPM	Reactor Coola	ant Containment Air	45	45			LER 528 1992-001: PWSCC/IGA	
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR- 41	PZR SAFETY AND RELIEF NOZZLE SAFE FNDS			SA182 GR.F316L (FORG.)		Not Applicable	-	653	2250	250 GPM	680	2485	GPM	Reactor Coola	ant Containment Air	21	21				
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR- 42	PRIMARY MANWAY	1	-	SA508 CL.2 (FORG.)		Not Applicable	1	653	2250	250 GPM	680	2485	GPM	Reactor Coola	ant Containment Air	45	45				
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	KUS-PZR- 43	FRIMART MANWAY COVER			(PLATE)		NOT Applicable		003	2250	250 GPM	UBGI	2485	GPM	reactor Coola	anic Containment Air	40.05	40.05				INCONEL WITH CANADIAN ASBESTOS
Reactor Coolant System (RCS)	Group 4 - Pressurizer (PZR)	RCS-PZR- 44	PRIMARY MANWAY COVER BOLTS AND STUDS			SA193 GR.B7 (BOLTING)	Not Applicable		ambient	ambient					Reactor Coola	ant Containment Air	105	105				GASKET

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Part Size in Thickness in inches inches	Material A	Material W	Material B	Weld Type	Operating Temperature ir °F	Operating Pressure in psi	Operating Flow	Design Temperature ir °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	4" PZR SPRAY NOZZLE SAFE END 6"X4" REDUCER	4 0.531"	SA182 GR.F316L (FORG.)		SA403 GR.WP304 (FITTING)	Field	653	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	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	ELBOW - PIPE	6 0.719"	SA403 GR.WP304 (FITTING)		SA376 GR.TP304 (SMLS PIPE)	Shop 4	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	PIPE - ELBOW	6 0.719"	SA376 GR.TP304 (SMLS PIPE)		SA403 GR.WP304 (FITTING)	Shop 4	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	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" PIPE - 2" SOCKOLET	2 0.344"	SA376 GR.TP304		SA182 GR.F304	Shop 5	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	PIPE - PIPE	6 0.719"	(SMLS PIPE) SA376 GR.TP304		(FORG.) SA376 GR.TP304	Shop 4	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	2" SOCKOLET	2 0.344"	(SMLS PIPE) SA182 GR.F304		(SMLS PIPE) Not Applicable	5	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	6" ELBOW	6 0.719"	(FORG.) SA403 GR.WP304		Not Applicable	ŧ	556 to 559	2250	1 GPM	650	2485	900 GPM	Reactor Coolant	Containment Air		24.6	24.6			
						(FITTING)																	
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-	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	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	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	PIPE - ELBOW	4 0.531"	SA376 GR.TP304 (SMLS PIPE)		SA403 GR.WP304 (FITTING)	Shop 4	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	4" ELBOW	4 0.531"	SA403 GR.WP304 (FITTING)		Not Applicable	Ę	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	4" PIPE - 2" SOCKOLET	2 0.344"	SA376 GR.TP304		SA182 GR.F304	Shop 4	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	PIPE - PIPE	4 0.531"	(SMLS PIPE) SA376 GR.TP304		(FORG.) SA376 GR.TP304	Shop 4	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	PIPE - VALVE 1RY022	4 0.531"	(SMLS PIPE) SA376 GR.TP304		(SMLS PIPE) SA182 GR.F316	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	VALVE 1RY022 - PIPE	4 0.531"	(SMLS PIPE) SA182 GR.F316		(FORG.) SA376 GR.TP304	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	4" VALVE BODY	4	(FORG.) SA182 GR.F316		(SMLS PIPE) Not Applicable	4	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	4" PIPE	4 0.531"	(FORG.) SA376 GR.TP304		Not Applicable	4	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	ELBOW - 4"X6" REDUCER	4 0.531"	(SMLS PIPE) SA403 GR.WP304		SA403 GR.WP304	Shop 4	556 to 559	2250	1 GPM	650	2485	900 GPM	Reactor Coolant	Containment Air	18.3	24.6	24.6			
						(FITTING)		(FITTING)															
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-	22	6"X4" REDUCER	6	SA403 GR.WP304 (FITTING)		Not Applicable	ę	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	4"X6" REDUCER - TEE	6 0.719"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)	Shop 4	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	TEE - PIPE	6 0.719"	SA403 GR.WP304 (FITTING)		SA376 GR.TP304 (SMLS PIPE)	Shop 4	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	TEE - PIPE	4 0.531"	SA403 GR.WP304 (FITTING)		SA376 GR.TP304 (SMLS PIPE)	Shop 4	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
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-	26	6"X6"X4" TEE	6	SA403 GR.WP304		Not Applicable		556 to 559	2250	1 GPM	650	2485	900 GPM	Reactor Coolant	Containment Air		24.6	24.6			LOOP 4
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-	27	PIPE - ELBOW	6 0.719"	SA376 GR.TP304		SA403 GR.WP304	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	ELBOW - PIPE	6 0.719"	(SMLS PIPE) SA403 GR.WP304		(FITTING) SA376 GR.TP304	Field	556 to 559	2250	1 GPM	650	2485	900 GPM	Reactor Coolant	Containment Air	18.3	24.6	24.6			
						(FITTING)		(SMLS PIPE)															
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-	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	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	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	ELBOW - PIPE	4 0.531"	SA403 GR.WP304 (FITTING)		SA376 GR.TP304 (SMLS PIPE)	Shop 4	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	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	INSTRUMENT CONNECTION	<1	NOT AVAILABLE		Not Applicable	Field	556 to 559	2250	1 GPM	650	2485	900 GPM	Reactor Coolant	Containment Air	19.0	24.6	24.6			
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RUS-SPRAY-	35	PIPE - VALVE 1KY024	4 0.531"	SA376 GR.1P304 (SMLS PIPE)		5A182 GR.F316 (FORG.)		550 to 559	2250	I GPM	650	2485	900 GPM	Reactor Coolant	Containment Air	18.2	24.0	24.0			
Reactor Coolant System (RCS)	Group 5 - Pressurizer Spray Piping (SPRAY)	RCS-SPRAY-	36	VALVE 1RY024 - PIPE	4 0.531"	SA182 GR.F316 (FORG.)		SA376 GR.TP304 (SMLS PIPE)	rield	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 r Description	Part Size in inches	Part Thickness in inches	Material Material A W	Material Weld B Type	Operating Temperature °F	Opera in Pressu psi	ating ure in si Flow	g Temperat °F	n Design sure in Pressure ir psi	Design Flow	Inside Environment	Outside Environmen	Residual Stress in ks	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 Field (SMLS PIPE)	620 to 653	2250	250 KGPN	1 680	2485		Reactor Coolant	Containment Ai	r 18.8	25.5	25.5		NUREG/CR-6260; INEL-95/0045 2/95 pp 5-61 Tal 5-82. There is a bimetallic weld at the pressurizer but that may be in the pressurizer listing.	le	
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 Shop (SMLS PIPE)	620 to 653	2250	250 KGPN	1 680	2485		Reactor Coolant	Containment Ai	r 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 KGPN	1 680	2485		Reactor Coolant	Containment Ai	r	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 KGPN	1 680	2485		Reactor Coolant	Containment Ai	r	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 KGPN	1 680	2485		Reactor Coolant	Containment Ai	r	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 KGPN	1 680	2485		Reactor Coolant	Containment Ai	r 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 ps	Operating Flow	Design Temperature in °F	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residua Stress in I	Normal Stress in ksi 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.TP30 (SMLS PIPE)	4 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.TP30 (SMLS PIPE)	4 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.TP30 (SMLS PIPE)	4 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.TP30- (SMLS PIPE)	4 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 Part Identification Number	Part Description	Part Size in inches	Part Thickness in inches	n Aterial Mate	erial N	Material B	Weld Type Op	erating erature in F °F	Operating Pressure in psi	Operating Flow	Design Temperature i °F	Design in Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in k	Normal si Stress in k	Faulted si Stress in F	SI CUF	Stress Comments	Operating Experience	General Comments
Reactor Coolant System (RCS)	Group 8 - Pressurizer to SRVs (SRV)	RCS-SRV- 1	SAFE END - ELBOW	6	0.719"	SA182 GR.F316L (FORG.)	s (SA403 GR.WP304 I (FITTING)	Field 653	2	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	6* ELBOW	6	0.719"	SA403 GR.WP304 (FITTING)	1	Not Applicable	653	2	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 wel		
Reactor Coolant System (RCS)	Group 8 - Pressurizer to SRVs (SRV)	RCS-SRV- 3	ELBOW - PIPE	6	0.719"	SA403 GR.WP304 (FITTING)	5 (SA376 GR.TP304 (SMLS PIPE)	Shop 653	2	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	6" PIPE	6	0.719"	SA376 GR.TP304 (SMLS PIPE)	١	Not Applicable	653	2	2250	0 K#/HR	680	2485		Reactor Coolant Steam	Containment Air		24.6	24.6		Typicaly wrought stainless in other Westinghouse plants as well.		
Reactor Coolant System (RCS)	Group 8 - Pressurizer to SRVs (SRV)	RCS-SRV- 5	PIPE - ELBOW	6	0.719"	SA376 GR.TP304 (SMLS PIPE)	5	SA403 GR.WP304 (FITTING)	Shop 653	2	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	ELBOW - PIPE	6	0.719"	SA403 GR.WP304 (FITTING)	5	SA376 GR.TP304 (SMLS PIPE)	Shop 653	2	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	PIPE - ELBOW	6	0.719"	SA376 GR.TP304 (SMLS PIPE)	5	SA403 GR.WP304 (FITTING)	Shop 653	2	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	ELBOW - VALVE 1RY8010A FLANGE	6	0.719"	SA403 GR.WP304 (FITTING)	5	SA182 GR.F316 (FORG.)	Shop 653	2	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	6" VALVE	6	0.719"	SA182 GR.F316 (FORG.)	1	Not Applicable	653	2	2250	0 K#/HR	680	2485		Reactor Coolant Condensed Steam	Containment Air		25.5	25.5				

System Identification	Group Identification	Part Identification	Part Part Number Description	Part Part Size in Thickness inches inches	n Material Materia A W	Materia B	Weld Type	Operating Temperature in °F	Operating n Pressure in psi	Operating Flow	Design Temperature ir °F	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Norma Stress in ksi Stress in	Faulted Stress in ksi 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 AN DISCHARGE NOZZLES		SA351 GR.CF8 (CASTING)	Not Applica	ble	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 Applica	ble	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 Applica	ble	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 Applica	ble	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 barier, 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 Applica	ble	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 BOL		SA193 (FSAR)	Not Applica	ble	556 to 559	2250	35 M#/HR	650	2485	35 M#/HR		Reactor Coolant	85.35	85.35				
Reactor Coolant System (RCS)	Group 9 - Reactor Coolant Pump (RCP)	RCS-RCP-	7 PUMP SHAFT		SA182 GR.F347 (FORG.)	Not Applica	ble	556 to 559	2250	35 M#/HR	650	2485	35 M#/HR		Reactor Coolant	25.5	25.5				

System Identification	Group Identification	Part Identificatio	Part ion Number	Part r Description	Part Size in inches	Part Thickness i inches	in A	Material W	Material B	Weld Type Operating Temperature °F	Operat in Pressur psi	ating ure in ii F	erating Temp Temp	Design perature in °F	Design Pressure in psi	Design Flow	Inside Environment	Outside Environmer	Resident Stress	dual Nori in ksi Stress	mal in ksi Str	Faulted ess in ksi CUF	Stress Comments	Operating Experience	General Comments
Reactor Coolant System (RC	S) Group 10 - Reactor Pressure Vessel (RPV)	RCS-R	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 N	/#/HR 650		2485	140 M#/HR	Reactor Coolant	Containment A	Air	42.1	40.05	40.05	NUREG/CR-6260; INEL-95/0045 2/95 pp 5-61 Table 5-82.		PRESSURE BOUNDARY STRUCTURAL WELDS USE TYPICALLY Mn-Mo-NI STEEL CONSUMABLE WIRE AND WELDING FLUX (LINDE 80). INTERIOR SURFACE CLAD WITH SS TP 304 AND BETTER OR ALLOY 82/182 WELD MATERIAL BAW IR PEOPD
Reactor Coolant System (RC	S) Group 10 - Reactor Pressure Vessel (RPV)	RCS-R	RPV- 2	DUTCHMAN - RX VESSEL LOW	/ER 0	8.625"	SA508 CL.2 (FORG.)		SA508 CL.2 (FORG.)	556 to 559	2250	140 N	/#/HR 650		2485	140 M#/HR	Reactor Coolant	Containment A	Air	42.1	45	45 0.018			
Reactor Coolant System (RC	S) Group 10 - Reactor Pressure Vessel (RPV)	RCS-R	RPV- 3	RX VESSEL LOWER SHELL - R) VESSEL INTERMEDIATE SHELL	X 0 L	8.625*	SA508 CL.2 (FORG.)		SA508 CL.2 (FORG.)	556 to 559	2250	140 N	/#/HR 650		2485	140 M#/HR	Reactor Coolant	Containment A	Air	42.1	45	45			
Reactor Coolant System (RC	S) Group 10 - Reactor Pressure Vessel (RPV)	RCS-R	RPV- 4	RX VESSEL INTERMEDIATE SHELL - RX VESSEL UPPER	0	8.625"	SA508 CL.2 (FORG.)		SA508 CL.2 (FORG.)	556 to 559	2250	140 N	/#/HR 650		2485	140 M#/HR	Reactor Coolant	Containment A	Air	42.1	45	45			
Reactor Coolant System (RC	S) Group 10 - Reactor Pressure Vessel (RPV)	RCS-R	RPV- 5	RX VESSEL UPPER SHELL -	0 NG	9.6875"	SA508 CL.2 (FORG.)		SA508 CL.2 (FORG.)	556 to 559	2250	140 N	/#/HR 650		2485	140 M#/HR	Reactor Coolant	Containment A	Air	42.1	45	45			
Reactor Coolant System (RC	S) Group 10 - Reactor Pressure Vessel (RPV)	RCS-R	RPV- 6	RX UPPER SHELL FORGING - OUTLET NOZZLE (22 DEG.)	0	9.6875"	SA508 CL.2 (FORG.)		SA508 CL.2 (FORG.)	620	2250	0 M#/	'HR 650		2485	35 M#/HR	Reactor Coolant	Containment A	Air	42.1	45	45 0.658			
Reactor Coolant System (RC	S) Group 10 - Reactor Pressure Vessel (RPV)	RCS-R	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 N	/#/HR 650		2485	140 M#/HR	Reactor Coolant	Containment A	Air	42.1	45	45 0.29			
Reactor Coolant System (RC	S) Group 10 - Reactor Pressure Vessel (RPV)	RCS-R	RPV- 8	OUTLET NOZZLE FORGING - SAFE END (22 DEG.)	0	2.940"	SA508 CL.2 (FORG.)		SA182 GR.F316 (FORG.) 620	2250	0 M#/	'HR 650		2485	35 M#/HR	Reactor Coolant	Containment A	Air	42.1	45	45			
Reactor Coolant System (RC	S) Group 10 - Reactor Pressure Vessel (RPV)	RCS-R	RPV- 9	SAFE END - INLET NOZZLE EORGING (67 DEG.)	0	2.810"	SA182 GR.F316 (FORG.)		SA508 CL.2 (FORG.)	556 to 559	2250	140 N	/#/HR 650		2485	140 M#/HR	Reactor Coolant	Containment A	Air	18.8	25.5	25.5			
Reactor Coolant System (RC	S) Group 10 - Reactor Pressure Vessel (RPV)	RCS-R	RPV- 10	HOT LEG SAFE END - HL PIPE	29	2.33"MW	SA182 GR.F316 (FORG.)		SA376 GR.TP304N (SMLS PIPE)	620	2250	0 M#/	'HR 650		2485	35 M#/HR	Reactor Coolant	Containment A	Air	18.8	25.5	25.5			
Reactor Coolant System (RC	S) Group 10 - Reactor Pressure Vessel (RPV)	RCS-R	RPV- 11	CL ELBOW - COLD LEG SAFE	27.5	2.21"MW	SA351 GR.CF8A		SA182 GR.F316 (FORG.) 556 to 559	2250	140 N	/#/HR 650		2485	140 M#/HR	Reactor Coolant	Containment A	Air	18.8	25.5	25.5			
Reactor Coolant System (RC	S) Group 10 - Reactor Pressure Vessel (RPV)	RCS-R	RPV- 12	INTERIOR ATTACHMENT OUTSIDE BELTLINE REGION	0		SA508 CL.2 (FORG.)		SB168 INCONEL	556 to 559	2250	140 N	/#/HR 650		2485	140 M#/HR	Reactor Coolant	Containment A	Air	42.1	45	45			CC-1336 MATERIAL INFO FROM B&W VESSEL REPORT. WELDED TO CLADDING
Reactor Coolant System (RC	S) Group 10 - Reactor Pressure Vessel (RPV)	RCS-R	RPV- 13	RX VESSEL INSTRUMENTATION	ON 0	N/A	SA533 GR.B CL.1 (PLATE)		SA166 INCONEL	556 to 559	2250	140 N	/#/HR 650		2485	140 M#/HR	Reactor Coolant	Containment A	Air	42.1	40.05	40.05		LER 318 1989-007: PWSCC	
Reactor Coolant System (RC	S) Group 10 - Reactor Pressure Vessel (RPV)	RCS-R	RPV- 14	RX VESSEL INSTRUMENTATION NOZZLE - VESSEL CENTRAL	DN 0	N/A	SA533 GR.B CL.1 (PLATE)		SA166 INCONEL	556 to 559	2250	140 M	/#/HR 650		2485	140 M#/HR	Reactor Coolant	Containment A	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 (RC	S) Group 10 - Reactor Pressure Vessel (RPV)	RCS-R	RPV- 15	RX VESSEL INSTRUMENTATIO	ON 0	N/A	SA533 GR.B CL.1		SA166 INCONEL	556 to 559	2250	140 N	/#/HR 650		2485	140 M#/HR	Reactor Coolant	Containment A	Air	42.1	40.05	40.05			
Reactor Coolant System (RC	S) Group 10 - Reactor Pressure Vessel (RPV)	RCS-R	RPV- 16	CLOSURE HEAD FLANGE - REACTOR CLOSURE HEAD RIN	0	6.9375"	SA508 CL.2 (FORG.)		SA508 CL.2 (FORG.)	-600	2250	0 M#/	'HR 650		2485	35 M#/HR	Reactor Coolant	Containment A	Air	42.1	45	45		IN 90-29 CRACKING OF CLADDING AND HAZ IN 90-32 SURFACE CRACK IN THE WELD	
Reactor Coolant System (RC	S) Group 10 - Reactor Pressure Vessel (RPV)	RCS-R	RPV- 17	REACTOR CLOSURE HEAD RIN	NG - 0	6.9375"	SA508 CL.2 (FORG.)		SA533 GR.B CL.1 (PLATE)	-600	2250	0 M#/	HR 650		2485	35 M#/HR	Reactor Coolant	Containment A	Air	42.1	45	45			
Reactor Coolant System (RC	S) Group 10 - Reactor Pressure Vessel (RPV)	RCS-R	RPV- 18	REACTOR VESSEL CRD NOZZLES - PERIPHERAL	0	0.656*	SA533 GR.B CL.1 (PLATE)		SB167 INCONEL	-600	2250	0 M#/	HR 650		2485	35 M#/HR	Reactor Coolant	Containment A	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 ol T/C on underside of RPV head, pinhole leaks and radial cracks across the fillet weld on CRDM.	
Reactor Coolant System (RC	S) Group 10 - Reactor Pressure Vessel (RPV)	RCS-R	RPV- 19	REACTOR VESSEL CRD NOZZLES - INTERMEDIATE	0	0.656"	SA533 GR.B CL.1 (PLATE)		SB167 INCONEL	~600	2250	0 M#/	HR 650		2485	35 M#/HR	Reactor Coolant	Containment A	Air	42.1	40.05	40.05		Numerous Reports: PWSCC at Alloy 600, Alloy 182 J-groove and CRDM nozzles.	
Reactor Coolant System (RC	S) Group 10 - Reactor Pressure Vessel (RPV)	RCS-R	RPV- 20	REACTOR VESSEL CRD NOZZLES - CENTRAL	0	0.656"	SA533 GR.B CL.1 (PLATE)		SB167 INCONEL	~600	2250	0 M#/	'HR 650	-	2485	35 M#/HR	Reactor Coolant	Containment A	Air	42.1	40.05	40.05			
Reactor Coolant System (RC	S) Group 10 - Reactor Pressure Vessel (RPV)	RCS-R	RPV- 21	WELD IN PERIPHERAL CRD HOUSING (45 LOCATIONS)	0	0.656"	SB167 INCONEL		SA182 GR.F304H (FORG.)	~600	2250	0 M#/	HR 650		2485	35 M#/HR	Reactor Coolant	Containment A	Air	25.4	34.95	34.95			
Reactor Coolant System (RC	S) Group 10 - Reactor Pressure Vessel (RPV)	RCS-R	RPV- 22	REACTOR VESSEL NOZZLE VE	ENT 0	N/A	SA533 GR.B CL.1 (PLATE)		SB167 INCONEL	-600	2250	0 M#/	'HR 650		2485	35 M#/HR	Reactor Coolant	Containment A	Air	42.1	40.05	40.05			
Reactor Coolant System (RC	S) Group 10 - Reactor Pressure Vessel (RPV) Crown 10, Reactor Pressure Vessel (RPV)	RCS-R	RPV- 23	REACTOR VESSEL SHELL			SA508 CL.2 (FORG.)		Not Applicable	556 to 559	2250	140 N	/#/HR 650		2485	140 M#/HR	Reactor Coolant	Containment A	Air		45	45		LED 207 2002 004, triangular aguitu ann rauimatalu 5 inakan	
Reactor Coolant System (RC	S) Gloup IU - Reactor Pressure Vesser (RPV)	RU3-F	RF V- 24	HEAD			3A508 CE.2 (FORG.)		Not Applicable	-600	2250	0 101#/	HK 050		2403	35 M#/HK	Reactor Coolant	Containment A	-11		45	45		LER 207 2003-001: Intaligual 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.	NIND 54555 GK.B CL. I
Reactor Coolant System (RC	S) Group 10 - Reactor Pressure Vessel (RPV)	RCS-R	RPV- 25	RX INLET AND OUTLET NOZZLE	ES		SA508 CL.2 (FORG.)		Not Applicable	IN: 556 to 559	OI2250	0 M#/	'HR 650		2485	35 M#/HR	Reactor Coolant	Containment A	Air		45	45 0.29	0.435 CUF for inlet. For outlet, the CUF no.'s an 0.658 and 0.987.		should split inlet and outlet into two parts
Reactor Coolant System (RC	S) Group 10 - Reactor Pressure Vessel (RPV)	RCS-R	RPV- 26	RX INLET AND OUTLET NOZZLE SAFE ENDS	E		SA182 GR.F316 (FORG.)		Not Applicable	IN: 556 to 559	OI2250	0 M#/	HR 650		2485	35 M#/HR	Reactor Coolant	Containment A	Air		25.5	25.5			Should split inlet and outlet into two parts
Reactor Coolant System (RC	S) Group 10 - Reactor Pressure Vessel (RPV)	RCS-R	RPV- 27	RX CLOSURE STUDS/NUTS			SA540 CL.3 GR.B-23 (BOLTING)		Not Applicable	ambient	ambient						Reactor Coolant	Containment A	Air		34.95	34.95		IN 86-108 BORIC ACID CORROSION	CC 1335-2 FROM B&W VESSEL REPORT
Reactor Coolant System (RC	S) Group 10 - Reactor Pressure Vessel (RPV)	RCS-R	RPV- 28	RX INTERIOR ATTACHMENTS (CORE GUIDE LUGS)			SB168 INCONEL		Not Applicable	556 to 559	2250	140 N	/#/HR 650		2485	140 M#/HR	Reactor Coolant	Containment A	Air		34.95	34.95			CC-1336 MATERIAL INFO FROM B&W VESSEL REPORT
Reactor Coolant System (RC	S) Group 10 - Reactor Pressure Vessel (RPV)	RCS-R	RPV- 29	RX CORE INSTRUMENTATION NOZZI ES (BOTTOM HEAD)			SA166 INCONEL		Not Applicable	556 to 559	2250	140 N	/#/HR 650		2485	140 M#/HR	Reactor Coolant	Containment A	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 (RC	S) Group 10 - Reactor Pressure Vessel (RPV)	RCS-R	RPV- 30	RX CRDM AND THERMOCOUPL NOZZLES (TOP HEAD)	LE		SB167 INCONEL		Not Applicable	-600	2250	0 M#/	HR 650		2485	35 M#/HR	Reactor Coolant	Containment A	Air		34.95	34.95		IN 86-108 BORIC ACID CORROSION	MATERIAL INFO FROM B&W VESSEL REPORT
Reactor Coolant System (RC	S) Group 10 - Reactor Pressure Vessel (RPV)	RCS-R	RPV- 31	RX EXTERIOR ATTACHMENTS (LIFTING LUGS ON CLOSURE HEAD, SUPPORT SKIRT, SEISM SUPPORTS OR NOZZLE PADS)	NIC		LAS		Not Applicable	ambient	ambient						Reactor Coolant	Containment A	Air						VATERIAL INFO FROM B&W VESSEL REPORT
Reactor Coolant System (RC	Group 10 - Reactor Pressure Vessel (RPV)	RCS-R	RPV- 32	CRD HOUSING AND CONOPY			Carbon Steel (BAW- 2251A)											Containment A	Air					LER 313 1989-043: CRD housing flange boils corroded. LER 275 1989-047 deposited botic acid and ruts colored material extending down the CRDM housing result contaminants (chlorides and suitales) in the stagnant liquid in the canopy annulus and in the crevices formed by the lack degrees F well enertaion; higher oxygen content suspected in the canopy annulus degrees F the spares. This is due to the canopy annulus degrees F the spares. This is due to the canopy annulus degrees F the spares. This is due to the canopy annulus degrees being at high points degrees F the system. LER Z651989-014: seal housing CRDM shaft tube approximately 1/in chr from the lower flange face / 347 SS leading to TGSCC, extensive cold working	ER 265 1990-028: residual stress from welfing was 10 ka; to op stress introduced by an operational pressure degrees F 2100 psi would be an additional 10.4 ksi which results in a tall tensile stress in the weld overlay area degrees F greater han 20 ksi. stagnant oxygenated conditions (300 to 1300 ppm). PWHT. Cracks in nisid damater weld overlay region approximately two feet from the bottom flange of the control element drive housing. (reactor vaseel head noz2el 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 Part Part Size in Inches	Part Thickness in inches	Material A	Material Material W 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 Operating Comments Experience	General Comments
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	1 CHANNEL HEAD - TUBESHEET 135.5	5.320"	SA216 GR.WCC (CASTING)	SA508 CL.2A (FORG.)		IN: 610 to 620 OUT: 556 to 559	2250	0 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	30.7	29.1	29.1			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	2 TUBE SHEET - STUB BARREL 135.5	3.375"	SA508 CL.2A	SA533 GR.A CL.2 (PLATE)		544	1000	0 M#/HR	572	1235	16 M#/HR	Reactor Coolant	Secondary Water	42.1	45	45			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	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 M#/HR	572	1235	16 M#/HR	Reactor Coolant	Secondary Water	58.9	45	45			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	4 LOWER SHELL (A) - LOWER 135.38 SHFLL (B)	3.0625"	(PLATE)	SA533 GR.A CL.2 (PLATE)		544	1000	0 M#/HR	572	1235	16 M#/HR	Reactor Coolant	Secondary Water	58.9	45	45			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	5 LOWER SHELL (B) - TRANSITION 135.38 CONF	3.0625"	(PLATE)	SA533 GR.A CL.2 (PLATE)		544	1000	0 M#/HR	572	1235	16 M#/HR	Reactor Coolant	Secondary Water	58.9	45	45			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	6 TRANSITION CONE - UPPER 176.25 SHFILI (A)	3.875"	(PLATE)	SA533 GR.A CL.2 (PLATE)		544	1000	0 M#/HR	572	1235	16 M#/HR	Reactor Coolant	Secondary Water	58.9	45	45			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	7 UPPER SHELL (A) - UPPER SHELL 176.25 (B)	3.875"	SA533 GR.A CL.2 (PLATE)	SA533 GR.A CL.2 (PLATE)		544	1000	0 M#/HR	572	1235	16 M#/HR	Reactor Coolant	Secondary Water	58.9	45	45			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	8 UPPER SHELL (B) - UPPER HEAD 176.25	3.813"	(1 D (1 E) SA533 GR.A CL.2 (PLATE)	SA533 GR.A CL.2 (PLATE)		544	1000	0 M#/HR	572	1235	16 M#/HR	Reactor Coolant	Secondary Water	58.9	45	45			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	9 STUB BARREL - LONGITUDINAL 176.25		(10112) SA533 GR.A CL.2 (PLATE)	SA533 GR.A CL.2 (PLATE)		544	1000	0 M#/HR	572	1235	16 M#/HR	Reactor Coolant	Secondary Water	58.9	45	45			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	10 LOWER SHELL A - LONGITUDINAL 176.25		(1 D (1 E) SA533 GR.A CL.2 (PLATE)	SA533 GR.A CL.2 (PLATE)		544	1000	0 M#/HR	572	1235	16 M#/HR	Reactor Coolant	Secondary Water	58.9	45	45			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	11 LOWER SHELL B - LONGITUDINAL 176.25		(1 D (1 E) SA533 GR.A CL.2 (PLATE)	SA533 GR.A CL.2 (PLATE)		544	1000	0 M#/HR	572	1235	16 M#/HR	Reactor Coolant	Secondary Water	58.9	45	45			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	12 TRANSITION CONE - 176.25		(1 D (1 E) SA533 GR.A CL.2 (PLATE)	SA533 GR.A CL.2 (PLATE)		544	1000	0 M#/HR	572	1235	16 M#/HR	Reactor Coolant	Secondary Water	58.9	45	45			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	13 UPPER SHELL A - LONGITUDINAL 176.25		(PLATE) SA533 GR.A CL.2 (DLATE)	SA533 GR.A CL.2		544	1000	0 M#/HR	572	1235	16 M#/HR	Reactor Coolant	Secondary Water	58.9	45	45			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	14 UPPER SHELL B - LONGITUDINAL 176.25		(PLATE) SA533 GR.A CL.2	(PLATE) SA533 GR.A CL.2		544	1000	0 M#/HR	572	1235	16 M#/HR	Reactor Coolant	Secondary Water	58.9	45	45			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	15 UPPER HEAD - LONGITUDINAL 176.25		(PLATE) SA533 GR.A CL.2	SA533 GR.A CL.2		544	1000	0 M#/HR	572	1235	16 M#/HR	Reactor Coolant	Secondary Water	58.9	45	45			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	16 STUB BARREL - FW NOZZLE 16	3.375"	SA533 GR.A CL.2	SA508 CL.2A (FORG.)		540	1000	0 M#/HR	572	1235	16 M#/HR	Reactor Coolant	Secondary Water	58.9	45	45			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	(NOZZLE 2) 17 UPPER HEAD - MS NOZZLE 30.25 (NOZZLE 2)	3.813"	(PLATE) SA533 GR.A CL.2	SA508 CL.2A (FORG.)		544	1000	0 M#/HR	572	1235	16 M#/HR	Reactor Coolant	Secondary Water	58.9	45	45			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	18 UPPER BARREL (A) - AFW 6	3.875"	(PLATE) SA533 GR.A CL.2	SA508 CL.2A (FORG.)		544	1000	0 M#/HR	572	1235	16 M#/HR	Reactor Coolant	Secondary Water	58.9	45	45			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	NOZZLE (NOZZLE 13) 19 CHANNEL HEAD - PRIMARY 31		(PLATE) SA216 GR.WCC	SA216 GR.WCC		IN: 610 to 620	2250	0 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	30.7	29.1	29.1			
			NOZZLES (INLET AND OUTLET) - NOZZLE 1A &1B		(CASTING)	(CASTING)		OUT: 556 to 559													
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	20 CHANNEL HEAD - PRIMARY 16 MANWAY (2) - NOZZLE 9A&9B		SA216 GR.WCC (CASTING)	SA216 GR.WCC (CASTING)		IN: 610 to 620 OUT: 556 to 559	2250	0 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	30.7	29.1	29.1			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	21 UPPER SHELL (B) - SECONDARY 16 MANWAY (2) - NOZZLE 10A&10B		SA533 GR.A CL.2 (PLATE)	SA508 CL.2A (FORG.)		544	1000	0 M#/HR	572	1235	16 M#/HR	Reactor Coolant	Secondary Water	58.9	45	45			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	22 STUB BARREL - INSPECTION 2 OPENING (4) - NOZZLE 11A TO		SA533 GR.A CL.2 (PLATE)	SA508 CL.2A (FORG.)		544	1000	0 M#/HR	572	1235	16 M#/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	
			11D																	generator at 83' elevation/ schedule 80 carbon steel	
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	23 SG TUBES -TUBE SHEET-ROLL TRANSITION		ALLOY 600	Not Applicable		IN: 610 to 620 OUT: 556 to 559	2250	0 M#/HR	650	2485	35 M#/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 SG TUBES - U-BEND AREA		ALLOY 600	Not Applicable		PRI: ~588 SEC:544	PRI: 2250 \$	0 M#/HR	650	2485	35 M#/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 SG TUBES - ALL OTHERS		ALLOY 600	Not Applicable		PRI: 556 to 620 SEC: 544	PRI: 2250	35 M#/HR	650	2485	35 M#/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	
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	26 SG TUBES - SLUDGE AREA		ALLOY 600	Not Applicable		PRI: 556 to 620	PRI: 2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Secondary Water	25	34.95	34.95		(SG) at the sixth support plate due to fatigue	
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	27 SG TUBES - FREE SPAN WATER		ALLOY 600	Not Applicable		SEC: 544 PRI: 556 to 620	PRI: 2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Secondary Water	25	34.95	34.95			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	28 SG TUBES - TUBESHEET/TSP		ALLOY 600	Not Applicable		SEC: 544 544	1000	0 M#/HR	572	1235	16 M#/HR	Reactor Coolant	Secondary Water	25	34.95	34.95		Numerous events of IGA/SCC at the crevice regions. denting	
			(DRILLED)																	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 ODSCC at the tube support plate interactions, ODSCC/IGA	
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	29 SG TUBES - TUBESHEET/TSP (LINE CONTACT)		ALLOY 600	Not Applicable		PRI: 556 to 620 SEC: 544	PRI: 2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Secondary Water	25	34.95	34.95			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	30 SG TUBES - FREE SPAN STEAM		ALLOY 600	Not Applicable		PRI: 556 to 620 SEC: 544	PRI: 2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Secondary Water	25	34.95	34.95			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	31 SG TUBES - FREE SPAN BEND		ALLOY 600	Not Applicable		PRI: 556 to 620 SEC: 544	PRI: 2250	35 M#/HR	650	2485	35 M#/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 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 SG TUBES - WEAR AT TOP AREA		ALLOY 600	Not Applicable		PRI: -588 SEC:544	PRI: 2250 \$	0 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	25	34.95	34.95			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	34 SG TUBES -TUBE SHEET-ROLL TRANSITION		ALLOY 600TT	Not Applicable		IN: 610 to 620 OUT: 556 to 559	2250	0 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	25	34.95	34.95			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	35 SG TUBES - U-BEND AREA		ALLOY 600TT	Not Applicable		PRI: ~588 SEC:544	PRI: 2250 \$	0 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	25	34.95	34.95			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	36 SG TUBES - ALL OTHERS		ALLOY 600TT	Not Applicable		PRI: 556 to 620 SEC: 544	PRI: 2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Secondary Water	25	34.95	34.95			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	37 SG TUBES - SLUDGE AREA		ALLOY 600TT	Not Applicable		PRI: 556 to 620 SEC: 544	PRI: 2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Secondary Water	25	34.95	34.95			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	38 SG TUBES - FREE SPAN WATER		ALLOY 600TT	Not Applicable		PRI: 556 to 620 SEC: 544	PRI: 2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Secondary Water	25	34.95	34.95			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	39 SG TUBES - TUBESHEET/TSP (DRILLED)		ALLOY 600TT	Not Applicable		544	1000	0 M#/HR	572	1235	16 M#/HR	Reactor Coolant	Secondary Water	25	34.95	34.95			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	40 SG TUBES - TUBESHEET/TSP (LINE CONTACT)		ALLOY 600TT	Not Applicable		544	1000	0 M#/HR	572	1235	16 M#/HR	Reactor Coolant	Secondary Water	25	34.95	34.95			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	41 SG TUBES - FREE SPAN STEAM		ALLOY 600TT	Not Applicable		PRI: 556 to 620 SEC: 544	PRI: 2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Secondary Water	25	34.95	34.95			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	42 SG TUBES - FREE SPAN BEND		ALLOY 600TT	Not Applicable		PRI: 556 to 620 SEC: 544	PRI: 2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Secondary Water	25	34.95	34.95			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	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 SG TUBES - WEAR AT TOP AREA		ALLOY 600TT	Not Applicable		PRI: ~588 SEC:544	PRI: 2250 \$	0 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	25	34.95	34.95			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	45 SG TUBES -TUBE SHEET-ROLL TRANSITION		ALLOY 690	Not Applicable		IN: 610 to 620 OUT: 556 to 559	2250	0 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	25	34.95	34.95			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	46 SG TUBES - U-BEND AREA		ALLOY 690	Not Applicable		PRI: -588 SEC:544	PRI: 2250 \$	0 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	25	34.95	34.95			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	47 SG TUBES - ALL OTHERS		ALLOY 690	Not Applicable		PRI: 556 to 620 SEC: 544	PRI: 2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Secondary Water	25	34.95	34.95			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	48 SG TUBES - SLUDGE AREA		ALLOY 690	Not Applicable		PRI: 556 to 620 SEC: 544	PRI: 2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Secondary Water	25	34.95	34.95			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	49 SG TUBES - FREE SPAN WATER		ALLOY 690	Not Applicable		PRI: 556 to 620 SEC: 544	PRI: 2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Secondary Water	25	34.95	34.95			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	50 SG TUBES - TUBESHEET/TSP (DRILLED)		ALLOY 690	Not Applicable		544	1000	0 M#/HR	572	1235	16 M#/HR	Reactor Coolant	Secondary Water	25	34.95	34.95			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	51 SG TUBES - TUBESHEET/TSP (LINE CONTACT)		ALLOY 690	Not Applicable		544	1000	0 M#/HR	572	1235	16 M#/HR	Reactor Coolant	Secondary Water	25	34.95	34.95			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	52 SG TUBES - FREE SPAN STEAM		ALLOY 690	Not Applicable		PRI: 556 to 620 SEC: 544	PRI: 2250	35 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Secondary Water	25	34.95	34.95			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	53 SG TUBES - FREE SPAN BEND		ALLOY 690	Not Applicable		PRI: ~588 SEC:544	PRI: 2250 \$	0 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	25	34.95	34.95			
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	54 SG TUBES - SUPERHEATER REGION (OTSG)		ALLOY 690	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-	55 SG TUBES - WEAR AT TOP AREA		ALLOY 690	Not Applicable		PRI: ~588 SEC:544	PRI: 2250 \$	0 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	25	34.95	34.95			

System Identification	Group Identification	Part Identification	Part Part Number Description	Part Size in inches	Part Thickness in inches A	Material W	Material B	Weld Type	Operating Temperature °F	in Pressur in psi	e Operating Flow	Design Temperature °F	Design e in Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in I	Faulted Stress in ke	i 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 M#/HR	650	2485	35 M#/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 M#/HR	650	2485	35 M#/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 M#/HR	572	1235	16 M#/HR	Reactor Coolant	Secondary Water	42.1	45	45				
Reactor Coolant System (RCS)	Group 11 - Steam Generator (SG)	RCS-SG-	59 FW/AFW NOZZLE		SA508 CL.2A (FORG.)		Not Applicable		544	1000	0 M#/HR	572	1235	16 M#/HR	Reactor Coolant	Secondary Water	42.1	45	45			EPIX-397: Leakage from SG downcorner 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 62 SEC: 544	0 PRI: 2250	35 M#/HR	650	2485	35 M#/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/F316LM		Not Applicable		PRI: 556 to 62 SEC: 544	0 PRI: 2250	35 M#/HR	650	2485	35 M#/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 M#/HR	572	1235	16 M#/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 M#/HR	572	1235	16 M#/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 5	2250 59	0 M#/HR	650	2485	35 M#/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 5	2250 59	0 M#/HR	650	2485	35 M#/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)	2	SA533 GR.A CL.2 (PLATE) (bolts - SA193, GR. B7)		Not Applicable		IN: 610 to 620 OUT: 556 to 5	2250 59	0 M#/HR	650	2485	35 M#/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 M#/HR	572	1235	16 M#/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 5	2250 59	0 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Containment Air	25	34.95	34.95			Numerous SG Tube leak, pitting, wastage, blockage. Tithermally 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 5	2250 59	0 M#/HR	650	2485	35 M#/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 5	2250 59	0 M#/HR	650	2485	35 M#/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 preheate baffles	ər	Carbon Steel or Stainless Steel wit variations in geometric designs	1	Not Applicable		544	1000	0 M#/HR	572	1235	16 M#/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 °F	Operating in Pressure in psi	Operating Flow	Design Temperature in °F	Design Pressure in ps	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-R∖	1- 1	UPPER INTERNALS ASSEMBLY - UPPER SUPPORT PLATE		s	S		Not Applicable		620	2250	0 M#/HR	650	2485	35 M#/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-RV	1-2	UPPER INTERNALS ASSEMBLY - UPPER SUPPORT COLUMN		S	S CASS		Not Applicable		620	2250	0 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Reactor Coolant							ATTACHED TO BOTH USP AND UCP.
Reactor Coolant System (RCS)	Group 12 - Reactor Vessel Internals (RVI)	RCS-RV	1-3	UPPER INTERNALS ASSEMBLY - UPPER SUPPORT COLUMN BOLTS	6	S	S		Not Applicable		620	2250	0 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Reactor Coolant							
Reactor Coolant System (RCS)	Group 12 - Reactor Vessel Internals (RVI)	RCS-RV	1-4	UPPER INTERNALS ASSEMBLY - UPPER CORE PLATE		s	s		Not Applicable		620	2250	0 M#/HR	650	2485	35 M#/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-RV	1- 5	UPPER INTERNALS ASSEMBLY - UPPER CORE PLATE ALIGNMENT PIN		N	II ALLOY		Not Applicable		620	2250	0 M#/HR	650	2485	35 M#/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-RV	'l- 6	UPPER INTERNALS ASSEMBLY - FUEL ALIGNMENT PINS		N	II ALLOY		Not Applicable		620	2250	0 M#/HR	650	2485	35 M#/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-RV	1- 7	UPPER INTERNALS ASSEMBLY - HOLDDOWN SPRING		S	S		Not Applicable		~600	2250	0 M#/HR	650	2485	35 M#/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-RV	1-8	RCCA GUIDE TUBE ASSEMBLIES - RCCA GUIDE TUBES		S	s		Not Applicable		620	2250	0 M#/HR	650	2485	35 M#/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-RV	1-9	RCCA GUIDE TUBE ASSEMBLIES - RCCA GUIDE TUBE BOI TS	1	S	s		Not Applicable		620	2250	0 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Reactor Coolant							
Reactor Coolant System (RCS)	Group 12 - Reactor Vessel Internals (RVI)	RCS-RV	1- 10	RCCA GUIDE TUBE ASSEMBLIES - RCCA GUIDE TUBE SUPPORT PINS		N	II ALLOY (X-750)		Not Applicable		620	2250	0 M#/HR	650	2485	35 M#/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-RV	1- 11	CORE BARREL - CORE BARREL		S	S		Not Applicable		556 to 620	2250	0 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Reactor Coolant							SUPPORTS THE CORE. RESTS DIRECTLY ON THE LOP THAT IS ULTIMATELY SUPPORTED BY THE CORE BARREL ATTACHED AT LOP PERIPHERY WHICH IS SUPPORTE DV 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-RV	'l- 12	CORE BARREL - CORE BARREL FLANGE		S	s		Not Applicable		556 to 620	2250	0 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Reactor Coolant							
Reactor Coolant System (RCS)	Group 12 - Reactor Vessel Internals (RVI)	RCS-RV	'l- 13	CORE BARREL - CORE BARREL	1	S	s		Not Applicable		620	2250	0 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Reactor Coolant							
Reactor Coolant System (RCS)	Group 12 - Reactor Vessel Internals (RVI)	RCS-RV	1- 14	CORE BARREL - THERMAL SHIELD)	S	s		Not Applicable		556 to 559	2250	0 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Reactor Coolant							
Reactor Coolant System (RCS)	Group 12 - Reactor Vessel Internals (RVI)	RCS-RV	'l- 15	BAFFLE AND FORMER ASSEMBLY BAFFLE AND FORMER PLATES		s	S		Not Applicable		556 to 620	2250	0 M#/HR	650	2485	35 M#/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-RV	'l- 16	BAFFLE AND FORMER ASSEMBLY BAFFLE/FORMER BOLTS		s	S TP347		Not Applicable		556 to 620	2250	0 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Reactor Coolant							AND COLD WORKED TP316 OR NI ALLOY
Reactor Coolant System (RCS)	Group 12 - Reactor Vessel Internals (RVI)	RCS-RV	'l- 17	LOWER INTERNAL ASSMEBLY -		S	s		Not Applicable		556 to 559	2250	0 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Reactor Coolant							
Reactor Coolant System (RCS)	Group 12 - Reactor Vessel Internals (RVI)	RCS-RV	'l- 18	LOWER INTERNAL ASSMEBLY - EUEL ALIGNMENT PINS		S	s		Not Applicable		556 to 559	2250	0 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Reactor Coolant							TWO PER FUEL ASSEMBLY ATTCHED TO THE LCP THAT POSITION THE FUEL ASSEMBLIES
Reactor Coolant System (RCS)	Group 12 - Reactor Vessel Internals (RVI)	RCS-RV	'l- 19	LOWER INTERNAL ASSMEBLY - LOWER SUPPORT FORGING OR CASTING		C	ASS		Not Applicable		556 to 559	2250	0 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Reactor Coolant							
Reactor Coolant System (RCS)	Group 12 - Reactor Vessel Internals (RVI)	RCS-RV	1- 20	LOWER INTERNAL ASSMEBLY - LOWER SUPPORT PLATE COLUMNS		S	S CASS		Not Applicable		556 to 559	2250	0 M#/HR	650	2485	35 M#/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-RV	1- 21	LOWER INTERNAL ASSMEBLY - LOWER SUPPORT PLATE COLUMN BOLTS		N	II ALLOY		Not Applicable		556 to 559	2250	0 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Reactor Coolant							COLUMNS ARE ATTACHED WITH THREADED FASTNERS TO THE LCP AND A THREADED JOINT TO THE LOWER SUPPORT
Reactor Coolant System (RCS)	Group 12 - Reactor Vessel Internals (RVI)	RCS-RV	1- 22	LOWER INTERNAL ASSMEBLY - RADIAL SUPPORT KEYS AND CREVIS INSERTS		s	s		Not Applicable		556 to 559	2250	0 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Reactor Coolant							
Reactor Coolant System (RCS)	Group 12 - Reactor Vessel Internals (RVI)	RCS-RV	1- 23	LOWER INTERNAL ASSMEBLY - CLEVIS INSERT BOLTS		N	I ALLOY		Not Applicable		556 to 559	2250	0 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Reactor Coolant							
Reactor Coolant System (RCS)	Group 12 - Reactor Vessel Internals (RVI)	RCS-RV	1- 24	INSTRUMENTATION SUPPORT STRUCTURE - FLUX THIMBLE GUIDE TUBES		S	S		Not Applicable		556 to 559	2250	0 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Reactor Coolant							
Reactor Coolant System (RCS)	Group 12 - Reactor Vessel Internals (RVI)	RCS-RV	1- 25	INSTRUMENTATION SUPPORT STRUCTURE - FLUX THIMBLES		S	s		Not Applicable		556 to 559	2250	0 M#/HR	650	2485	35 M#/HR	Reactor Coolant	Reactor Coolant							

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	n A	Material W	Material B	Weld Type	Operating Temperature in °F	Operating Pressure in pe	Operating Flow	Design Temperature i	Design in °F Pressure in pe	Design i Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Operating Comments Experience	General Comments
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYF	P- 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-LPBYF	P- 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-LPBYF	- 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-LPBYF	P- 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-LPBYF	P- 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-LPBYF	P- 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 600E	
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYF	P- 7	PIPE	8	0.906"	SA376 GR.TP304 (SMLS PIPE)		Not Applicable		~600	2250	0	650	2485		Reactor Coolant	Containment Air	10.20	24.60	36.40		at 600E	1
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYF	P- 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 600E	[
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYF	P- 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 (EORG.)		Not Applicable		~600	2250	0	650	2485		Reactor Coolant	Containment Air	16.20	24.00	37.60		24 6005	[
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYF	P- 11	VALVE 1RC8003A - PIPE	8	0.906"	(FORG.) SA182 GR.F316 (EORG.)		SA376 GR.TP304 (SMLS PIPE)	Field	~600	2250	0	650	2485		Reactor Coolant	Containment Air	18 20	23.50	37.00		21 600	[
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYF	P- 12	PIPE - VALVE 1RC8001A NOZZLE	8	0.906"	SA376 GR.TP304		SA351 GR.CF8M	Field	~600	2250	0	650	2485		Reactor Coolant	Containment Air	10.20	24.00	30.40			[
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYF	P- 13	BRANCH CONNECTION - PIPE	1.5	0.281"	SA182 GR.F304		SA376 GR.TP304	Field	~600	2250	0	650	2485		Reactor Coolant	Containment Air	18.20	24.00	36.40			[
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYF	P- 14	PIPE - ELBOW	1.5	0.281"	SA376 GR.TP304		SA182 GR.F304	Field	~600	2250	0	650	2485		Reactor Coolant	Containment Air	23.66	20.85	36.40			[
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYF	P- 15	ELBOW	1.5	0.281"	(SMLS PIPE) SA376 GR.TP304		Not Applicable		~600	2250	0	650	2485		Reactor Coolant	Containment Air	23.66	20.85	36.40			[
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYF	P- 16	ELBOW - PIPE	1.5	0.281"	(SMLS PIPE) SA182 GR.F304		SA376 GR.TP304	Field	~600	2250	0	650	2485		Reactor Coolant	Containment Air		24.60	36.40			[
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYF	P- 17	PIPE	1.5	0.281"	(FORG.) SA182 GR.F304		(SMLS PIPE) Not Applicable		~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-LPBYF	P- 18	PIPE - VALVE 1RC8045A	1.5	0.281"	(FORG.) SA182 GR.F316		SA376 GR.TP304	Field	~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-LPBYF	P- 19	CHECK VALVE	1.5	0.281"	(FORG.) SA182 GR.F316		(SMLS PIPE) Not Applicable		~600	2250	0	650	2485		Reactor Coolant	Containment Air	23.66	24.60	36.40		at 600F	<u> </u>
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYF	P- 20	VALVE 1RC8045A - PIPE	1.5	0.281"	(FORG.) SA182 GR.F316		SA376 GR.TP304	Field	~600	2250	0	650	2485		Reactor Coolant	Containment Air		25.50	37.60		at 600F	<u> </u>
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYF	P- 21	PIPE - TEE	1.5	0.281"	(FORG.) SA376 GR.TP304		(SMLS PIPE) SA182 GR.F304	Field	~600	2250	0	650	2485		Reactor Coolant	Containment Air	23.66	24.60	36.40		at 600F	<u> </u>
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYF	- 22	FULL SIZE TEE	1.5	0.281"	(SMLS PIPE) SA182 GR.F304		(FORG.) Not Applicable		~600	2250	0	650	2485		Reactor Coolant	Containment Air	23.66	20.85	36.40		at 600F	l
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYF	- 23	TEE - 1.5"X.75" REDUCER	1.5	0.281"	(FORG.) SA182 GR.F304		SA182 GR.F304	Field	~600	2250	0	650	2485		Reactor Coolant	Containment Air		20.85	36.40		at 600F	l
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYF	P- 24	1.5"X.75" REDUCER	1.5	0.281"	(FORG.) SA182 GR.F304		(FORG.) Not Applicable		~600	2250	0	650	2485		Reactor Coolant	Containment Air	23.66	20.85	36.40		at 600F	<u> </u>
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYF	- 25	TEE - PIPE	1.5	0.281"	(FORG.) SA182 GR.F304		SA376 GR.TP304	Field	~600	2250	0	650	2485		Reactor Coolant	Containment Air		20.85	36.40		at 600F	<u> </u>
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYF	- 26	PIPE - TEE	1.5	0.281"	(FORG.) SA376 GR.TP304		(SMLS PIPE) SA182 GR.F304	Field	~600	2250	0	650	2485		Reactor Coolant	Containment Air	23.66	20.85	36.40		at 600F	H
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYF	- 27	3"X1.5" REDUCER	1.5	0.281"	(SMLS PIPE) SA182 GR.F304		(FORG.) Not Applicable		~600	2250	0	650	2485		Reactor Coolant	Containment Air	23.66	20.85	36.40		at 600F	l
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYF	- 28	3"X1.5" REDUCER - PIPE	1.5	0.281"	(FORG.) SA182 GR.F304		SA376 GR.TP304	Field	~600	2250	0	650	2485		Reactor Coolant	Containment Air		20.85	36.40		at 600F	H
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYF	- 29	PIPE - VALVE 1RC8042A	1.5	0.281"	(FORG.) SA376 GR.TP304		(SMLS PIPE) SA182 GR.F316	Field	~600	2250	0	650	2485		Reactor Coolant	Containment Air	23.66	20.85	36.40		at 600F LER 338 1991-011: weld on line between the "B"cold lea	H
	, , , , , , , , , , , , , , , , , , , ,						(SMLS PIPE)		(FORG.)														LP stop valve and the isolation valve for the 3/4 inch (3/8inch inside diameter) upper disc pressurization line -	1
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYF	- 30	GATE VALVE	1.5	0.281"	SA182 GR.F316		Not Applicable		~600	2250	0	650	2485		Reactor Coolant	Containment Air	23.66	24.60	36.40		at 600F fatigue failure	H
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RCS-LPBY	2- 31	VALVE 1RC8042A - PIPE	1.5	0.281"	(FORG.) SA182 GR F316		SA376 GR TP304	Field	~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-LPBY	2. 32		1.5	0.281"	(FORG.) SA376 GR TP304		(SMLS PIPE) SA182 GR E304	Field	~600	2250	0	650	2485		Reactor Coolant	Containment Air	23.66	24.60	36.40		at 600F	l
Reactor Coolant System (RCS)	Group 13 - Loop Bypacs (LPBVP)	PCS-I DBVD	0.22		1.5	0.281"	(SMLS PIPE)		(FORG.)	r ioid	.600	2250	0	650	2485		Reactor Coolant	Containment Air	23.66	20.85	36.40		at 600F	l
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBTP)	RCS-LFBT	2 24		1.5	0.201	(FORG.)		SA376 CB TD304	Field	~000	2250	0	650	2403		Reactor Coolant	Containment Air		20.85	36.40		at 600F	ł
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBTP)	RCS-LFBT	2 25		1.5	0.201	(FORG.)		(SMLS PIPE)	Field	~000	2250	0	650	2403		Reactor Coolant	Containment Air	23.66	20.85	36.40		at 600F	ł
Reactor Coolant System (RCS)	Crown 13 - Loop Bypass (LPBYP)	RGS-LPBY	35		1.5	0.281	(SMLS PIPE)		(FORG.)	Field	-000	2200	0	650	2480		Reactor Coolant	Containment Air	23.66	20.85	36.40		at 600F	
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	RUS-LPBYF	- 30	TEE - 1.5 A.75 REDUCER	1.5	0.201	(FORG.)		(FORG.)	rieid	~000	2200	0	050	2485		Reactor Coolant	Containment Air	23.66	20.85	36.40		at 600F	
Reactor Coolant System (RCS)	Group 13 - Loop Bypass (LPBYP)	KUS-LPBYF	- 3/	FULL SIZE ANGLE TEE	1.5	0.281"	5A182 GR.F304 (FORG.)		Not Applicable		~DUU	2200	0	Uca	2485		Reactor Coolant	Containment Air		20.85	36.40		at 600F	
Emergency Core Cooling Systems	Group 13 - Loop Bypass (LPBYP)	RCS-LPBYF	- 38	LOOP STOP VALVE WITH EACH HAVING A 8" NOZZLE FOR LOOP BYPASS			SA351 GR.CF8M (CASTING)		Not Applicable		~600	2250	υ	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) Grou	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	t- 1	RWST TANK - PIPE 1SI01T	24	0.375"	Not Available		SA358 GR.TP304 (WLD. PIPE)		100 a	ambient	0 GPM			25-14000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60	6	2100F		
Emergency Core Cooling Systems (ECCS) Gro	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	- 2	PIPE LONG SEAM	24	0.375*	SA358 GR.TP304		SA358 GR.TP304		100 a	ambient	0 GPM			25-14000 GPM	Borated Water (2000-2500 ppm	Aux Bldg Air	39	30	60	6	2100F		
Emergency Core Cooling Systems (ECCS) Grou	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	- 3	PIPE - PIPE	24	0.375"	SA358 GR.TP304		SA358 GR.TP304	Field	100 a	ambient	0 GPM			25-14000 GPM	Borated Water (2000-2500 ppm	Aux Bldg Air	39	30	60	6	8100F		
Emergency Core Cooling Systems (ECCS) Gro	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	- 4	RWST HEADER PIPE WITH	24	0.375*	SA358 GR.TP304		Not Applicable		100 a	ambient	0 GPM			25-14000 GPM	Borated Water (2000-2500 ppm	Aux Bldg Air		30	60	6	2100F	LER 389 1999-003: chloride induced ODSCC	
Emergency Core Cooling Systems (ECCS) Gro	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	t- 5	PIPE - ELBOW	24	0.375"	(WLD. PIPE) SA358 GR.TP304		SA403 GR.WP304	Field	100 a	ambient	0 GPM			25-14000 GPM	Borated Water (2000-2500 ppm	Aux Bldg Air	39	30	60	(8100F		
Emergency Core Cooling Systems (ECCS) Gro	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	t- 6	RWST HEADER ELBOW WITH	24	0.375"	(WLD. PIPE) SA358 GR.TP304		(FITTING) Not Applicable		100 a	ambient	0 GPM			25-14000 GPM	boric acid in demin water) Borated Water (2000-2500 ppm	Aux Bldg Air		30	60	6	8100F		
Emergency Core Cooling Systems (ECCS) Grou	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	t- 7	LONGITUDINAL SEAM ELBOW LONG SEAM	24	0.375"	(WLD. PIPE) SA403 GR.WP304		SA403 GR.WP304		100 a	ambient	0 GPM			25-14000 GPM	boric acid in demin water) Borated Water (2000-2500 ppm	Aux Bldg Air	39	30	60	6	2100F		
Emergency Core Cooling Systems (ECCS) Gro	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	- 8	ELBOW - PIPE	24	0.375"	(FITTING) SA403 GR.WP304		(FITTING) SA358 GR.TP304		100	ambient	0 GPM			25-14000 GPM	boric acid in demin water) Borated Water (2000-2500 ppm	Aux Bldg Air	39	30	60		≅100F		
Emergency Core Cooling Systems (ECCS) Grou	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	9	24" PIPE - 8" WEI DOLET	24	0.375*	(FITTING) SA358 GR TP304		(WLD. PIPE) SA403 GR WP304	Shop	100	amhient	0 GPM			25-14000 GPM	boric acid in demin water) Borated Water (2000-2500 ppm)	Aux Bldg Air	30	30	60		0100F		
Emergency Core Cooling Systems (ECCS) Gro	up 14 - PWST Header (PWSTHDP)	ECCS-RWSTHDR	- 10	8" WELDOLET IN 24" PIPE TO SL			(WLD. PIPE)		(FITTING)	p	100	ambiant	0 GPM			25-14000 GPM	boric acid in demin water) Borated Water (2000-2500 ppm)	Aux Bida Air		20	e0		8100E		FOR SI DUMPS ARE
Emergency core cooling systems (ECCS)	up 14 - RWST Header (RWSTHDR)	ECCO-RWGTHDR		PUMPS A&B	0	0.0001	(FITTING)			01	100	ambient				20-14000 GI W	boric acid in demin water)	Aux Didy Ali		00	00	•	81001		
Emergency Core Cooling Systems (ECCS) Gro	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	6-11	WELDOLET - PIPE	8	0.322	(FITTING)		(WLD. & SMLS PIPE)	Snop	100 8	ampient	0 GPM			25-14000 GPM	boric acid in demin water)	Aux Bidg Air	39 .	30	60	0	#100F		
Emergency Core Cooling Systems (ECCS) Gro	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	- 12	24" PIPE - 12" WELDOLET	24	0.375"	SA358 GR.TP304 (WLD. PIPE)		SA403 GR.WP304 (FITTING)	Shop	100 a	ambient	0 GPM			25-14000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39 :	30	60	6	₿100F		
Emergency Core Cooling Systems (ECCS) Grou	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	- 13	12" WELDOLET IN 24" PIPE TO RHR PUMP B	12		SA403 GR.WP304 (FITTING)		Not Applicable		100 a	ambient	0 GPM			25-14000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air		30	60	6	2100F		FOR RHR PUMP B
Emergency Core Cooling Systems (ECCS) Grou	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	- 14	PIPE - TEE	24	0.375"	SA358 GR.TP304 (WLD. PIPE)		SA403 GR.WP304 (FITTING)	Field	100 a	ambient	0 GPM			25-14000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60	٩	8100F		
Emergency Core Cooling Systems (ECCS) Grou	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	- 15	TEE LONG SEAM	24	0.375"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)		100 a	ambient	0 GPM			25-14000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60	6	2100F		
Emergency Core Cooling Systems (ECCS) Gro	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	- 16	24"X24"X14" REDUCED TEE WITH LONG SEEM	24	0.375"	SA403 GR.WP304 (FITTING)		Not Applicable		100 a	ambient	0 GPM			25-14000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air		30	60	6	2100F		TO CS PUMP A AND SIMILAR CONN TO CS PUMP B
Emergency Core Cooling Systems (ECCS) Grou	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	l- 17	TEE - ELBOW	24	0.375"	SA403 GR.WP304		SA403 GR.WP304	Shop	100 a	ambient	0 GPM			25-14000 GPM	Borated Water (2000-2500 ppm	Aux Bldg Air	39	30	60	6	8100F		
Emergency Core Cooling Systems (ECCS) Gro	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	- 18	WELDOLET - PIPE TO RHR PUMP	12	0.375*	SA403 GR.WP304		SA312 GR.TP304	Field	100	ambient	0 GPM			25-14000 GPM	Borated Water (2000-2500 ppm	Aux Bldg Air	39	30	60	6	2100F		TO RHR PUMP B
Emergency Core Cooling Systems (ECCS) Gro	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	t- 19	B PIPE - PIPE	12	0.375*	(FITTING) SA312 GR.TP304		(WLD. & SMLS PIPE) SA312 GR.TP304	Shop	100 a	ambient	0 GPM			25-14000 GPM	Borated Water (2000-2500 ppm	Aux Bldg Air	39	30	60	6	2100F		
Emergency Core Cooling Systems (ECCS) Gro	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	- 20	12" PIPE	12	0.375"	(WLD. & SMLS PIPE) SA312 GR.TP304		(WLD. & SMLS PIPE) Not Applicable		100 a	ambient	0 GPM			25-14000 GPM	boric acid in demin water) Borated Water (2000-2500 ppm	Aux Bldg Air		30	60		8100F		
Emergency Core Cooling Systems (ECCS) Grou	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	- 21	PIPE - ELBOW	12	0.375"	(WLD. & SMLS PIPE) SA312 GR.TP304		SA403 GR.WP304	Shop	100 a	ambient	0 GPM			25-14000 GPM	boric acid in demin water) Borated Water (2000-2500 ppm	Aux Bldg Air	39	30	60	6	2100F		
Emergency Core Cooling Systems (ECCS) Grou	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	- 22	12" FLBOW	12	0.375"	(WLD. & SMLS PIPE) SA403 GR WP304		(FITTING) Not Applicable		100	ambient	0 GPM			25-14000 GPM	boric acid in demin water) Borated Water (2000-2500 ppm)	Aux Bldg Air		30	60		2100F		
Emergency Core Cooling Systems (ECCS) Gro	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	- 23	FLBOW - PIPE	12	0.375"	(FITTING) SA403 GR WP304		SA312 GR TP304	Shop	100	ambient	0 GPM			25-14000 GPM	boric acid in demin water) Borated Water (2000-2500 ppm	Aux Bldg Air	30	30	60		0100F		
Emergency Core Cooling Systems (ECCS) Grou	up 14 - PWST Header (PWSTHDP)	ECCS-RWSTHDR	2.0	ELBOW - ELBOW	12	0.075	(FITTING)		(WLD. & SMLS PIPE)	Eiold	100	ambient	0 GPM			25-14000 GPM	boric acid in demin water) Borated Water (2000-2500 ppm	Aux Bida Air	20	20	60		8100F		
		ECCO-RWSTIDR	. 24		12	0.373	(FITTING)		(FITTING)	T IOIG	100	ambient	0.001			23-14000 GI M	boria acid in demin water)				00	•	8 1001		
Emergency Core Cooling Systems (ECCS) Gro	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	- 25	ELBOW - VALVE 1SI8812B	12	0.375"	(FITTING)		SA182 GR.F316 (FORG.)	Field	100 a	ambient	0 GPM			25-14000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bidg Air	39 .	30	60	¢	8100F		
Emergency Core Cooling Systems (ECCS) Gro	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	- 26	VALVE 1SI8812B	12	0.375*	SA182 GR.F316 (FORG.)		Not Applicable		100 a	ambient	0 GPM			25-14000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air		34.95	69.9	6	2100F		
Emergency Core Cooling Systems (ECCS) Gro	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	- 27	VLV 1SI8812B - VLV 1SI8958B	12	0.375"	SA182 GR.F316 (FORG.)		SA182 GR.F316 (FORG.)	Field	100 a	ambient	0 GPM			25-14000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	45.5	34.95	69.9	٩	8100F		
Emergency Core Cooling Systems (ECCS) Grou	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	- 28	VALVE 1SI8958B	12	0.375"	SA182 GR.F316 (FORG.)		Not Applicable		100 a	ambient	0 GPM			25-14000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air		34.95	69.9	6	2100F		
Emergency Core Cooling Systems (ECCS) Gro	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	- 29	TEE - PIPE TO CS PUMP A	14	0.375*	SA403 GR.WP304 (FITTING)		SA358 GR.TP304 (WLD. PIPE)	Field	100 a	ambient	0 GPM			25-14000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60	6	2100F		
Emergency Core Cooling Systems (ECCS) Gro	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	t- 30	PIPE LONG SEAM	14	0.375"	SA358 GR.TP304 (WLD. PIPE)		SA358 GR.TP304 (WLD_PIPE)		100 a	ambient	0 GPM			25-14000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60	6	2100F		
Emergency Core Cooling Systems (ECCS) Grou	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	8- 31	PIPE - PIPE	14	0.375"	SA358 GR.TP304		SA358 GR.TP304		100 a	ambient	0 GPM			25-14000 GPM	Borated Water (2000-2500 ppm	Aux Bldg Air	39	30	60	6	8100F		
Emergency Core Cooling Systems (ECCS) Grou	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	32	14" PIPE	14	0.375*	SA358 GR.TP304		Not Applicable		100 a	ambient	0 GPM			25-14000 GPM	Borated Water (2000-2500 ppm	Aux Bldg Air		30	60	6	2100F		
Emergency Core Cooling Systems (ECCS) Gro	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	- 33	PIPE - ELBOW	14	0.375"	(WLD. PIPE) SA358 GR.TP304		SA403 GR.WP304	Shop	100 a	ambient	0 GPM			25-14000 GPM	Borated Water (2000-2500 ppm	Aux Bldg Air	39	30	60	(8100F		
Emergency Core Cooling Systems (ECCS) Gro	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	- 34	14" ELBOW	14	0.375*	(WLD. PIPE) SA403 GR.WP304		(FITTING) Not Applicable		100 a	ambient	0 GPM			25-14000 GPM	boric acid in demin water) Borated Water (2000-2500 ppm	Aux Bldg Air		30	60	6	2100F		
Emergency Core Cooling Systems (ECCS) Gro	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	- 35	ELBOW LONG SEAM	14	0.375"	(FITTING) SA403 GR.WP304		SA403 GR.WP304		100 a	ambient	0 GPM			25-14000 GPM	boric acid in demin water) Borated Water (2000-2500 ppm	Aux Bldg Air	39	30	60		8100F		
Emergency Core Cooling Systems (ECCS) Grou	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	- 36	ELBOW - PIPE	14	0.375*	(FITTING) SA403 GR.WP304		(FITTING) SA358 GR.TP304	Field	100 a	ambient	0 GPM			25-14000 GPM	boric acid in demin water) Borated Water (2000-2500 ppm	Aux Bldg Air	39	30	60	6	2100F		
Emergency Core Cooling Systems (ECCS) Gro	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	- 37	PIPE - VALVE 1CS001B	14	0.375"	(FITTING) SA358 GR.TP304		(WLD. PIPE) SA351 GR.CF8M	Field	100 a	ambient	0 GPM			25-14000 GPM	boric acid in demin water) Borated Water (2000-2500 ppm	Aux Bldg Air	39 3	30	60	6	2100F		
Emergency Core Cooling Systems (ECCS) Grou	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	. 38	TEE - PIPE	24	0.375*	(WLD. PIPE) SA403 GR WP304		(CASTING) SA358 GR TP304	Shop	100	amhient	0 GPM			25-14000 GPM	boric acid in demin water) Borated Water (2000-2500 ppm)	Aux Bldg Air	30	30	60		0100F		
Emergency Core Cooling Systems (ECCS) Gro	up 14 - RWST Header (RWSTHDR)	ECCS RWSTHDR	20		24	0.375	(FITTING)		(WLD. PIPE)	Chop	100	ambient	0.001			25-14000 CDM	borated Water (2000-2500 ppm boric acid in demin water)	Aux Didg Air	20	20	60		8100		
Emergency Core Cooling Systems (ECCS) Gro	up 14 - RWST Header (RWSTHDR)	ECC3-RWSTHDR	- 39	24 PIPE - 12 WELDOLET	24	0.375	(WLD. PIPE)		(FITTING)	Ohee	100					25-14000 GPM	borated Water (2000-2500 ppm boric acid in demin water)	Aux Blug All	59	30	00	•	8 100F		
Emergency Core Cooling Systems (ECCS) Gro	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	- 40	24 PIPE - 8 WELDOLET	24	0.375	(WLD. PIPE)		(FITTING)	Snop	100 8	ampient	0 GPM			25-14000 GPM	boric acid in demin water)	Aux Bidg Air	39 .	30	60	0	#100F		TO CHARGING PUMPS A&B
Emergency Core Cooling Systems (ECCS) Gro	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	t- 41	CAP - PIPE	24	0.375"	SA403 GR.WP304 (FITTING)		SA358 GR.TP304 (WLD. PIPE)	Shop	100 a	ambient	0 GPM			25-14000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39 :	30	60	6	₿100F		
Emergency Core Cooling Systems (ECCS) Gro	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	42	8" WELDOLET - 24" PIPE	24	0.375*	SA403 GR.WP304 (FITTING)		SA358 GR.TP304 (WLD. PIPE)	Shop	100 a	ambient	0 GPM			25-14000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39 3	30	60	6	2100F		TIE TO RHR PUMP DISCHARGE
Emergency Core Cooling Systems (ECCS) Gro	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	- 43	TEE - PIPE TO CS PUMP B	14	0.375"	SA403 GR.WP304 (FITTING)		SA358 GR.TP304 (WLD. PIPE)	Field	100 a	ambient	0 GPM			25-14000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39 :	30	60	٩	8100F		TO CONT. SPRAY PUMP B
Emergency Core Cooling Systems (ECCS) Gro	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	- 44	ELBOW - VALVE 1CS001A	14	0.375"	SA403 GR.WP304 (FITTING)		SA351 GR.CF8M (CASTING)	Field	100 a	ambient	0 GPM			25-14000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60	6	2100F		
Emergency Core Cooling Systems (ECCS) Gro	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	45	WELDOLET - PIPE TO RHR PUMP	12	0.375"	SA403 GR.WP304 (FITTING)		SA312 GR.TP304 (WLD & SMLS PIPE)	Field	100 a	ambient	0 GPM			25-14000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60	6	2100F		TO RHR PUMP A
Emergency Core Cooling Systems (ECCS) Grou	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	46	ELBOW - VALVE 1SI8812A	12	0.375"	SA403 GR.WP304 (FITTING)		SA182 GR.F316 (EORG.)	Field	100 a	ambient	0 GPM			25-14000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39 3	30	60	6	2100F		
Emergency Core Cooling Systems (ECCS) Grou	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	47	VLV 1SI8812A - VLV 1SI8958A	12	0.375"	SA182 GR.F316		SA182 GR.F316	Field	100 a	ambient	0 GPM			25-14000 GPM	Borated Water (2000-2500 ppm	Aux Bldg Air	45.5	34.95	69.9	6	₿100F		
Emergency Core Cooling Systems (ECCS) Gro	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	48	VALVE 1RH8735 - ELBOW	8	0.322"	SA182 GR.F316		SA403 GR.WP304	Field	100 a	ambient	0 GPM			25-14000 GPM	Borated Water (2000-2500 ppm	Aux Bldg Air	39	30	60	6	2100F		CONTINUE ON 1RH-07
Emergency Core Cooling Systems (ECCS) Gro	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	49	ELBOW - ELBOW	8	0.322"	(FORG.) SA403 GR.WP304		(FITTING) SA403 GR.WP304	Field	100 a	ambient	0 GPM			25-14000 GPM	Borated Water (2000-2500 ppm	Aux Bldg Air	39	30	60	6	8100F		
Emergency Core Cooling Systems (ECCS) Gro	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	- 50	8" ELBOW	8	0.322"	(FITTING) SA403 GR.WP304		(FITTING) Not Applicable		100 a	ambient	0 GPM			25-14000 GPM	boric acid in demin water) Borated Water (2000-2500 ppm	Aux Bldg Air		30	60	6	8100F		
Emergency Core Cooling Systems (ECCS) Grou	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	8- 51	ELBOW - PIPE	8	0.322*	(FITTING) SA403 GR.WP304		SA312 GR.TP304	Field	100 a	ambient	0 GPM			25-14000 GPM	boric acid in demin water) Borated Water (2000-2500 ppm	Aux Bldg Air	39	30	60	6	2100F		
Emergency Core Cooling Systems (ECCS) Grou	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	- 52	PIPE - ELBOW	8	0.322"	(FITTING) SA312 GR.TP304		(WLD. & SMLS PIPE) SA403 GR.WP304	Field	100	ambient	0 GPM			25-14000 GPM	boric acid in demin water) Borated Water (2000-2500 nnm	- Aux Blda Air	39	30	60	6	2100F		
Emergency Core Cooling Systems (ECCS) Cro	up 14 - RWST Header (RWSTHDP)	ECCS-RWSTHDP	- 53	PIPE - PIPE	8	0.322*	(WLD. & SMLS PIPE) SA312 GR TP304		(FITTING) SA312 GR TP304	Field	100	ambient	0 GPM			25-14000 GPM	boric acid in demin water) Borated Water (2000-2500 ppm	Aux Bldg Air	39	30	60		2100F		
Emergency Core Cooling Systems (ECCS) GIU	up 14 - RWST Header (DWETLIDE)	ECCO.DWOTUDO	54	8" PIPE	8	0.322*	(WLD. & SMLS PIPE)		(WLD. & SMLS PIPE)		100	ambient	0 GPM			25-14000 GDM	boric acid in demin water) Borated Water (2000-2500 ppm)						0100F		
Emergency Core Cooling Systems (ECCS) Gro		ECCE DWOTUSS			2	0.322	(WLD. & SMLS PIPE)			Ch	100	ambient	0.004			25-14000 OPM	boric acid in demin water)		20	20	60		B 100E		
Emergency Core Cooling Systems (ECCS) Grou	up 14 - KWST Header (KWSTHDR)	EUCS-RWSTHDR	- 55	DISCHARGE TIE	ð	0.322"	(WLD. & SMLS PIPE)		(FITTING)	Snop	100	ambient	U GPM			23-14000 GPM	borated water (2000-2500 ppm boric acid in demin water)	Aux Bidg Air	3 9	au	00	6	s iUUt		ILE TO KHK PUMP DISCHARGE
Emergency Core Cooling Systems (ECCS) Grou	up 14 - RWST Header (RWSTHDR)	ECCS-RWSTHDR	t- 56	RWST			NOT AVAILABLE		Not Applicable		100 á	ambient	0 GPM			25-14000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air						LER 528 1987-018: socket weld on the upstream side of the isolation valve for the flanged refueling water level indication cracked due to lack of fusion	RWST MADE WITH MANY PLATES WELDED TOGETHER

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Part Size in Thickness in A A 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-	- 1	PIPE - TEE	8 0.322" SA312 GR.TP304 & SMLS PIPE)	(WLD.	SA403 GR.WP304 (FITTING)	Shop	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin	Aux Bldg Air	39	30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPS)	ECCS-CVPMPS	- 2	TEE - 8"X4" REDUCER	8 0.322" SA403 GR.WP30- (FITTING)		SA403 GR.WP304 (FITTING)	Shop	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin	Aux Bldg Air	39	30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPS)	ECCS-CVPMPS-	- 3	8" ST TEE	8 0.322" SA403 GR.WP30- (FITTING)		Not Applicable		200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin	Aux Bldg Air		30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPS)	ECCS-CVPMPS-	- 4	8"X4" REDUCER	8 0.322* SA403 GR.WP30 (FITTING)		Not Applicable		200	2250	0 GPM	300	2485	150-550 GPM	water) Borated Water (2000-2500 ppm boric acid in demin	Aux Bldg Air		30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPS)	ECCS-CVPMPS	- 5	TEE - PIPE	8 0.322" SA403 GR.WP30 (FITTING)		SA312 GR.TP304 (WLD. & SMLS PIPE)	Shop	200	2250	0 GPM	300	2485	150-550 GPM	water) Borated Water (2000-2500 ppm boric acid in demin	Aux Bldg Air	39	30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPS)	ECCS-CVPMPS	- 6	8" PIPE	8 0.322" SA312 GR.TP304 & SMLS PIPE)	(WLD.	Not Applicable		200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air		30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPS)	ECCS-CVPMPS-	- 7	PIPE - ELBOW	8 0.322" SA312 GR.TP304 & SMLS PIPE)	(WLD.	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-	- 8	8" ELBOW	8 0.322* SA403 GR.WP30- (FITTING)		Not Applicable		200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air		30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPS)	ECCS-CVPMPS-	9	ELBOW - ELBOW	8 0.322* SA403 GR.WP30- (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)	Aux Bldg Air	39	30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPS)	ECCS-CVPMPS	- 10	ELBOW - PIPE	8 0.322* SA403 GR.WP30 (FITTING)		SA312 GR.TP304 (WLD. & SMLS PIPE)	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	- 11	PIPE - PIPE	8 0.322" SA312 GR.TP304 & SMLS PIPE)	(WLD.	SA312 GR.TP304 (WLD. & SMLS PIPE)	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-	12	TEE - 8"X6" REDUCER	8 0.322* SA403 GR.WP30- (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)	Aux Bldg Air	39	30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPS)	ECCS-CVPMPS	- 13	8"X6" REDUCER	8 0.322* SA403 GR.WP30- (FITTING)		Not Applicable		200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin	Aux Bldg Air		30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPS)	ECCS-CVPMPS	- 14	WELDOLET - PIPE	8 0.322* SA403 GR.WP30- (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	Aux Bldg Air	39	30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPS)	ECCS-CVPMPS	- 15	PIPE - VALVE 1CV112E	8 0.322" SA312 GR.TP304 & SMLS PIPE)	(WLD.	SA182 GR.F316 (FORG.)	Field	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin	Aux Bldg Air	39	30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPS)	ECCS-CVPMPS	- 16	VALVE 1CV112E	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	Aux Bldg Air		30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPS)	ECCS-CVPMPS	- 17	VALVE 1CV112E - TEE	8 0.322* SA182 GR.F316 (FORG.)		SA403 GR.WP304 (FITTING)	Field	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin	Aux Bldg Air	39	30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPS)	ECCS-CVPMPS	- 18	TEE - VALVE 1CV8546	8 0.322* SA403 GR.WP30- (FITTING)		SA182 GR.F316 (FORG.)	Field	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin	Aux Bldg Air	39	30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPS)	ECCS-CVPMPS	- 19	VALVE 1CV8546	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	Aux Bldg Air		34.95	69.9		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPS)	ECCS-CVPMPS	- 20	VALVE 1CV8546 - 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	Aux Bldg Air	39	30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPS)	ECCS-CVPMPS	21	TEE - VALVE 1CV112D	8 0.322* SA403 GR.WP30- (FITTING)		SA182 GR.F316 (FORG.)	Field	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin	Aux Bldg Air	39	30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPS)	ECCS-CVPMPS	- 22	VALVE 1CV112D	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	Aux Bldg Air		34.95	69.9		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPS)	ECCS-CVPMPS	- 23	VALVE 1CV112D - 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	Aux Bldg Air	39	30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPS)	ECCS-CVPMPS	- 24	TEE - PIPE	6 0.280" SA403 GR.WP30- (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	Aux Bldg Air	39	30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPS)	ECCS-CVPMPS	- 25	PIPE - PIPE	6 0.280" SA312 GR.TP304 & SMLS PIPE)	(WLD.	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	Aux Bldg Air	39	30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPS)	ECCS-CVPMPS	- 26	PIPE - VALVE 1CV8471A	6 0.280" SA312 GR.TP304 & SMLS PIPE)	(WLD.	SA182 GR.F316 (FORG.)	Field	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin	Aux Bldg Air	39	30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPS)	ECCS-CVPMPS	- 27	VALVE 1CV8471A	6 0.280* SA182 GR.F316 (FORG.)		Not Applicable		200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin	Aux Bldg Air		34.95	69.9		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPS)	ECCS-CVPMPS	- 28	VALVE 1CV8471A - ELBOW	6 0.280* SA182 GR.F316 (FORG.)		SA403 GR.WP304 (FITTING)	Field	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin	Aux Bldg Air	39	30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPS)	ECCS-CVPMPS	- 29	6° ELBOW	6 0.280" SA403 GR.WP30 (FITTING)		Not Applicable		200	2250	0 GPM	300	2485	150-550 GPM	water) Borated Water (2000-2500 ppm boric acid in demin	Aux Bldg Air		30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPS)	ECCS-CVPMPS	- 30	ELBOW - PIPE	6 0.280* SA403 GR.WP30- (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	Aux Bldg Air	39	30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPS)	ECCS-CVPMPS	- 31	6° PIPE	6 0.280" SA312 GR.TP304 & SMLS PIPE)	(WLD.	Not Applicable		200	2250	0 GPM	300	2485	150-550 GPM	water) Borated Water (2000-2500 ppm boric acid in demin	Aux Bldg Air		30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPS)	ECCS-CVPMPS	- 32	PIPE - ELBOW	6 0.280" SA312 GR.TP304 & SMLS PIPE)	(WLD.	SA403 GR.WP304 (FITTING)	Field	200	2250	0 GPM	300	2485	150-550 GPM	water) Borated Water (2000-2500 ppm boric acid in demin	Aux Bldg Air	39	30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPS)	ECCS-CVPMPS	- 33	ELBOW - FLANGE	6 0.280" SA403 GR.WP30 (FITTING)		SA182 GR.F304 (FORG.)	Shop	200	2250	0 GPM	300	2485	150-550 GPM	water) Borated Water (2000-2500 ppm boric acid in demin	Aux Bldg Air	39	30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPS)	ECCS-CVPMPS-	- 34	6° FLANGE	6 0.280" SA182 GR.F304 (FORG.)		Not Applicable		200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin	Aux Bldg Air		30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPS)	ECCS-CVPMPS-	- 35	FLANGE - PIPE	6 0.280° SA182 GR.F304 (FORG.)		SA312 GR.TP304 (WLD. & SMLS PIPE)	Shop	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin	Aux Bldg Air	39	30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPS)	ECCS-CVPMPS	- 36	PIPE - FLANGE	6 0.280° SA312 GR.TP304 & SMLS PIPE)	(WLD.	SA182 GR.F304 (FORG.)	Shop	200	2250	0 GPM	300	2485	150-550 GPM	water) Borated Water (2000-2500 ppm boric acid in demin	Aux Bldg Air	39	30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPS)	ECCS-CVPMPS	- 37	FLANGE - PUMP 1CV01PA CASING	6 0.280" SA182 GR.F304 (FORG.)		SA182 GR.F304 (FORG.)		200	2250	0 GPM	300	2485	150-550 GPM	water) Borated Water (2000-2500 ppm boric acid in demin	Aux Bldg Air	39	30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPS)	ECCS-CVPMPS-	- 38	8"X6" REDUCER - PIPE	6 0.280* SA403 GR.WP30 (FITTING)		SA312 GR.TP304 (WLD. & SMLS PIPE)	Field	200	2250	0 GPM	300	2485	150-550 GPM	water) Borated Water (2000-2500 ppm boric acid in demin	Aux Bldg Air	39	30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPS)	ECCS-CVPMPS	- 39	ELBOW - VALVE 1CV8471B	6 0.280* SA403 GR.WP30 (FITTING)		SA182 GR.F316 (FORG.)	Field	200	2250	0 GPM	300	2485	150-550 GPM	water) Borated Water (2000-2500 ppm boric acid in demin	Aux Bldg Air	39	30	60		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPS)	ECCS-CVPMPS	- 40	VALVE 1CV8471B	6 0.280* SA182 GR.F316 (FORG.)		Not Applicable		200	2250	0 GPM	300	2485	150-550 GPM	water) Borated Water (2000-2500 ppm boric acid in demin	Aux Bldg Air		34.95	69.9		@200F		
Emergency Core Cooling Systems (ECCS)	Group 15 - RWST Header to CVCS Pumps (CVPMPS)	ECCS-CVPMPS	- 41	VALVE 1CV8471B - PIPE	6 0.280" SA182 GR.F316 (FORG.)		SA312 GR.TP304 (WLD. & SMLS PIPE)	Field	200	2250	0 GPM	300	2485	150-550 GPM	water) Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30	60		@200F		

System Identification	Group Identification	Part Par Identification Numb	t Part Der Description	Part Size ir inches	Part Thickness i inches	n A	Material W	Material B	Weld Type	Operating Temperature in °F	Operating n Pressure in psi	Operating Flow	Design Temperatu °F	n Design Ire in Pressure in psi	n 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 1CVO1PB FLANGE	E 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	G 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 Part Number Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material B	Weld Operating Type 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-	1 PIPE - PIPE	8	0.322"	SA312 GR.TP304 (WLD. & SMLS PIPE)		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		FROM RWST HEADER
Emergency Core Cooling Systems (ECCS)	Group 16 - RWST Header to SI Pumps (SIPMPS)	ECCS-SIPMPS-	2 8* PIPE	8	0.322"	SA312 GR.TP304 (WLD. & SMLS PIPE)		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		30	60	@ambient		
Emergency Core Cooling Systems (ECCS)	Group 16 - RWST Header to SI Pumps (SIPMPS)	ECCS-SIPMPS-	3 PIPE - ELBOW	8	0.322"	SA312 GR.TP304 (WLD. & SMLS PIPE)		SA403 GR.WP304 (FITTING)	Shop 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-	4 8" ELBOW	8	0.322"	SA403 GR.WP304 (FITTING)		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		30	60	@ambient		
Emergency Core Cooling Systems (ECCS)	Group 16 - RWST Header to SI Pumps (SIPMPS)	ECCS-SIPMPS-	5 ELBOW - PIPE	8	0.322*	SA403 GR.WP304 (FITTING)		SA312 GR.TP304 (WLD. & SMLS PIPE)	Shop 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-	6 PIPE - VALVE 1SI8806	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-	7 VALVE 1S18806	8	0.322"	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-	8 VALVE 1SI8806 - VALVE 1SI8926	8	0.322"	SA182 GR.F316 (FORG.)		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-	9 VALVE 1S18926	8	0.322"	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-	10 VALVE 1SI8926 - PIPE	8	0.322"	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-	11 PIPE - TEE	8	0.322"	SA312 GR.TP304 (WLD. & SMLS PIPE)		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-	12 8"X8"X6" TEE	8	0.322"	SA403 GR.WP304 (FITTING)		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		30	60	@ambient		
Emergency Core Cooling Systems (ECCS)	Group 16 - RWST Header to SI Pumps (SIPMPS)	ECCS-SIPMPS-	13 TEE - 8"X6" REDUCER	8	0.322"	SA403 GR.WP304 (FITTING)		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-	14 8"X6" REDUCER	6	0.280"	SA403 GR.WP304 (FITTING)		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		30	60	@ambient		
Emergency Core Cooling Systems (ECCS)	Group 16 - RWST Header to SI Pumps (SIPMPS)	ECCS-SIPMPS-	15 8"X6" REDUCER - PIPE	6	0.280°	SA403 GR.WP304 (FITTING)		SA312 GR.TP304 (WLD. & SMLS PIPE)	Shop 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-	16 6" PIPE	6	0.280"	SA312 GR.TP304 (WLD. & SMLS PIPE)		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		30	60	@ambient		
Emergency Core Cooling Systems (ECCS)	Group 16 - RWST Header to SI Pumps (SIPMPS)	ECCS-SIPMPS-	17 PIPE - ELBOW	6	0.280"	SA312 GR.TP304 (WLD. & SMLS PIPE)		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-	18 6* ELBOW	6	0.280"	SA403 GR.WP304 (FITTING)		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		30	60	@ambient		
Emergency Core Cooling Systems (ECCS)	Group 16 - RWST Header to SI Pumps (SIPMPS)	ECCS-SIPMPS-	19 ELBOW - PIPE	6	0.280"	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-	20 PIPE - PIPE	6	0.280°	SA312 GR.TP304 (WLD. & SMLS PIPE)		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-	21 ELBOW - VALVE 1SI8923B	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-	22 VALVE 1S18923B	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-	23 VALVE 1SI8923B - 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-	24 6" ST TEE	6	0.280"	SA403 GR.WP304 (FITTING)		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		30	60	@ambient		
Emergency Core Cooling Systems (ECCS)	Group 16 - RWST Header to SI Pumps (SIPMPS)	ECCS-SIPMPS-	25 TEE - PIPE	6	0.280"	SA403 GR.WP304 (FITTING)		SA312 GR.TP304 (WLD. & SMLS PIPE)	Shop 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-	26 PIPE - PIPE	6	0.280"	SA312 GR.TP304 (WLD. & SMLS PIPE)		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-	27 PIPE - FLANGE	6	0.280"	SA312 GR.TP304 (WLD. & SMLS PIPE)		SA182 GR.F304 (FORG.)	Shop 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-	28 6" FLANGE	6	0.280"	SA182 GR.F304 (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		30	60	@ambient		
Emergency Core Cooling Systems (ECCS)	Group 16 - RWST Header to SI Pumps (SIPMPS)	ECCS-SIPMPS-	29 FLANGE - PIPE	6	0.280"	SA182 GR.F304 (FORG.)		SA312 GR.TP304 (WLD. & SMLS PIPE)	Shop 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-	30 ELBOW - 6"X4" REDUCER	6	0.280"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)	Shop 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		SI PUMP 1B SUCTION NOZZLE
Emergency Core Cooling Systems (ECCS)	Group 16 - RWST Header to SI Pumps (SIPMPS)	ECCS-SIPMPS-	31 VALVE 1SI8804B - 8"X6" REDUCER	8	0.322"	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-	32 8"X6" REDUCER - TEE	6	0.280°	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)	Shop 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-	33 PIPE - VALVE 1SI8923A	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-	34 VALVE 1S18923A	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-	35 VALVE 1SI8923A - 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-	36 TEE - FLANGE	6	0.280"	SA403 GR.WP304 (FITTING)		SA182 GR.F304 (FORG.)	Shop 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-	37 FLANGE - ELBOW	6	0.280"	SA182 GR.F304 (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-	38 ELBOW - 6"X4" REDUCER	6	0.280"	SA182 GR.F304 (FORG.)		SA403 GR.WP304 (FITTING)	Shop 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-	39 PIPE - VALVE 1SI8807B	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-	40 VALVE 1S18807B	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		

System Identification	Group Identification	Part Identification	Part Numbe	Part Description	Part Size in inches	Part Thickness in inches	Material Material A W	Material B	Weld Type	Operating Temperature in °I	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	S- 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	S- 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	S- 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	S- 44	VALVE 1S18807A	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	S- 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	S- 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	S- 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	S- 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	n Design Flow	Inside Outside Environment Environme	Residual nt Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	- 1	ELBOW - PUMP 1RH01PA	14	0.438"	SA403 GR.WP304 (FITTING)		SA182 GR.F304 (FORG.)		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 Aux Bldg Air ppm boric acid in demin water)	39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	- 2	ELBOW LONG SEAM	14	0.438"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)		100-350	15-400	0 GPM 4	400	600	3000-5000 GPM	Borated Water (2000-2500 Aux Bldg Air ppm boric acid in demin water)	39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	- 3	ELBOW LONG SEAM	14	0.438"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 Aux Bldg Air ppm boric acid in demin water)	39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	- 4	ELBOW LONG SEAM	14	0.438"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 Aux Bldg Air ppm boric acid in demin water)	39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	- 5	ELBOW LONG SEAM	14	0.438"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 Aux Bldg Air ppm boric acid in demin water)	39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS-	- 6	14" ELBOW	14	0.438"	SA403 GR.WP304 (FITTING)		Not Applicable		100-350	15-400	0 GPM 4	400	600	3000-5000 GPM	Borated Water (2000-2500 Aux Bldg Air ppm boric acid in demin water)		30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	- 7	16"X14" REDUCER - ELBOW	14	0.438"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)		100-350	15-400	0 GPM 4	400	600	3000-5000 GPM	Borated Water (2000-2500 Aux Bldg Air ppm boric acid in demin water)	39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS-	- 8	REDUCER LONG SEAM	14	0.438"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 Aux Bldg Air ppm boric acid in demin water)	39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	9	REDUCER LONG SEAM	16	0.500*	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 Aux Bldg Air ppm boric acid in demin water)	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	- 10	16"X14" REDUCER	16	0.500*	SA403 GR.WP304 (FITTING)		Not Applicable		100-350	15-400	0 GPM 4	400	600	3000-5000 GPM	Borated Water (2000-2500 Aux Bldg Air ppm boric acid in demin water)		30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	- 11	FLANGE - 16"X14" REDUCER	16	0.500"	SA182 GR.F304 (FORG.)		SA403 GR.WP304 (FITTING)	Shop	100-350	15-400	0 GPM 4	400	600	3000-5000 GPM	Borated Water (2000-2500 Aux Bldg Air ppm boric acid in demin water)	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS-	- 12	PIPE - FLANGE	16	0.500"	SA358 GR.TP304 (WLD. PIPE)		SA182 GR.F304 (FORG.)	Field	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 Aux Bldg Air ppm boric acid in demin water)	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	- 13	PIPE LONG SEAM	16	0.500*	SA358 GR.TP304 (WLD. PIPE)		SA358 GR.TP304 (WLD. PIPE)		100-350	15-400	0 GPM 4	400	600	3000-5000 GPM	Borated Water (2000-2500 Aux Bldg Air ppm boric acid in demin water)	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	- 14	PIPE 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 Aux Bldg Air ppm boric acid in demin water)	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	- 15	16" FLANGE	16	0.500*	SA358 GR.TP304 (WLD. PIPE)		Not Applicable		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 Aux Bldg Air ppm boric acid in demin water)		30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	- 16	FLANGE - PIPE	16	0.500*	SA182 GR.F304 (FORG.)		SA358 GR.TP304 (WLD. PIPE)	Shop	100-350	15-400	0 GPM 4	400	600	3000-5000 GPM	Borated Water (2000-2500 Aux Bldg Air ppm boric acid in demin water)	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	17	ELBOW - PIPE	16	0.500"	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 Aux Bldg Air ppm boric acid in demin water)	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	- 18	16" ELBOW	16	0.500"	SA403 GR.WP304 (FITTING)		Not Applicable		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 Aux Bldg Air ppm boric acid in demin water)		30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	- 19	PIPE - ELBOW	16	0.500"	SA358 GR.TP304 (WLD. PIPE)		SA403 GR.WP304 (FITTING)	Field	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 Aux Bldg Air ppm boric acid in demin water)	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	- 20	16" PIPE	16	0.500"	SA358 GR.TP304 (WLD. PIPE)		Not Applicable		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 Aux Bldg Air ppm boric acid in demin water)		30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS-	21	PIPE - PIPE	16	0.500"	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 Aux Bldg Air ppm boric acid in demin water)	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	- 22	TEE - PIPE	16	0.500"	SA403 GR.WP304 (FITTING)		SA358 GR.TP304 (WLD. PIPE)	Shop	100-350	15-400	0 GPM 4	400	600	3000-5000 GPM	Borated Water (2000-2500 Aux Bldg Air ppm boric acid in demin water)	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	- 23	TEE LONG SEAM	16	0.500"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 Aux Bldg Air ppm boric acid in demin water)	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	- 24	TEE LONG SEAM	16	0.500*	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)		100-350	15-400	0 GPM 4	400	600	3000-5000 GPM	Borated Water (2000-2500 Aux Bldg Air ppm boric acid in demin water)	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	- 25	16"X16"X12" TEE	16	0.500*	SA403 GR.WP304 (FITTING)		Not Applicable		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 Aux Bldg Air ppm boric acid in demin water)		30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS-	- 26	ELBOW - TEE	16	0.500"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)	Shop	100-350	15-400	0 GPM 4	400	600	3000-5000 GPM	Borated Water (2000-2500 Aux Bldg Air ppm boric acid in demin water)	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS-	- 27	ELBOW LONG SEAM	16	0.500"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)		100-350	15-400	0 GPM 4	400	600	3000-5000 GPM	Borated Water (2000-2500 Aux Bldg Air ppm boric acid in demin water)	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	- 28	ELBOW LONG SEAM	16	0.500"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 Aux Bldg Air ppm boric acid in demin water)	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS-	- 29	ELBOW LONG SEAM	16	0.500"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)		100-350	15-400	0 GPM 4	400	600	3000-5000 GPM	Borated Water (2000-2500 Aux Bldg Air ppm boric acid in demin water)	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	- 30	ELBOW LONG SEAM	16	0.500*	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 Aux Bldg Air ppm boric acid in demin water)	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS-	- 31	TEE - ELBOW	16	0.500"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)	Field	100-350	15-400	0 GPM 4	400	600	3000-5000 GPM	Borated Water (2000-2500 Aux Bldg Air ppm boric acid in demin water)	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS-	- 32	TEE LONG SEAM	12	0.375"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)		100-350	15-400	0 GPM 4	400	600	3000-5000 GPM	Borated Water (2000-2500 Aux Bldg Air ppm boric acid in demin water)	39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	- 33	TEE - TEE	12	0.375"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)	Field	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 Aux Bldg Air ppm boric acid in demin water)	39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	- 34	TEE LONG SEAM	12	0.375"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 Aux Bldg Air ppm boric acid in demin water)	39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	- 35	12" ST TEE	12	0.375*	SA403 GR.WP304 (FITTING)		Not Applicable		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 Aux Bldg Air ppm boric acid in demin water)		30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	- 36	TEE LONG SEAM	12	0.375"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 Aux Bldg Air ppm boric acid in demin water)	39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	- 37	VALVE 1SI8958A - TEE	12	0.375"	SA182 GR.F316 (FORG.)		SA403 GR.WP304 (FITTING)	Field	100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 Aux Bldg Air ppm boric acid in demin water)	39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	- 38	TEE LONG SEAM	12	0.375*	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 Aux Bldg Air ppm boric acid in demin water)	39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	- 39	ELBOW - TEE	12	0.375"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)	Shop	100-350	15-400	0 GPM 4	400	600	3000-5000 GPM	Borated Water (2000-2500 Aux Bldg Air ppm boric acid in demin water)	39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	- 40	ELBOW LONG SEAM	12	0.375"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)		100-350	15-400	0 GPM 4	400	600	3000-5000 GPM	Borated Water (2000-2500 Aux Bldg Air ppm boric acid in demin water)	39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS	- 41	ELBOW LONG SEAM	12	0.375*	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)		100-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 Aux Bldg Air ppm boric acid in demin water)	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 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 4	00	600	3000-5000 GPM	Borated Water (2000-2500 Au ppm boric acid in demin water)	ux Bldg Air	39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	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 4	00	600	3000-5000 GPM	Borated Water (2000-2500 Au ppm boric acid in demin water)	ux Bldg Air		30	60		@100F		
Emergency Core Cooling Systems (ECCS)	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 4	00	600	3000-5000 GPM	Borated Water (2000-2500 Au ppm boric acid in demin water)	ux Bldg Air	39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	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	Shop	100-350	15-400	0 GPM 4	00	600	3000-5000 GPM	Borated Water (2000-2500 Au ppm boric acid in demin water)	ux Bldg Air	39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	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 4	00	600	3000-5000 GPM	Borated Water (2000-2500 Au ppm boric acid in demin water)	ux Bldg Air		30	60		@100F		
Emergency Core Cooling Systems (ECCS)	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	Field	100-350	15-400	0 GPM 4	00	600	3000-5000 GPM	Borated Water (2000-2500 Au ppm boric acid in demin water)	ux Bldg Air	39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	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 4	00	600	3000-5000 GPM	Borated Water (2000-2500 Co ppm boric acid in demin water)	ontainment Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	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 4	00	600	3000-5000 GPM	Borated Water (2000-2500 Co ppm boric acid in demin water)	ontainment Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	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 4	00	600	3000-5000 GPM	Borated Water (2000-2500 Co ppm boric acid in demin water)	ontainment Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS-	51	VALVE 1SI8811A - PIPE	24	0.688"	SA182 GR.F316 (FORG.)		SA358 GR.TP304 (WLD. PIPE)	Field	100-350	15-400	0 GPM 4	00	600	3000-5000 GPM	Borated Water (2000-2500 Au ppm boric acid in demin water)	ux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	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 4	00	600	3000-5000 GPM	Borated Water (2000-2500 Au ppm boric acid in demin water)	ux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	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 4	00	600	3000-5000 GPM	Borated Water (2000-2500 Au ppm boric acid in demin water)	ux Bldg Air		30	60		@100F		
Emergency Core Cooling Systems (ECCS)	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 4	00	600	3000-5000 GPM	Borated Water (2000-2500 Au ppm boric acid in demin water)	ux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	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 4	00	600	3000-5000 GPM	Borated Water (2000-2500 Au ppm boric acid in demin water)	ux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	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 4	00	600	3000-5000 GPM	Borated Water (2000-2500 Au ppm boric acid in demin water)	ux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	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 4	00	600	3000-5000 GPM	Borated Water (2000-2500 Au ppm boric acid in demin water)	ux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	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 4	00	600	3000-5000 GPM	Borated Water (2000-2500 Au ppm boric acid in demin water)	ux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	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 4	00	600	3000-5000 GPM	Borated Water (2000-2500 Au ppm boric acid in demin water)	ux Bldg Air		30	60		@100F		
Emergency Core Cooling Systems (ECCS)	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 4	00	600	3000-5000 GPM	Borated Water (2000-2500 Au ppm boric acid in demin water)	ux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	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 4	00	600	3000-5000 GPM	Borated Water (2000-2500 Au ppm boric acid in demin water)	ux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	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 4	00	600	3000-5000 GPM	Borated Water (2000-2500 Au ppm boric acid in demin water)	ux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	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 4	00	600	3000-5000 GPM	Borated Water (2000-2500 Au ppm boric acid in demin water)	ux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	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 4	00	600	3000-5000 GPM	Borated Water (2000-2500 Au ppm boric acid in demin water)	ux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	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 4	00	600	3000-5000 GPM	Borated Water (2000-2500 Au ppm boric acid in demin water)	ux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS-	66	BRANCH CONNECTION (INACCES	S 16	0.500*	SA358 GR.TP304 (WLD. PIPE)		SA358 GR.TP304 (WLD. PIPE)	Shop	100-350	15-400	0 GPM 4	00	600	3000-5000 GPM	Borated Water (2000-2500 Au ppm boric acid in demin water)	ux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS-	67	BRANCH CONNECTION LONG SE/	AN 16	0.500*	SA358 GR.TP304 (WLD. PIPE)		SA358 GR.TP304 (WLD. PIPE)		100-350	15-400	0 GPM 4	00	600	3000-5000 GPM	Borated Water (2000-2500 Au ppm boric acid in demin water)	ux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	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 4	00	600	3000-5000 GPM	Borated Water (2000-2500 Au ppm boric acid in demin water)	ux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	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 4	00	600	3000-5000 GPM	Borated Water (2000-2500 Au ppm boric acid in demin water)	ux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	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 4	00	600	3000-5000 GPM	Borated Water (2000-2500 Au ppm boric acid in demin water)	ux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	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 4	00	600	3000-5000 GPM	Borated Water (2000-2500 Au ppm boric acid in demin water)	ux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	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 4	00	600	3000-5000 GPM	Borated Water (2000-2500 Au ppm boric acid in demin water)	ux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	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 4	00	600	3000-5000 GPM	Borated Water (2000-2500 Au ppm boric acid in demin water)	ux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	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 4	00	600	3000-5000 GPM	Borated Water (2000-2500 Au ppm boric acid in demin water)	ux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS-	75	24"X16"REDUCER - VALVE 1CS00	9416	0.500*	SA403 GR.WP304 (FITTING)		SA351 GR.CF8M (CASTING)	Field	100-350	15-400	0 GPM 4	00	600	3000-5000 GPM	Borated Water (2000-2500 Au ppm boric acid in demin water)	ux Bldg Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	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 4	00	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	ux Bldg Air		30	60		@100F	LER 255 1994-006: through wall defect of check valve body due to corrosion of sentized grain boundary in the weld	
Emergency Core Cooling Systems (ECCS)	Group 17 - RWST Header to RHR Pumps (RHPMPS)	ECCS-RHPMPS-	77	RHR PUMPS			SS		Not Applicable		100-350	15-400	0 GPM 4	00	600	3000-5000 GPM	Borated Water (2000-2500 At ppm boric acid in demin water)	ux Bldg Air						LER 305 1993-019: casting void approximately 2 1/2 incher tong by 1/2 incher wide, by 30 inch deep. The void was located between 19/32 and 30/32 of an inch from the outsid 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 Faulted Stress in ksi Stress in ksi	CUF	Stress Comments	Operating General Experience Comments
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM	- 1	1SI04TD 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 wate	Containment Air r	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	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 wate	Containment Air r		30 60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM	- 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 wate	Containment Air r	39	30 60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM	- 4	ACCUMULATOR NOZZLE SAFE END - PIPE	10	0.365"	SA312 GR.TP304 (WLD. & SMLS PIPE)		SA312 GR.TP304 (WLD. & SMLS PIPE)	Field	100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin wate	Containment Air r	39	30 60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM	- 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 wate	Containment Air r		30 60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM	- 6	PIPE - PIPE	10	0.365"	SA312 GR.TP304 (WLD. & SMLS PIPE)		SA312 GR.TP304 (WLD. & SMLS PIPE)	Field	100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin wate	Containment Air r	39	30 60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM	- 7	PIPE - ELBOW	10	0.365"	SA312 GR.TP304 (WLD. & SMLS PIPE)		SA403 GR.WP304 (FITTING)	Shop	100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin wate	Containment Air r	39	30 60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM	- 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 wate	Containment Air r	39	30 60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM	- 9	ELBOW	10		SA403 GR.WP304 (FITTING)		Not Applicable		100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin wate	Containment Air r		30 60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM	- 10	ELBOW - PIPE	10	0.365"	SA403 GR.WP304 (FITTING)		SA312 GR.TP304 (WLD. & SMLS PIPE)	Shop	100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin wate	Containment Air r	39	30 60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM	- 11	PIPE - VALVE 1SI8808D	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 wate	Containment Air r	30	30 60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM	- 12	VALVE 1SI8808D	10		SA182 GR.F316 (FORG.)		Not Applicable		100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin wate	Containment Air r		34.95 69.9		@100F	
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM	- 13	VALVE 1SI8808D - PIPE	10	1.000"	SA182 GR.F316 (FORG.)		SA376 GR.TP316 (SMLS PIPE)	Field	100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin wate	Containment Air r	30	30 60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM	- 14	PIPE - ELBOW	10	1.000"	SA376 GR.TP316 (SMLS PIPE)		SA403 GR.WP316 (FITTING)	Shop	100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin wate	Containment Air r	30	30 60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM	- 15	ELBOW	10		SA403 GR.WP316 (FITTING)		Not Applicable		100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin wate	Containment Air r		30 60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM	- 16	ELBOW - PIPE	10	1.000"	SA403 GR.WP316 (FITTING)		SA376 GR.TP316 (SMLS PIPE)	Shop	100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin wate	Containment Air r	30	30 60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM	- 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 wate	Containment Air r		30 60		@100F	LER 323 1994-00110/7/2004: 3/4 inch diameter vent line socket weld off an accumulator line connected to the RCS
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold	ECCS-ACCM	- 18	PIPE - PIPE	10	1.000"	SA376 GR.TP316		SA376 GR.TP316		100-150	640	0	300	700		Borated Water (2000-2500	Containment Air	30	30 60		@100F	LP 3 colo teg. Inadequate weid penetration, fack of fusion, fatigue.
Emergency Core Cooling Systems (ECCS)	Leg (ACCM) Group 18 - Accumulator to RCS Cold	ECCS-ACCM	- 19	PIPE - VALVE 1SI8956D	10	1.000"	(SMLS PIPE) SA376 GR.TP316		(SMLS PIPE) SA182 GR.F316	Field	100-150	640	0	300	700		ppm boric acid in demin wate Borated Water (2000-2500	r Containment Air	30	30 60		@100F	
Emergency Core Cooling Systems (ECCS)	Leg (ACCM) Group 18 - Accumulator to RCS Cold	ECCS-ACCM	- 20	VALVE 1SI8956D	10		(SMLS PIPE) SA182 GR.F316		(FORG.) Not Applicable		100-150	640	0	300	700		ppm boric acid in demin wate Borated Water (2000-2500	r Containment Air		34.95 69.9		@100F	
Emergency Core Cooling Systems (ECCS)	Leg (ACCM) Group 18 - Accumulator to RCS Cold	ECCS-ACCM	- 21	VALVE 1SI8956D - PIPE	10	1.000"	(FORG.) SA182 GR.F316		SA376 GR.TP316	Field	100-150	640	0	300	700		ppm boric acid in demin wate Borated Water (2000-2500	r Containment Air	30	30 60		@100F	
Emergency Core Cooling Systems (ECCS)	Leg (ACCM) Group 18 - Accumulator to BCS Cold	ECCS-ACCM	- 22	FLBOW - FLBOW	10	1.000"	(FORG.) SA403 GR WP316		(SMLS PIPE) SA403 GR WP316	Shop	100-150	640	0	300	700		ppm boric acid in demin wate Borated Water (2000-2500	r Containment Air	30	30 60		@100F	
Emergency Core Cooling Systems (ECCS)	Leg (ACCM)	ECCS-ACCM	22		10	1.000"	(FITTING)		(FITTING)	Shop	100-150	640	0	300	700		ppm boric acid in demin wate	r Containment Air	30	30 60		@100E	
Energency core cooling dystems (2000)	Leg (ACCM)	Loco-Accim	- 23		10	1.000	(SMLS PIPE)		(FITTING)	Gliop	100-100	040		300	700		ppm boric acid in demin wate	r	30	30 00		8 1001	
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM	- 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 wate	Containment Air r		30 60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM	- 25	TEE - PIPE	10	1.000"	SA403 GR.WP316 (FITTING)		SA376 GR.TP316 (SMLS PIPE)	Shop	100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin wate	Containment Air r	30	30 60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM	- 26	PIPE - VALVE 1SI8948D	10	1.000"	SA376 GR.TP316 (SMLS PIPE)		SA182 GR.F316 (FORG.)	Field	100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin wate	Containment Air r	30	30 60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM	- 27	VALVE 1SI8948D	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	VALVE 1SI8948D - PIPE	10	1.000"	SA182 GR.F316 (FORG.)		SA376 GR.TP316 (SMLS PIPE)	Field	~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	PIPE - 45 DEG. ELBOW	10	1.000"	SA376 GR.TP316 (SMLS PIPE)		SA403 GR.WP316 (FITTING)	Shop	~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	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	45 DEG. ELBOW - 45 DEG. ELBOW	10	1.000"	SA403 GR.WP316 (FITTING)		SA403 GR.WP316 (FITTING)	Shop	~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	45 DEG. ELBOW - PIPE	10	1.000"	SA403 GR.WP316 (FITTING)		SA376 GR.TP316 (SMLS PIPE)	Shop	~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	PIPE - 10" BRANCH NOZZLE FROM RCS COLD LEG LOOP 4	10	1.000"	SA376 GR.TP316 (SMLS PIPE)		SA351 GR.CF8A (CASTING)	Field	~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	REDUCING TEE - PIPE	6	0.719"	SA403 GR.WP304 (FITTING)		SA376 GR.TP304 (SMLS PIPE)	Shop	100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin wate	Containment Air r	30	30 60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM	- 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 wate	Containment Air r		30 60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM	- 36	PIPE - PIPE	6	0.719"	SA376 GR.TP304 (SMLS PIPE)		SA376 GR.TP304 (SMLS PIPE)	Field	100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin wate	Containment Air r	30	30 60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM	- 37	PIPE - ELBOW	6	0.719"	SA376 GR.TP304 (SMLS PIPE)	<u> </u>	SA403 GR.WP304 (FITTING)	Shop	100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin wate	Containment Air r	30	30 60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM	- 38	ELBOW	6		SA403 GR.WP304 (FITTING)		Not Applicable		100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin wate	Containment Air r		30 60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM	- 39	ELBOW - PIPE	6	0.719"	SA403 GR.WP304 (FITTING)		SA376 GR.TP304 (SMLS PIPE)	Shop	100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin wate	Containment Air r	30	30 60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM	- 40	PIPE - ELBOW	6	0.719"	SA376 GR.TP304 (SMLS PIPE)		SA403 GR.WP304 (FITTING)	Field	100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin wate	Containment Air r	30	30 60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 18 - Accumulator to RCS Cold Leg (ACCM)	ECCS-ACCM	- 41	ACCUMULATOR SHELL AND HEAD ASSEMBLY			SA254		Not Applicable		100-150	640	0	300	700		Borated Water (2000-2500 ppm boric acid in demin wate	Containment Air r					ACCUMULATOR VOLUME 1350 CUBIC FEET. NITROGEN VOLUME 500 CUBIC FEET.
			+		<u> </u>					<u> </u>													

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 emperature 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 Operating Comments Experience	General Comments
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN)	ECCS-HLCONN-	- 1	VALVE 1SI8905A - PIPE	2	0.344"	SA182 GR.F316 (FORG.)		SA376 GR.TP304 (SMLS PIPE)	Field 100	0-350	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 (HLCONN	ECCS-HLCONN-	- 2	2" PIPE	2	0.344"	SA376 GR.TP304 (SMLS PIPE)		Not Applicable	100	0-350	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 (HLCONN	ECCS-HLCONN-	- 3	PIPE - ELBOW	2	0.344"	SA376 GR.TP304 (SMLS PIPE)		SA182 GR.F304 (FORG.)	Field 100	0-350	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 (HLCONN	ECCS-HLCONN-	- 4	2" ELBOW	2	0.344"	SA182 GR.F304 (FORG.)		Not Applicable	100	0-350	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 (HLCONN)	ECCS-HLCONN-	- 5	ELBOW - PIPE	2	0.344"	SA182 GR.F304 (FORG.)		SA376 GR.TP304 (SMLS PIPE)	Field 100	0-350	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 (HLCONN	ECCS-HLCONN-	- 6	PIPE - BRANCH CONNECTION	2	0.344"	SA376 GR.TP304 (SMLS PIPE)		SA182 GR.F304 (FORG.)	Field 100	0-350	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 (HLCONN)	ECCS-HLCONN-	- 7	VALVE 1S18841A	8	0.906"	SA182 GR.F316 (FORG.)		Not Applicable	100	0-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500	Containment Air		34.95	69.9		@100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN	ECCS-HLCONN-	- 8	VALVE 1SI8841A - PIPE	8	0.906"	SA182 GR.F316 (FORG.)		SA376 GR.TP304 (SMLS PIPE)	Field 100	0-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500	Containment Air	30	30	60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN	ECCS-HLCONN-	- 9	PIPE - ELBOW	8	0.906"	SA376 GR.TP304		SA403 GR.WP304	Shop 100	0-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500	Containment Air	30	30	60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN	ECCS-HLCONN-	- 10	8" ELBOW	8	0.906"	SA403 GR.WP304		Not Applicable	100	0-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500	Containment Air		30	60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN	ECCS-HLCONN-	- 11	ELBOW - PIPE	8	0.906"	SA403 GR.WP304		SA376 GR.TP304 (SMLS	Shop 100	0-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500	Containment Air	30	30	60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN	ECCS-HLCONN-	- 12	8" PIPE	8	0.906"	SA376 GR.TP304		Not Applicable	100	0-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500	Containment Air		30	60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN	ECCS-HLCONN-	- 13	2" SOCKOLET - 8" PIPE	2	0.344"	(SMLS PIPE) SA182 GR.F304		SA376 GR.TP304 (SMLS	Shop 100	0-350	15-400	0 GPM	400	600	3000-5000 GPM	ppm boric acid in demin water Borated Water (2000-2500	r Containment Air	39	30	60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN	ECCS-HLCONN-	- 14	PIPE - PIPE	8	0.906"	(FORG.) SA376 GR.TP304		PIPE) SA376 GR.TP304 (SMLS	Field 100	0-350	15-400	0 GPM	400	600	3000-5000 GPM	ppm boric acid in demin water Borated Water (2000-2500	r Containment Air	30	30	60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN	ECCS-HLCONN-	- 15	PIPE - 8"X6" REDUCER	8	0.906"	(SMLS PIPE) SA376 GR.TP304		PIPE) SA403 GR.WP304	Shop 100	0-350	15-400	0 GPM	400	600	3000-5000 GPM	ppm boric acid in demin water Borated Water (2000-2500	r Containment Air	30	30	60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Lea (HLCONN	ECCS-HLCONN-	- 16	8"X6" REDUCER	6	0.719"	(SMLS PIPE) SA403 GR.WP304		(FITTING) Not Applicable	100	0-350	15-400	0 GPM	400	600	3000-5000 GPM	ppm boric acid in demin water	r Containment Air		30	60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HI CONN)	ECCS-HI CONN-	. 17	8"X6" REDUCER - VALVE 1SI8949A	6	0.719"	(FITTING)		S&182 GR F316	Field 100	0-350	15-400	0 GPM	400	600	3000-5000 GPM	ppm boric acid in demin water	r Containment Air	39	30	5.7		@ 100E	
Emergency Core Cooling Systems (ECCO)		FOOD LIL CONN	10			0.713	(FITTING)		(FORG.)		0.550	0050	0.000	400	0405	25 M//UD	ppm boric acid in demin water	Containment Air	39	30	0.0		© 1001	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN Group 19 - SI-RHR to RCS Hot Leg (HLCONN	ECCS-HLCONN-	- 18	VALVE 1SI8949A - PIPE	6	0.719	(FORG.) SA182 GR.F316		SA376 GR.TP304 (SMLS	Field 610	0 to 620	2250	0 GPM	650	2485	35 M#/HR 35 M#/HR	Reactor Coolant	Containment Air	30	34.95	69.9		@100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN	ECCS-HLCONN-	- 20	6" PIPE	6	0.719"	(FORG.) SA376 GR.TP304		PIPE) Not Applicable	610	0 to 620	2250	0 GPM	650	2485	35 M#/HR	Reactor Coolant	Containment Air		30	60		@ 100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN	ECCS-HLCONN-	- 21	PIPE - ELBOW	6	0.719"	(SMLS PIPE) SA376 GR.TP304		SA403 GR.WP304	Shop 610	0 to 620	2250	0 GPM	650	2485	35 M#/HR	Reactor Coolant	Containment Air	30	30	60		@ 100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN	ECCS-HLCONN-	- 22	6" ELBOW	6	0.719"	(SMLS PIPE) SA403 GR.WP304		(FITTING) Not Applicable	. 610	0 to 620	2250	0 GPM	650	2485	35 M#/HR	Reactor Coolant	Containment Air		30	60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN	ECCS-HLCONN-	- 23	ELBOW - PIPE	6	0.719"	(FITTING) SA403 GR.WP304		SA376 GR.TP304 (SMLS	Shop 610	0 to 620	2250	0 GPM	650	2485	35 M#/HR	Reactor Coolant	Containment Air	30	30	60		@ 100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN	ECCS-HLCONN-	- 24	PIPE - TEE	6	0.719"	(FITTING) SA376 GR.TP304		PIPE) SA403 GR.WP304	Shop 610	0 to 620	2250	0 GPM	650	2485	35 M#/HR	Reactor Coolant	Containment Air	30	30	60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN	ECCS-HLCONN-	- 25	TEE - PIPE	12	1.125"	(SMLS PIPE) SA403 GR.WP316		(FITTING) SA376 GR.TP316 (SMLS	Shop 610	0 to 620	2250	0 GPM	650	2485	35 M#/HR	Reactor Coolant	Containment Air	30	30	60		@ 100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HI CONN	ECCS-HI CONN-	- 26	PIPE - VALVE 18H8701B	12	1.125"	(FITTING) SA376 GR TP316		PIPE) SA182 GR E316	Field 610	0 to 620	2250	0 GPM	650	2485	35 M#/HR	Reactor Coolant	Containment Air	30	30	60		@ 100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HI CONN	ECCS-HI CONN-	- 27	PIPE - TEE	12	1.125"	(SMLS PIPE) SA376 GR TP316		(FORG.) SA403 GR WP316	Shop 61(0 to 620	2250	0 GPM	650	2485	35 M#/HR	Reactor Coolant	Containment Air	30	30	60		@ 100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN)	ECCS-HI CONN-	- 28	12" BRANCH CONNECTION - PIPE	12	1 125"	(SMLS PIPE)		(FITTING) SA376 GR TP316 (SMLS	Field 610	0 to 620	2250	0 GPM	650	2485	35 M#/HR	Reactor Coolant	Containment Air	30	30	60	273/41	@ 100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN)	ECCS-HI CONN-	- 29	12"X8" REDUCER - TEE	12	0.375"	(FORG.)		PIPE) SA403 GR WP304	Shop 100	0-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500	Aux Bldg Air	39	30	60	2.107 4.1	@100F	
Emergency Core Cooling Systems (ECCS)	Crown 10 SI RHR to RCS Hot Log (HLCONN)		20		12	0.375"	(FITTING)		(FITTING)	100	0.350	15 400	0 CPM	400	600	2000-5000 CPM	ppm boric acid in demin water	r Aux Bidg Air	20	30	60		@1005	
Emergency Core Cooling Systems (ECCS)	Gloup 19 - SI-KHK to KCS Hut Leg (HECONIN	ECC3-HECONN-	- 30	TEE LONG SEAM	12	0.375	(FITTING)		(FITTING)	100	0-350	15-400	0 GFM	400	800	3000-3000 GFM	ppm boric acid in demin water	r)	39	30	60		W IUUP	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN	ECCS-HLCONN-	- 31	TEE LONG SEAM	12	0.375"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)	100	0-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water	Aux Bldg Air r	39	30	60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN	ECCS-HLCONN-	- 32	TEE LONG SEAM	12	0.375"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)	100	0-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water	Aux Bldg Air r	39	30	60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN	ECCS-HLCONN-	- 33	ELBOW LONG SEAM	12	0.375"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)	100	0-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water	Aux Bldg Air r	39	30	60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN	ECCS-HLCONN-	- 34	ELBOW LONG SEAM	12	0.375"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)	100	0-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water	Aux Bldg Air r	39	30	60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN)	ECCS-HLCONN-	- 35	PIPE - PIPE	12	0.375"	SA312 GR.TP304 (WLD. & SMLS PIPE)		SA312 GR.TP304 (WLD. & SMLS PIPE)	Field 100	0-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water	Aux Bldg Air r	39	30	60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN	ECCS-HLCONN-	- 36	PIPE - VALVE 1SI8840	12	1.125"	SA376 GR.TP316 (SMLS PIPE)		SA182 GR.F316 (FORG.)	Field 100	0-350	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 19 - SI-RHR to RCS Hot Leg (HLCONN)	ECCS-HLCONN-	- 37	VALVE 1SI8840	12	1.125"	SA182 GR.F316 (FORG.)		Not Applicable	100	0-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water	Aux Bldg Air		34.95	69.9		@100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN	ECCS-HLCONN-	- 38	VALVE 1SI8840 - PIPE	12	1.125"	SA182 GR.F316 (FORG.)		SA376 GR.TP316 (SMLS PIPE)	Field 100	0-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin water	Aux Bldg Air r	30	30	60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN)	ECCS-HLCONN-	- 39	TEE - 12"X8" REDUCER	12	1.125"	SA403 GR.WP316 (FITTING)		SA403 GR.WP316 (FITTING)	Shop 100	0-350	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 (HLCONN	ECCS-HLCONN-	- 40	REDUCER LONG SEAM	12	1.125"	SA403 GR.WP316 (FITTING)		SA403 GR.WP316 (FITTING)	100	0-350	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 (HLCONN	ECCS-HLCONN-	- 41	12"X8" REDUCER	12	1.125"	SA403 GR.WP316 (FITTING)		Not Applicable	100	0-350	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 (HLCONN	ECCS-HLCONN-	- 42	PIPE - VALVE 1SI8841B	8	0.906"	SA376 GR.TP304 (SMLS PIPE)		SA182 GR.F316 (FORG.)	Field 100	0-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500	Containment Air	30	30	60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN	ECCS-HLCONN-	- 43	PIPE - VALVE 1SI8841A	8	0.906"	SA376 GR.TP304		SA182 GR.F316	Field 100	0-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500	Containment Air	30	30	60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN	ECCS-HLCONN-	- 44	PIPE CAP - PIPE	6	0.719"	(SMLS PIPE) SA403 GR.WP304		(FUKG.) SA376 GR.TP304 (SMLS	Field 100	0-350	15-400	0 GPM	400	600	3000-5000 GPM	ppm boric acid in demin water Borated Water (2000-2500	r. Containment Air	30	30	60		@100F	
			1		1		(FITTING)		PIPE)				1			1	ppm boric acid in demin water	q						

System Identification	Group Identification	Part Identification	Part Part Number Description	Part Size in inches	Part Thickness inches	in A	Material W	Material B	Weld Type Te	Operating emperature in °F	Operating Pressure in psi	Operatin Flow	Design Temperature °F	Design Pressure in p	Design si Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Operating Comments Experience	General Comments
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN)	ECCS-HLCONN	- 45 PIPE - VALVE 1SI8949B	6	0.719"	SA376 GR.TP304 (SMLS PIPE)		SA182 GR.F316 (FORG.)	Field 100	0-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin wate	Containment Air	30	30	60		@ 100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN)	ECCS-HLCONN	- 46 VALVE 1SI8949B - PIPE	6	0.719"	SA182 GR.F316 (FORG.)		SA376 GR.TP304 (SMLS PIPE)	Field 610	0 to 620	2250	0 GPM	650	2485	35 M#/HR	Reactor Coolant	Containment Air	30	30	60		@ 100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN)	ECCS-HLCONN	- 47 PIPE - ELBOW	6	0.719"	SA376 GR.TP304 (SMLS PIPE)		SA403 GR.WP304 (FITTING)	Shop 610	0 to 620	2250	0 GPM	650	2485	35 M#/HR	Reactor Coolant	Containment Air	30	30	60		@ 100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN)	ECCS-HLCONN	- 48 ELBOW - BRANCH CONNECTION	16	0.719"	SA403 GR.WP304 (FITTING)		SA182 GR.F316N	Field 610	0 to 620	2250	0 GPM	650	2485	35 M#/HR	Reactor Coolant	Containment Air	30	30	26.9		@100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN)	ECCS-HLCONN	- 49 VALVE 1SI8905B - PIPE	2	0.344"	SA182 GR.F316 (FORG.)		SA376 GR.TP304 (SMLS PIPE)	Field 100	0-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin wate	Containment Air	39	30	60		@ 100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN)	ECCS-HLCONN	- 50 PIPE - TEE	2	0.344"	SA376 GR.TP304 (SMLS PIPE)		SA182 GR.F304 (FORG.)	Field 100	0-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin wate	Containment Air	39	30	60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN)	ECCS-HLCONN	- 51 TEE - 2"X3/4" REDUCER	2	0.344"	SA182 GR.F304 (FORG.)		SA182 GR.F304 (FORG.)	Field 100	0-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin wate	Containment Air	39	30	60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN)	ECCS-HLCONN	- 52 TEE - PIPE	2	0.344"	SA182 GR.F304 (FORG.)		SA376 GR.TP304 (SMLS PIPE)	Field 100	0-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin wate	Containment Air	39	30	60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN)	ECCS-HLCONN	- 53 2" ST TEE	2	0.344"	SA182 GR.F304 (FORG.)		Not Applicable	100	0-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin wate	Containment Air		30	60		@ 100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN)	ECCS-HLCONN	- 54 2°X3/4" REDUCER	2	0.344"	SA182 GR.F304 (FORG.)		Not Applicable	100	0-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin wate	Containment Air		30	60		ELER 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	e
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN)	ECCS-HLCONN	- 55 PIPE - COUPLING	2	0.344"	SA376 GR.TP304 (SMLS PIPE)		SA182 GR.F304 (FORG.)	Field 100	0-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin wate	Containment Air	39	30	60		@ 100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN)	ECCS-HLCONN	- 56 2" COUPLING	2	0.344"	SA182 GR.F304 (FORG.)		Not Applicable	100	0-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin wate	Containment Air		30	60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN)	ECCS-HLCONN	- 57 COUPLING - PIPE	2	0.344"	SA182 GR.F304 (FORG.)		SA376 GR.TP304 (SMLS PIPE)	Field 100	0-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin wate	Containment Air	39	30	60		@100F	
Emergency Core Cooling Systems (ECCS)	Group 19 - SI-RHR to RCS Hot Leg (HLCONN)	ECCS-HLCONN	- 58 COUPLING - 6" B.W. CAP	2	0.344"	SA182 GR.F304 (FORG.)		SA403 GR.WP304 (FITTING)	Field 100	0-350	15-400	0 GPM	400	600	3000-5000 GPM	Borated Water (2000-2500 ppm boric acid in demin wate	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 o	ating O ature in Pre	perating ressure 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	D- 1	PIPE LONG SEAM	8	0.322"	SA312 GR.TP304 (WLD. & SMLS		SA312 GR.TP304 (WLD. & SMLS PIPE)	100-350) 15-4	400	0 GPM	400 6	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric a acid in demin water)	Aux Bldg Air	39	30 6	50		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	0- 2	PIPE LONG SEAM	8	0.322"	SA312 GR.TP304 (WLD. & SMLS		SA312 GR.TP304 (WLD. & SMLS PIPE)	100-350) 15-4	400	0 GPM	400 6	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric a acid in demin water)	Aux Bldg Air	39	30 6	50		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	D- 3	PIPE - ELBOW	8	0.322*	PIPE) SA312 GR.TP304 (WLD. & SMLS		SA403 GR.WP304 (FITTING)	Shop 100-350) 15-4	400 (0 GPM	400 6	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30 6	50		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	0-4	8" ELBOW	8	0.322*	SA403 GR.WP304 (FITTING)		Not Applicable	100-350) 15-4	400 (0 GPM	400 6	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air		30 6	50		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	D- 5	ELBOW - PIPE	8	0.322*	SA403 GR.WP304 (FITTING)		SA312 GR.TP304 (WLD. & SMLS PIPE)	Shop 100-350) 15-4	400	0 GPM	400 6	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30 6	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	D- 6	PIPE - PIPE	8	0.322*	SA312 GR.TP304 (WLD. & SMLS		SA312 GR.TP304 (WLD. & SMLS PIPE)	Shop 100-350) 15-4	400 (0 GPM	400 6	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30 6	50		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD)- 7	8" PIPE	8	0.322"	SA312 GR.TP304 (WLD. & SMLS		Not Applicable	100-350) 15-4	400	0 GPM	400 6	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air		30 6	50		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	D- 8	PIPE - FLANGE	8	0.322*	SA312 GR.TP304 (WLD. & SMLS		SA182 GR.F304 (FORG.)	Field 100-350) 15-4	100	0 GPM	400 6	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30 6	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	9-9	FLANGE - PIPE	8	0.322"	SA182 GR.F304		SA312 GR.TP304 (WLD. & SMLS PIPE)	Field 100-350) 15-4	400	0 GPM	400 6	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric a	Aux Bldg Air	39	30 6	50		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	D- 10	PIPE - TEE	8	0.322*	(VLD. & SMLS		SA403 GR.WP304 (FITTING)	Field 100-350) 15-4	400	0 GPM	400 6	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30 6	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	D- 11	8" ST TEE	8	0.322"	SA403 GR.WP304 (FITTING)		Not Applicable	100-350) 15-4	400	0 GPM	400 6	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air		30 6	50		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	0- 12	TEE - PIPE	8	0.322"	SA403 GR.WP304 (FITTING)		SA312 GR.TP304 (WLD. & SMLS PIPE)	Shop 100-350) 15-4	400	0 GPM	400 6	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30 6	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	D- 13	PIPE - VALVE 1RH8716B	8	0.322*	SA312 GR.TP304 (WLD. & SMLS		SA182 GR.F316 (FORG.)	Field 100-350) 15-4	400	0 GPM	400 6	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30 6	50		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	D- 14	VALVE 1RH8716B	8	0.322"	SA182 GR.F316		Not Applicable	100-350) 15-4	400	0 GPM	400 (600	3000-5000 GPM	Borated Water (1500-2500 ppm boric a	Aux Bldg Air		34.95	59.9		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	D- 15	VLV 1RH8716B - 12"X8" REDUCER	8	0.322"	SA182 GR.F316 (FORG.)		SA403 GR.WP304 (FITTING)	Field 100-350) 15-4	400	0 GPM	400 6	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric a acid in demin water)	Aux Bldg Air	39	30 6	50		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	D- 16	12"x8" REDUCER	8	0.322"	SA403 GR.WP304 (FITTING)		Not Applicable	100-350) 15-4	400	0 GPM	400 6	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air		30 6	50		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	D- 17	REDUCER LONG SEAM	8	0.322*	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)	100-350) 15-4	400	0 GPM	400 6	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30 6	50		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	D- 18	REDUCER LONG SEAM	8	0.322*	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)	100-350) 15-4	400	0 GPM	400 6	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30 6	50		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	D- 19	12"X8" REDUCER - TEE	8	0.322*	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)	Field 100-350) 15-4	400	0 GPM	400 6	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30 6	50		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	0- 20	PIPE - VALVE 1RH8735	8	0.322*	SA312 GR.TP304 (WLD. & SMLS PIPE)		SA182 GR.F316 (FORG.)	Field 100-350) 15-4	400	0 GPM	400 6	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30 6	50		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	0- 21	VALVE 1RH8735	8	0.322*	SA182 GR.F316 (FORG.)		Not Applicable	100-350) 15-4	400	0 GPM	400 (600	3000-5000 GPM	Borated Water (1500-2500 ppm boric a acid in demin water)	Aux Bldg Air		34.95 6	59.9		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	0- 22	PIPE - VALVE 1RH8716A	8	0.322*	SA312 GR.TP304 (WLD. & SMLS		SA182 GR.F316 (FORG.)	Field 100-350) 15-4	400 (0 GPM	400 6	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30 6	50		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	0- 23	VALVE 8716A	8	0.322"	SA182 GR.F316		Not Applicable	100-350) 15-4	400	0 GPM	400 6	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric	Aux Bldg Air		34.95	59.9		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	0- 24	14"X8" REDUCER - 1B HX NOZZLE	14	0.375"	SA403 GR.WP304 (FITTING)		SA240 GR.TP304 (PLATE)	Field 100-350) 15-4	400	0 GPM	400 6	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30 6	50		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	D- 25	REDUCER LONG SEAM	8	0.322*	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)	100-350) 15-4	400 (0 GPM	400 6	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30 6	50		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	D- 26	REDUCER LONG SEAM	14	0.375"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)	100-350) 15-4	400 (0 GPM	400 6	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30 6	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	D- 27	14"X8" REDUCER	14	0.375*	SA403 GR.WP304 (FITTING)		Not Applicable	100-350) 15-4	400 (0 GPM	400 6	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air		30 6	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	D- 28	ELBOW - 14*X8* REDUCER	8	0.322*	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)	Shop 100-350) 15-4	400	0 GPM	400 é	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30 6	50		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	0- 29	PIPE - VALVE 1RH0619 FLANGE	8	0.322"	SA312 GR.TP304 (WLD. & SMLS PIPE)		SA182 GR.F304 (FORG.)	Shop 100-350) 15-4	400	0 GPM	400 6	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30 6	50		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	0- 30	VALVE 1RH0619	8	0.322*	SA182 GR.F304 (FORG.)		Not Applicable	100-350) 15-4	400	0 GPM	400 6	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric a	Aux Bldg Air		30 6	50		@100F	LER 213 1996-019: pinhole leak in body of 8" inlet isolation valve to the RHR beat exchanger	
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	D- 31	VALVE 1RH0619 FLANGE - TEE	8	0.322*	SA182 GR.F304 (FORG.)		SA403 GR.WP304 (FITTING)	Shop 100-350) 15-4	400	0 GPM	400 6	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30 6	50		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	0- 32	VALVE 1RH0607 FLANGE - TEE	8	0.322*	SA182 GR.F304 (FORG.)		SA403 GR.WP304 (FITTING)	Shop 100-350) 15-4	400	0 GPM	400 6	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30 6	50		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	0- 33	VALVE 1RH0607	8	0.322*	SA182 GR.F304 (FORG.)		Not Applicable	100-350) 15-4	100	0 GPM	400 6	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air		30 6	50		@100F	LER 528 1988-022: bolting which secures a gasket retainer plate on the shutdown cooling system heat exchanger outlet valve has SCC and hydrogen embrittlement	
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	D- 34	PIPE - VALVE 1RH0607 FLANGE	8	0.322*	SA312 GR.TP304 (WLD. & SMLS PIPE)		SA182 GR.F304 (FORG.)	Shop 100-350) 15-4	100	0 GPM	400 6	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30 6	50		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	D- 35	ELBOW - ELBOW	8	0.322*	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)	Shop 100-350) 15-4	400	0 GPM	400 6	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30 6	50		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	D- 36	14"X8" REDUCER - ELBOW	8	0.322*	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)	Shop 100-350) 15-4	400	0 GPM	400 6	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30 6	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	D- 37	REDUCER LONG SEAM	14	0.375*	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)	100-350	15-4	400	0 GPM	400 6	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30 6	50		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	D- 38	REDUCER LONG SEAM	8	0.322*	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 (FITTING)	100-350) 15-4	400 (0 GPM	400 6	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30 6	50		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	0- 39	1B HX NOZZLE - 14"X8" REDUCER	14	0.375"	SA240 GR.TP304 (PLATE)		SA403 GR.WP304 (FITTING)	Field 100-350) 15-4	400	0 GPM	400 6	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric a acid in demin water)	Aux Bldg Air	39	30 6	50		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	0-40	PUMP 1RH01PB - ELBOW	8	0.322"	, SA182 GR.F304 (FORG.)		SA403 GR.WP304 (FITTING)	Field 100-350) 15-4	400	0 GPM	400 6	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30 6	50		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	D- 41	ELBOW - VALVE 1RH8730B	8	0.322*	SA403 GR.WP304 (FITTING)		SA182 GR.F316 (FORG.)	Field 100-350	15-4	400	0 GPM	400 6	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30 6	50		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	0-42	VALVE 1RH8730B	8	0.322*	SA182 GR.F316 (FORG.)		Not Applicable	100-350) 15-4	400	0 GPM	400 (600	3000-5000 GPM	Borated Water (1500-2500 ppm boric a acid in demin water)	Aux Bldg Air		34.95 6	59.9		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	0-43	VLV 1RH8730B - VLV 1RH8724B	8	0.322"	SA182 GR.F316 (FORG.)		SA182 GR.F316 (FORG.)	Field 100-350) 15-4	400	0 GPM	400 6	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air	39	30 6	50		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPD	0- 44	VALVE 1RH8724B	8	0.322*	SA182 GR.F316 (FORG.)		Not Applicable	100-350) 15-4	400	0 GPM	400 6	600	3000-5000 GPM	Borated Water (1500-2500 ppm boric acid in demin water)	Aux Bldg Air		34.95	59.9		@100F		

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material Materi W B	al Weld Type	Operating Temperature i °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-RHPMPE	- 45	VALVE 1RH8724B - PIPE	8	0.322*	SA182 GR.F316 (FORG.)	SA312 GR.TP3 & SMLS PIPE)	04 (WLD. 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 6	10		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPE	9- 46	PIPE - FLANGE	8	0.322"	SA312 GR.TP304 (WLD. & SMLS PIPE)	SA182 GR.F30 (FORG.)	4 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 6	10		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPE)- 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 6	10		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPE	- 48	FLANGE - PIPE	8	0.322*	SA182 GR.F304 (FORG.)	SA312 GR.TP3 & SMLS PIPE)	04 (WLD. 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 6	10		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPE	- 49	RHR HX SHELL - BOTTOM HE	AD 44	0.875*	SA240 GR.TP304 (PLATE)	SA240 GR.TP3 (PLATE)	04	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 6	10		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPE	- 50	RHR HX SHELL - BOTTOM HE	AD 44	0.875*	SA240 GR.TP304 (PLATE)	SA240 GR.TP3 (PLATE)	04	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 6	i0		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPE	0- 51	RHR HX NOZZLE - SHELL	14	0.375*	SA240 GR.TP304 (PLATE)	SA240 GR.TP3 (PLATE)	04	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 6	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPE	- 52	RHR HX NOZZLE - SHELL	14	0.375*	SA240 GR.TP304 (PLATE)	SA240 GR.TP3 (PLATE)	D4	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 6	10		@100F		
Emergency Core Cooling Systems (ECCS)	Group 20 - RHR Pump Discharge (RHPMPD)	ECCS-RHPMPE	- 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-RHPMPE	- 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 Part Identification Number	Part Part Description	Part Size i inche	Part n Thickness in s inches	Material A	Material W	Material B	Weld Type	Operating Temperatu in °F	9 Operating re Pressure in psi	Operating Flow	Design Temperature °F	n Design Pressure in ps	Design ii Flow	Inside C Environment Env	Dutside vironment	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 GPN	A Borated Water (2000-2500 ppm boric Aux Blo acid in demin water)	dg 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 GPN	A Borated Water (2000-2500 ppm boric Aux Blo acid in demin water)	dg Air		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 GPN	A Borated Water (2000-2500 ppm boric Aux Blo acid in demin water)	dg 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*	SA312 GR.TP304 (WLD. & SMLS PIPE)		SA403 GR.WP304 (FITTING)	Shop	100-350	15-400	0 GPM	400	600	3000-5000 GPN	M Borated Water (2000-2500 ppm boric Aux Blo acid in demin water)	dg 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 GPN	M Borated Water (2000-2500 ppm boric Aux Blo acid in demin water)	dg 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 GPN	M Borated Water (2000-2500 ppm boric Aux Blo acid in demin water)	dg Air		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 GPN	M Borated Water (2000-2500 ppm boric Aux Blo acid in demin water)	dg 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 GPN	A Borated Water (2000-2500 ppm boric Aux Blo acid in demin water)	dg 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 GPN	A Borated Water (2000-2500 ppm boric Aux Blo acid in demin water)	dg Air		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 GPN	A Borated Water (2000-2500 ppm boric Aux Blo acid in demin water)	dg 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	(WLD. & SMLS PIPE)		(FORG.)	Field	100-350	15-400	U GPM	400	600	3000-5000 GPN	acid in demin water)	og Air	30	30	60 0		@100F		
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCL-12	VALVE 1518809B	8	0.300	(FORG.)		Not Applicable	Cield	100-350	15-400	0 GPM	400	600	3000-5000 GPN	A Borated Water (2000-2500 ppm boric Aux Bic acid in demin water)	og Air	20	34.95	69.9		@100F		
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCL-13	ELBOW STYRE DEDUCED		0.719	(FITTING)		(FORG.)	Chen	100-350	15-400	0 GPM	400	600	2000-5000 GPN	acid in demin water)		30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCL- 14	TEE - PIPE	8	0.906	(FITTING) SA403 GR WP304		(FITTING) SA376 GR TP304	Shop	100-350	15-400	0 GPM	400	600	3000-5000 GPN	acid in demin water (2000-2500 ppm boric A Borated Water (2000-2500 ppm boric Contain	oment Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCL-15	VALVE 1519900B - DIDE		0.906*	(FITTING)		(SMLS PIPE)	Field	100-350	15-400	0 GPM	400	600	2000-5000 GPM	acid in demin water)	da Air	20	20	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCI - 17	PIPE - 8"X6" REDUCER	8	0.906*	(FORG.) SA376 GR TP304		(SMLS PIPE) SA403 GR WP304	Shop	100-350	15-400	0 GPM	400	600	3000-5000 GPM	acid in demin water)	nment Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCI - 18	8"X6" REDUCER	6	0.719*	(SMLS PIPE) SA403 GR WP304		(FITTING)	onop	100-350	15-400	0 GPM	400	600	3000-5000 GPM	acid in demin water)	da Air		30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCL 19	8"X6" REDUCER - VALVE 1SI8818	BB6	0.719*	(FITTING) SA403 GR WP304		S4182 GR E316	Field	100-350	15-400	0 GPM	400	003	3000-5000 GPM	acid in demin water)	oment Air	30	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCI - 20	VALVE 1SI8818B	6	0.719*	(FITTING) SA182 GR E316		(FORG.)	, loid	100-350	15-400	0 GPM	400	600	3000-5000 GPM	acid in demin water)	da Air	35	34.95	69.9		@100F		
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCI - 21	VAI VE 1SI8818B - PIPE	6	0.719"	(FORG.) SA182 GR E316		SA376 GR TP304	Field	100-350	15-400	0 GPM	400	600	3000-5000 GPM	acid in demin water) A Borated Water (2000-2500 ppm boric Contain	nment 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"	(FORG.) SA376 GR.TP304		(SMLS PIPE) SA403 GR.WP304	Shop	100-350	15-400	0 GPM	400	600	3000-5000 GPN	acid in demin water) Borated Water (2000-2500 ppm boric Contain	nment 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"	(SMLS PIPE) SA403 GR.WP304		(FITTING) SA376 GR.TP304	Shop	100-350	15-400	0 GPM	400	600	3000-5000 GPN	acid in demin water) M Borated Water (2000-2500 ppm boric Contain	nment 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*	(FITTING) SA182 GR.F304		(SMLS PIPE) SA376 GR.TP304	Shop	100-350	15-400	0 GPM	400	600	3000-5000 GPM	acid in demin water) A Borated Water (2000-2500 ppm boric Contain	nment 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"	(FORG.) SA376 GR.TP304		(SMLS PIPE) SA376 GR.TP304	Shop	100-350	15-400	0 GPM	400	600	3000-5000 GPM	acid in demin water) M Borated Water (2000-2500 ppm boric Contain	nment 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*	(SMLS PIPE) SA182 GR.F316		(SMLS PIPE) Not Applicable		100-350	15-400	0 GPM	400	600	3000-5000 GPN	acid in demin water) M Borated Water (2000-2500 ppm boric Aux Blo	da Air		34.95	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*	(FORG.) SA182 GR.F316		SA376 GR.TP304	Field	100-350	15-400	0 GPM	400	600	3000-5000 GPM	acid in demin water) M Borated Water (2000-2500 ppm boric Contain	- nment Air	39	30	60		@100F	LER 364 1987-01010/7/2004: thermal transients were due to	
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCL- 28	PIPE - ELBOW	2	0.344*	(FORG.) SA376 GR.TP304		(SMLS PIPE) SA182 GR.F304	Field	100-350	15-400	0 GPM	400	600	3000-5000 GPM	acid in demin water) A Borated Water (2000-2500 ppm boric Contain	nment Air	39	30	60		@100F	/alve leakage resulted in a thru wall crack	
Emergency Core Cooling Systems (ECCS)	Group 21 - RHR to RCS Cold Leg (RHRCL)	ECCS-RHRCL- 29	ELBOW - PIPE	2	0.344*	(SMLS PIPE) SA182 GR.F304		(FORG.) SA376 GR.TP304	Field	100-350	15-400	0 GPM	400	600	3000-5000 GPM	acid in demin water) M Borated Water (2000-2500 ppm boric Contain	nment Air	39	30	60		@100F		
Emergency Care Casiling Surface: (5000)	Creve 31, BUB to BCC Cold Lat. (DUBCI)	ECCE BURCH 22		-	0.244	(FORG.)		(SMLS PIPE)	Field	100.250	45.400	0.0014	400	600	2000 5000 001	acid in demin water)	amont Air	20	20	60		@100E	I ED 200 1005 017: 2// insk reducing en ming unstream of	
Emergency Core Cooling Systems (ECCS)	Group 21 - KHK to KUS Cold Leg (KHRCL)	EGGS-RHRUL-30	FIFE - BRANCH CONNECTION	2	0.344	(SMLS PIPE)		(FORG.)	F1810	100-350	15-400	U GPM	400	600	3000-5000 GPN	acid in demin water)	nment Air	28	30	00		W TOUP	the inlet flange cracked due to fatigue	

System Identification	Group Identification	Part Part Identification Number	Part Description	Part Part Size in Thickness in inches inches	Material A	Material W	Material B	Weld Type [°] F	Operating Pressure in psi	Operating Flow	Design Temperature in °F	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment St	Residual ress in ksi	Normal Faulted Stress in ksi 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- 1	1CV01PA-1 PUMP CASING - FLANG	34 0.531"	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 30		30 60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL- 2	FLANGE - ELBOW	4 0.531"	SA182 GR.F316 (EORG.)		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 30		30 60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg	ECCS-CVCL- 3	4" ELBOW	4 0.531"	SA403 GR.WP304		Not Applicable	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric	Aux Bldg Air		30 60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg	ECCS-CVCL- 4	ELBOW - ELBOW	4 0.531"	SA403 GR.WP304		SA403 GR.WP304	Shop 200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric	Aux Bldg Air 30		30 60		@100F		
Emergency Core Cooling Systems (ECCS)	(CVCL) Group 22 - CVCS to RCS Cold Leg	ECCS-CVCL- 5	ELBOW - PIPE	4 0.531"	SA403 GR.WP304		(FITTING) SA376 GR.TP304 (SMLS	Shop 200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric	Aux Bldg Air 30		30 60		@100F	LER 250 1986-025: weld on discharge line of charging	
Emergency Core Cooling Systems (ECCS)	(CVCL) Group 22 - CVCS to RCS Cold Leg	ECCS-CVCL- 6	4" PIPE - 2" SOCKOLET	4 0.531"	(FITTING) SA376 GR.TP304	ł	PIPE) SA182 GR.F304 (FORG.)	Shop 200	2250	0 GPM	300	2485	150-550 GPM	acid in demin water) Borated Water (2000-2500 ppm boric	Aux Bldg Air 30		30 60		@100F	pump due to vibration	
Emergency Core Cooling Systems (ECCS)	(CVCL) Group 22 - CVCS to RCS Cold Leg	ECCS-CVCL- 7	PIPE - VALVE 1CV8481A	4 0.531*	(SMLS PIPE) SA376 GR.TP304		SA182 GR.F316 (FORG.)	Field 200	2250	0 GPM	300	2485	150-550 GPM	acid in demin water) Borated Water (2000-2500 ppm boric	Aux Blda Air 30		30 60		@100F		
Emergency Core Cooling Systems (ECCS)	(CVCL) Group 22 - CVCS to BCS Cold Leg	ECCS-CVCL 8	VALVE 10V84814	4 0.531*	(SMLS PIPE) SA182 GR E316		Not Applicable	200	2250	0 GPM	300	2485	150-550 GPM	acid in demin water) Borated Water (2000-2500 ppm boric	Aux Bida Air		34.95 69.9		@100E		
Emergency Care Caeling Systems (ECCC)	(CVCL)			4 0.521	(FORG.)		EA276 OB TD204 (CMLC	Eield 200	2250	0 CPM	200	2495	150 550 CDM	acid in demin water)	Aux Bide Air 20		20 60.5		@ 100F		
Emergency Core Cooling Systems (ECCS)	(CVCL)	ECCS-CVCE- 9	VALVE 1CV8481A - PIPE	4 0.531	(FORG.)		PIPE)	Field 200	2250	U GPM	300	2485	150-550 GPM	acid in demin water)	AUX BIOG AIF 30		30 60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL- 10	4" PIPE	4 0.531"	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)	Aux Bldg Air		30 60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL- 11	PIPE - TEE	4 0.531"	SA376 GR.TP304 (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 30		30 60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL- 12	4"X4"X3" TEE	4 0.531"	SA403 GR.WP304 (FITTING)		Not Applicable	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air		30 60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg	ECCS-CVCL- 13	TEE - VALVE 1CV8485A	4 0.531"	SA403 GR.WP304		SA182 GR.F316 (FORG.)	Field 200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in domin water)	Aux Bldg Air 30		30 60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg	ECCS-CVCL- 14	VALVE 1CV8485A	4 0.531"	SA182 GR.F316		Not Applicable	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric	Aux Bldg Air		34.95 69.9		@100F		
Emergency Core Cooling Systems (ECCS)	(CVCL) Group 22 - CVCS to RCS Cold Leg	ECCS-CVCL- 15	VALVE 1CV8485A - ELBOW	4 0.531"	(FORG.) SA182 GR.F316		SA403 GR.WP304	Field 200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric	Aux Bldg Air 30		30 60		@100F		
Emergency Core Cooling Systems (ECCS)	(CVCL) Group 22 - CVCS to RCS Cold Leg	ECCS-CVCL- 16	PIPE - ELBOW	4 0.531*	(FORG.) SA376 GR.TP304	ł	(FITTING) SA403 GR.WP304	Shop 200	2250	0 GPM	300	2485	150-550 GPM	acid in demin water) Borated Water (2000-2500 ppm boric	Aux Bldg Air 30		30 60		@100F		
Emergency Core Cooling Systems (ECCS)	(CVCL) Group 22 - CVCS to RCS Cold Leg	ECCS-CVCL- 17	PIPE - PIPE	4 0.531"	(SMLS PIPE) SA376 GR.TP304		(FITTING) SA376 GR.TP304 (SMLS	Field 200	2250	0 GPM	300	2485	150-550 GPM	acid in demin water) Borated Water (2000-2500 ppm boric	Aux Bldg Air 30		30 60		@100F		
Emergency Core Cooling Systems (ECCS)	(CVCL) Group 22 - CVCS to BCS Cold Leg	ECCS-CVCL 18	TEE - PIPE	4 0.531*	(SMLS PIPE) SA403 GR WP304		PIPE) SA376 GR TP304 (SMLS	Field 200	2250	0 GPM	300	2485	150-550 GPM	acid in demin water) Borated Water (2000-2500 ppm boric	Aux Bida Air 30		30 60		@100E		
Energency core cooling Systems (ECCS)	(CVCL)		4.00000	4 0.331	(FITTING)		PIPE)	200	2200		300	2403	130-330 GI M	acid in demin water)	Aux bidg All 30				0.1001		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL- 19	4" ST TEE	4 0.531"	SA403 GR.WP304 (FITTING)		Not Applicable	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air		30 60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL- 20	TEE - CAP	4 0.531"	SA403 GR.WP304 (FITTING)		SA403 GR.WP304 I (FITTING)	Field 200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air 30		30 60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL- 21	SOCKOLET - PIPE	2 0.344"	SA182 GR.F304 (FORG.)		SA376 GR.TP304 (SMLS I 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		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg	ECCS-CVCL- 22	2" PIPE	2 0.344*	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)	Aux Bldg Air		30 60		@100F	EPIX-369: through wall crack at the socket weld due to bad weld and birth vibrational fatigue	
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg	ECCS-CVCL- 23	PIPE - ELBOW	2 0.344"	SA376 GR.TP304		SA182 GR.F304 (FORG.)	Field 200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric	Aux Bldg Air 39		30 60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg	ECCS-CVCL- 24	2" ELBOW	2 0.344*	(3ME3 FIFE) SA182 GR.F304		Not Applicable	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric	Aux Bldg Air		30 60		@100F	EPIX-296: socket weld from 2" elbow leaked due to fatigue	
Emergency Core Cooling Systems (ECCS)	(CVCL) Group 22 - CVCS to RCS Cold Leg	ECCS-CVCL- 25	ELBOW - PIPE	2 0.344*	(FORG.) SA182 GR.F304		SA376 GR.TP304 (SMLS	Field 200	2250	0 GPM	300	2485	150-550 GPM	acid in demin water) Borated Water (2000-2500 ppm boric	Aux Bldg Air 39		30 60		@100F		
Emergency Core Cooling Systems (ECCS)	(CVCL) Group 22 - CVCS to RCS Cold Leg	ECCS-CVCL- 26	PIPE - VALVE 1CV8480A	2 0.344"	(FORG.) SA376 GR.TP304		PIPE) SA182 GR.F316 (FORG.)	Field 200	2250	0 GPM	300	2485	150-550 GPM	acid in demin water) Borated Water (2000-2500 ppm boric	Aux Bldg Air 39		30 60		@100F		
Emergency Core Cooling Systems (ECCS)	(CVCL) Group 22 - CVCS to RCS Cold Leg	ECCS-CVCL-27	VALVE 1CV8480A	2 0.344*	(SMLS PIPE) SA182 GR E316		Not Applicable	200	2250	0 GPM	300	2485	150-550 GPM	acid in demin water) Borated Water (2000-2500 ppm boric	Aux Bldg Air		34.95 69.9		@100F		
Emergency Core Cooling Systems (ECCS)	(CVCL) Group 22 - CVCS to PCS Cold Log	ECCS-CVCL-28	TEE - VALVE 1CV/9297A	3 0.429"	(FORG.)		SA192 CP E216 (EOPC)	Eiold 200	2250	0 GPM	200	2495	150-550 GPM	acid in demin water) Borated Water (2000-2500 ppm boric	Aux Bida Air 20		30 60		@100E		
Energency core cooling Systems (ECCS)	(CVCL)	E003-0V0E-20		5 0.450	(FITTING)			200	2200		300	2405	130-330 GI M	acid in demin water)	Aux Bidg All 53				0.1005		
Emergency Core Cooling Systems (ECCS)	(CVCL)	ECCS-CVCE- 29	VALVE 1CV8487A	3 0.438	(FORG.)		Not Applicable	200	2250	U GPM	300	2485	150-550 GPM	acid in demin water)	Aux Bidg Air		34.95 69.9		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL- 30	VALVE 1CV8483A	3 0.438"	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		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL- 31	VALVE 1CV8483A - ELBOW	3 0.438"	SA182 GR.F316 (FORG.)		SA403 GR.WP316 I (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		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCI)	ECCS-CVCL- 32	ELBOW - 4*x3*REDUCER	3 0.438*	SA403 GR.WP316 (FITTING)		SA403 GR.WP316	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		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg	ECCS-CVCL- 33	4"X3" REDUCER	4 0.531*	SA403 GR.WP316		Not Applicable	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric	Aux Bldg Air		30 60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg	ECCS-CVCL- 34	4"X3"REDUCER - TEE	4 0.531"	SA403 GR.WP316		SA403 GR.WP316	Shop 200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric	Aux Bldg Air 30		30 60		@100F		
Emergency Core Cooling Systems (ECCS)	(CVCL) Group 22 - CVCS to RCS Cold Leg	ECCS-CVCL- 35	CAP - TEE	4 0.531"	SA403 GR.WP304		(FITTING) SA403 GR.WP304	Field 200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric	Aux Bldg Air 30		30 60		@100F		
Emergency Core Cooling Systems (ECCS)	(CVCL) Group 22 - CVCS to RCS Cold Leg	ECCS-CVCL- 36	TEE - VALVE 1SI8801B-2	4 0.531"	(FITTING) SA403 GR.WP304		(FITTING) SA182 GR.F316 (FORG.)	Field 200	2250	0 GPM	300	2485	150-550 GPM	acid in demin water) Borated Water (2000-2500 ppm boric	Aux Bldg Air 30		30 60		@100F		
Emergency Core Cooling Systems (ECCS)	(CVCL) Group 22 - CVCS to RCS Cold Leg	ECCS-CVCL- 37	VALVE 1CV8801B	4 0.531"	(FITTING) SA182 GR.F316		Not Applicable	200	2250	0 GPM	300	2485	150-550 GPM	acid in demin water) Borated Water (2000-2500 ppm boric	Aux Bldg Air		34.95 69.9		@100F		
Emergency Core Cooling Systems (ECCS)	(CVCL) Group 22 - CVCS to PCS Cold Log	ECCS-CVCL-28	VALVE 1SI88018-2 - DIDE	4 0.521"	(FORG.)		\$4276 CP TP204 (SMI S	Field 200	2250	0 GPM	200	2495	150-550 GPM	acid in demin water) Borated Water (2000-2500 ppm boric	Aux Bida Air 20		30 60		@100E		
Emergency core cooling Systems (ECCS)	(CVCL)	E000-0V0E-30		4 0.551	(FORG.)		PIPE)	200	2200		000	2405	150-550 OPM	acid in demin water)	Aux Didy All 30		50 60 80		84005		
Emergency Core Cooling Systems (ECCS)	(CVCL)	ECCS-CVCE- 39	TEE - 4 X3 REDUCER	4 0.531	(FITTING)		(FITTING)	Shop 200	2250	U GPM	300	2485	150-550 GPM	acid in demin water)	AUX BIOG AIF 30		30 60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL- 40	4"X3"REDUCER - ELBOW	3 0.438"	SA403 GR.WP316 (FITTING)		SA403 GR.WP316 (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		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL- 41	3" ELBOW	3 0.438"	SA403 GR.WP316 (FITTING)		Not Applicable	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air		30 60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL- 42	ELBOW - PIPE	3 0.438"	SA403 GR.WP316 (FITTING)		SA376 GR.TP304 (SMLS PIPE)	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		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg	ECCS-CVCL- 43	3" PIPE	3 0.438*	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)	Aux Bldg Air		30 60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg	ECCS-CVCL- 44	PIPE - ELBOW	3 0.438"	SA376 GR.TP304		SA403 GR.WP316	Shop 200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric	Aux Bldg Air 39		30 60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg	ECCS-CVCL- 45	PIPE - PIPE	3 0.438"	SA376 GR.TP304		SA376 GR.TP304 (SMLS	Field 200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric	Containment Air 39		30 60		@100F		
Emergency Core Cooling Systems (ECCS)	(CVCL) Group 22 - CVCS to RCS Cold Leg	ECCS-CVCL- 46	PIPE - VALVE 1SI8815	3 0.438*	(SMLS PIPE) SA376 GR.TP304		SA182 GR.F316 (FORG.)	Field 200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric	Containment Air 39		30 60		@100F		
Emergency Core Cooling Systems (ECCS)	(CVCL) Group 22 - CVCS to RCS Cold Leg	ECCS-CVCL- 47	PIPE - VALVE 1SI8801A-1	4 0.531"	(SMLS PIPE) SA376 GR.TP304		SA182 GR.F316 (FORG.)	Field 200	2250	0 GPM	300	2485	150-550 GPM	acid in demin water) Borated Water (2000-2500 ppm boric	Aux Bldg Air 30		30 60		@100F		
Emergency Core Cooling Systems (ECCS)	(CVCL) Group 22 - CVCS to RCS Cold Leg	ECCS-CVCI - 48	VALVE 1SI8801A-1 - TEE	4 0.531*	(SMLS PIPE) SA182 GR E316		SA403 GR WP304	Field 200	2250	0 GPM	300	2485	150-550 GPM	acid in demin water) Borated Water (2000-2500 ppm boric	Aux Bldg Air 30		30 60		@100F		
Emergency Care Caeling Systems (ECCS)	(CVCL)	ECC8 CVCL 40		2 0.429	(FORG.)		(FITTING)	Field 200	2250	0.0014	200	2495	150 550 CDM	acid in demin water)	Contoinmont Air 20		20 60		@ 100E		
Emergency core cooling Systems (ECCS)	(CVCL)	E003-0V0E- 49	VALVE 130615 - FIFE	5 0.436	(FORG.)		PIPE)	Field 200	2230	U GFW	300	2403	150-550 GFM	acid in demin water)	Containment Air 39		30 60		@ TOOP		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL- 50	PIPE - TEE	3 0.438"	SA376 GR.TP304 (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)	Containment Air 39		30 60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg (CVCL)	ECCS-CVCL- 51	TEE - PIPE	3 0.438"	SA403 GR.WP304 (FITTING)		SA376 GR.TP304 (SMLS I 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- 52	PIPE - BEND	3 0.438*	SA376 GR.TP304 (SMLS PIPE)		SA376 GR.TP304 (SMLS PIPE)	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	ECCS-CVCL- 53	BEND	3 0.438"	SA376 GR.TP304 (SMI S PIPE)		Not Applicable	200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Containment Air		30 60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg	ECCS-CVCL- 54	BEND - PIPE	3 0.438*	SA376 GR.TP304		SA376 GR.TP304 (SMLS	Field 200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric	Containment Air 39		30 60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to RCS Cold Leg	ECCS-CVCL- 55	PIPE - REDUCER	3 0.438"	SA376 GR.TP304		SA403 GR.WP304	Shop 200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric	Containment Air 39		30 60		@100F		
Emergency Core Cooling Systems (ECCS)	(CVCL) Group 22 - CVCS to RCS Cold Leg	ECCS-CVCL- 56	REDUCER - COUPLING	1.5 0.281"	(SMLS PIPE) SA403 GR.WP304		(FITTING) SA403 GR.WP304	Shop 200	2250	0 GPM	300	2485	150-550 GPM	acid in demin water) Borated Water (2000-2500 ppm boric	Containment Air 39		30 60		@100F		
Emergency Core Cooling Systems (ECCS)	(CVCL) Group 22 - CVCS to RCS Cold Leg	ECCS-CVCL- 57	TEE - PIPE	3 0.438*	(FITTING) SA403 GR.WP304		(FITTING) SA376 GR.TP304 (SMLS	Shop 200	2250	0 GPM	300	2485	150-550 GPM	acid in demin water) Borated Water (2000-2500 ppm boric	Containment Air 39		30 60		@100F		
Emergency Core Cooling Systems (ECCCS)	(CVCL) Group 22 - CVCS to PCS Cold L co	ECCS-CVCI-59	PIPE - REDUCEP	3 0 429*	(FITTING)		PIPE)	Shop 200	2250	0 GPM	300	2485	150-550 CPM	acid in demin water) Borated Water (2000-2500 ppr horiz	Containment Air 20		 20 60		@100E		
Encigency core couling systems (ECCS)	(CVCL)	E000-01/0E- 30	DEDUCED COURTING	0.430	(SMLS PIPE)		(FITTING)	01-04	0050		000	2405	450 550 OFW	acid in demin water)	Operation of the All 39				@ 100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - UVUS to RUS Cold Leg (CVCL)	EUUS-UVUL- 59	REDUCER - COUPLING	1.5 0.281"	SA403 GR.WP304 (FITTING)		GR403 GR.WP304 (FITTING)	anop 200	2250	u GPM	300	2460	100-050 GPM	porated vvater (2000-2500 ppm boric acid in demin water)	containment Air 39		au 60		⊌ 100F		

System Identification	Gro Identif	oup cation	Part P Identification Nu	Part umber	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 Outside Environment Environmen	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 (CVCL)	RCS Cold Leg	ECCS-CVCL- 60	:	3" PIPE - 1.5" SOCKOLET	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 Containment A acid in demin water)	ir 39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to (CVCL)	RCS Cold Leg	ECCS-CVCL- 61	F	PIPE - 3"X1.5" REDUCER	3	0.438"	SA376 GR.TP304 (SMLS PIPE)		SA403 GR.WP304 (FITTING)	Shop 200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric Containment A acid in demin water)	ir 39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to (CVCL)	RCS Cold Leg	ECCS-CVCL- 62	3	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 Containment A acid in demin water)	ir 39	30	60		@100F		
Emergency Care Cooling Systems (ECCS)	Group 22 - CVCS to (CVCL)	RCS Cold Leg	ECCS-CVCL- 63	E	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 Containment A acid in demin water)	ir 39	30	60		@100F	EPIX-557: High pressure vent stack line weld teaking due to weld defects, vioration, or metallurgical issues (SCC) LER 346 2002-009: avial cracks at the downstream end of the ASTM A356 FBM (316 SS)thermal sleven. Not reactor coolant and relatively cool makeup flow run through the line bypass flow was increased to 115 gpm in 1988 to decrease thermal stratification and minimize thermal cycle mixing. However, a flow degrees F50 gpm is recommended to eliminate the mixing zone.	
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to (CVCL)	RCS Cold Leg	ECCS-CVCL- 64	1	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 Containment A acid in demin water)	ir	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to (CVCL)	RCS Cold Leg	ECCS-CVCL- 65	F	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 Containment A acid in demin water)	ir 39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to (CVCL)	RCS Cold Leg	ECCS-CVCL- 66	1	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 Containment A acid in demin water)	ir	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to (CVCL)	RCS Cold Leg	ECCS-CVCL- 67	E	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 Containment A acid in demin water)	ir 39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to (CVCL)	RCS Cold Leg	ECCS-CVCL- 68	F	PIPE - 2"X11/2" 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 Containment A	ir 39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to	RCS Cold Leg	ECCS-CVCL- 69	2	2"X1½" 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 Containment A	ir	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to	RCS Cold Leg	ECCS-CVCL- 70	2	2"X1½" REDUCER - COUPLING	2	0.344"	SA182 GR.F304		SA182 GR.F304 (FORG.)	Field 200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric Containment A	ir 39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to	RCS Cold Leg	ECCS-CVCL- 71	c	COUPLING - PIPE	2	0.344"	SA182 GR.F304		SA376 GR.TP304 (SMLS	Field 200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric Containment A	ir 39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to	RCS Cold Leg	ECCS-CVCL- 72	F	PIPE - FLANGE	2	0.344"	SA376 GR.TP304		SA182 GR.F316 (FORG.)	Field 200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric Containment A	ir 39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to	RCS Cold Leg	ECCS-CVCL- 73	F	FLANGE - PIPE	2	0.344"	SA182 GR.F316		SA376 GR.TP304 (SMLS	Field 200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric Containment A	ir 39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to	RCS Cold Leg	ECCS-CVCL- 74	F	PIPE - COUPLING	2	0.344"	SA376 GR.TP304		SA182 GR.F304 (FORG.)	Field 200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric Containment A	ir 39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to	RCS Cold Leg	ECCS-CVCL- 75	c	COUPLING - 2"X11/2" REDUCER	2	0.344"	(SMES FIFE) SA182 GR.F304		SA182 GR.F304 (FORG.)	Field 200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric Containment A	ir 39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to	RCS Cold Leg	ECCS-CVCL- 76	2	2" X 1.5" REDUCER - PIPE	1.5	0.281"	(FORG.) SA182 GR.F304		SA376 GR.TP304 (SMLS	Field 200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric Containment A	ir 39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	Group 22 - CVCS to	RCS Cold Leg	ECCS-CVCL- 77	F	PIPE - VALVE 1SI8810A	1.5	0.281"	(FORG.) SA376 GR.TP304		SA182 GR.F316 (FORG.)	Field 200	2250	0 GPM	300	2485	150-550 GPM	acid in demin water) Borated Water (2000-2500 ppm boric Containment A	ir 39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	(CVCL) Group 22 - CVCS to	RCS Cold Leg	ECCS-CVCL- 78	\ \	VALVE 1SI8810A - PIPE	1.5	0.281"	(SMLS PIPE) SA182 GR.F316		SA376 GR.TP304 (SMLS	Field 200	2250	0 GPM	300	2485	150-550 GPM	acid in demin water) Borated Water (2000-2500 ppm boric Containment A	ir 39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	(CVCL) Group 22 - CVCS to	RCS Cold Leg	ECCS-CVCL- 79	F	PIPE - ELBOW	1.5	0.281"	(FORG.) SA376 GR.TP304		PIPE) SA182 GR.F304 (FORG.)	Field 200	2250	0 GPM	300	2485	150-550 GPM	acid in demin water) Borated Water (2000-2500 ppm boric Containment A	ir 39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	(CVCL) Group 22 - CVCS to	RCS Cold Leg	ECCS-CVCL- 80	F	PIPE - REDUCER	1.5	0.281"	(SMLS PIPE) SA376 GR.TP304		SA182 GR.F304 (FORG.)	Field 556 to 559	2250	M#/HR	650	2485	M#/HR	acid in demin water) Reactor Coolant Containment A	ir 39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	(CVCL) Group 22 - CVCS to	RCS Cold Leg	ECCS-CVCL- 81	\	VALVE 1SI8900A - PIPE	1.5	0.281"	(SMLS PIPE) SA182 GR.F316		SA376 GR.TP304 (SMLS	Field 556 to 559	2250	M#/HR	650	2485	M#/HR	Reactor Coolant Containment A	ir 39	30	60		@100F	+	
Emergency Core Cooling Systems (ECCS)	(CVCL) Group 22 - CVCS to	RCS Cold Leg	ECCS-CVCL- 82	F	PIPE - VALVE 1SI8900A	1.5	0.281"	(FORG.) SA376 GR.TP304		PIPE) SA182 GR.F316 (FORG.)	Field 556 to 559	2250	M#/HR	650	2485	M#/HR	Reactor Coolant Containment A	ir 39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	(CVCL) Group 22 - CVCS to	RCS Cold Leg	ECCS-CVCL- 83	E	ELBOW - PIPE	1.5	0.281"	(SMLS PIPE) SA182 GR.F304		SA376 GR.TP304 (SMLS	Field 200	2250	0 GPM	300	2485	150-550 GPM	Borated Water (2000-2500 ppm boric Containment A	ir 39	30	60		@100F		
Emergency Core Cooling Systems (ECCS)	(CVCL) Group 22 - CVCS to	RCS Cold Leg	ECCS-CVCL- 84	E	BIT SHELL ASSEMBLY			(FORG.) SA351 CF8A		PIPE) Not Applicable	200	2250	0 GPM	300	2485	150-550 GPM	acid in demin water) Borated Water (2000-2500 ppm boric Aux Bldg Air	+					+	
Emergency Core Cooling Systems (ECCS)	(CVCL) Group 22 - CVCS to	RCS Cold Leg	ECCS-CVCL- 85		BIT HEAD ASSEMBLY			SA240 TP304			200	2250	0 GPM	300	2485	150-550 GPM	acid in demin water) Borated Water (2000-2500 ppm boric Aux Bldg Air	+					+	
Emergency Core Cooling Systems (ECCS)	(CVCL) Group 22 - CVCS to	RCS Cold Leg	ECCS-CVCI - 86	F	BIT FORGINGS			SA182 GR E304			200	2250	0 GPM	300	2485	150-550 GPM	acid in demin water) Borated Water (2000-2500 ppm boric Aux Bida Air							
COO COUNTY COUCHE (2000)	(CVCL)		2000 0102-00					0.000			200						acid in demin water)							

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Material Thickness A in inches	Material W	Material B	Weld Type	Operating Temperature in oF	Operating Pressure in psi	Operating Flow OF	o in Pressure in ps	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 300 Pump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air		30.00	48.30	Not calculated	No secondary stres included - Design	3	
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 300 Pump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air		30.00	48.30	Not calculated	No secondary stres included - Design	3	
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 300 Pump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	31.40	30.00	48.30	Not calculated	No secondary stres	s	
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 300 Pump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air		30.00	48.30	Not	No secondary stres	8	
Emergency Core Cooling Systems (ECCS) Group :	23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	- 5	11/2" sockolet from elbow	4	0.337 SA182, GR. F304 or F316		Not Applicable	Shop	100	1500-1700	400 GPM 300 Pump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	31.33	34.95	48.20	Not calculated	No secondary stres included - Design	s LER 528-96-006:incomplete fusion at the root of the socket weld which made it susceptible to crack initialize and exactly a fear whether the socket for the socket set of	
Emergency Core Cooling Systems (ECCS) Group	23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	- 6	Elbow - Pipe	4	0.337 SA403 WP304/316		SA312 GR.TP304	Shop	100	1500-1700	400 GPM 300	1750	650 GPM	Borated Water (2000-2500 ppm	Aux Bldg Air	31.40	30.00	48.30	Not	No secondary stres	initiation and propagation from vibration.	
Emergency Core Cooling Systems (ECCS) Group	23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	- 7	Instrument nozzle from pipe - 3/4" or	4	(SMLS/WELDED) 0.337 SA182, F304 or F316		(SMLS PIPE) Not Applicable		100	1500-1700	Pump Rating 400 GPM 300	1750	650 GPM	boric acid in demin water) Borated Water (2000-2500 ppm	Aux Bldg Air		34.95	48.30	calculated Not	included - Design No secondary stres	3	
Emergency Core Cooling Systems (ECCS) Group	23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	- 8	less Straight pipe	4	0.337 SA312 GR.TP304		Not Applicable		100	1500-1700	Pump Rating 400 GPM 300	1750	650 GPM	boric acid in demin water) Borated Water (2000-2500 ppm	Aux Bldg Air		30.00	48.30	calculated Not	included - Design No secondary stres	s	
Emergency Core Cooling Systems (ECCS) Group	23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	- 9	Pipe - Valve 8922A	4	(SMLS PIPE) 0.337 SA312 GR.TP304		SA182. GR. F316	Field	100	1500-1700	Pump Rating 400 GPM 300	1750	650 GPM	boric acid in demin water) Borated Water (2000-2500 ppm	Aux Bldg Air	31.33	30.00	48.20	calculated Not	included - Design No secondary stres	s	
Emergency Core Cooling Systems (ECCS) Group	23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	- 10	Valve 8922A - Valve 8921A	4	(SMLS PIPE) 0.337 SA182, GR. F316		SA182, GR. F316	Field	100	1500-1700	Pump Rating 400 GPM 300	1750	650 GPM	boric acid in demin water) Borated Water (2000-2500 ppm	Aux Bldg Air	31.33	34.95	48.20	calculated Not	included - Design No secondary stres	s	
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	Pump Rating 400 GPM 300	1750	650 GPM	boric acid in demin water) Borated Water (2000-2500 ppm	Aux Bldg Air		34.95	48.30	calculated Not	included - Design No secondary stres	SLER 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	Field	100	1500-1700	Pump Rating 400 GPM 300	1750	650 GPM	boric acid in demin water) Borated Water (2000-2500 ppm	Aux Bldg Air	31.33	34.95	48.20	calculated Not	included - Design No secondary stres	s	
Emergency Core Cooling Systems (ECCS) Group	23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	- 13	Pipe - Flange	4	0.337 SA312 GR TP304		(SMLS/WELDED) SA182 GR E304 or		100	1500-1700	Pump Rating 400 GPM 300	1750	650 GPM	boric acid in demin water) Borated Water (2000-2500 ppm	Aux Bldg Air		30.00	48.30	calculated	included - Design	4	
Emergency Core Cooling Systems (ECCS) Group	23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	- 14	Flange	4	(SMLS PIPE) 0.337 SA182, GR, F304 or		F316 Not Applicable		100	1500-1700	Pump Rating 400 GPM 300	1750	650 GPM	boric acid in demin water) Borated Water (2000-2500 ppm	Aux Bldg Air		34.95	48.30	calculated Not	included - Design No secondary stres	sLER 445-96-005:flance socket weld located	
				-		F316						Pump Rating			boric acid in demin water)	-				calculated	included - Design stress only	outside the containment building had a 0.25" thru wall crack	
Emergency Core Cooling Systems (ECCS) Group 2	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 300 Pump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	31.33	30.00	48.20	Not calculated	No secondary stres included - Design	s	
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 300 Pump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air		30.00	48.30	Not calculated	No secondary stres included - Design	s	
Emergency Core Cooling Systems (ECCS) Group 2	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 300 Pump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	31.40	30.00	48.30	Not calculated	No secondary stres included - Design	s	
Emergency Core Cooling Systems (ECCS) Group 2	23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	- 18	Valve 8821A	4	0.337 SA182, GR. F316		Not Applicable		100	1500-1700	400 GPM 300 Pump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air		34.95	48.30	Not calculated	No secondary stres included - Design	s	
Emergency Core Cooling Systems (ECCS) Group 2	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 300 Pump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	31.33	34.95	48.20	Not calculated	No secondary stres included - Design	s	
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 300 Pump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	31.33	30.00	48.20	Not calculated	No secondary stres included - Design	s	
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 300 Pump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air		30.00	48.30	Not calculated	No secondary stres included - Design	s	
Emergency Core Cooling Systems (ECCS) Group	23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	- 22	3/4" sockolet from elbow	4	0.337 SA182, GR. F304 or F316		Not Applicable	Shop	100	1500-1700	400 GPM 300 Pump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Aux Bldg Air	31.33	34.95	48.20	Not calculated	No secondary stres	s 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 300 Pump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air	31.72	30.00	48.80	Not calculated	No secondary stres included - Design	8	
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 300 Pump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air		30.00	48.30	Not calculated	No secondary stres included - Design	8	
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 300 Pump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air	31.72	30.00	48.80	Not calculated	No secondary stres	s	
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 300 Pump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air	31.40	30.00	48.30	Not calculated	No secondary stres included - Design	s	
Emergency Core Cooling Systems (ECCS) Group 2	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 300 Pump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air		30.00	48.30	Not calculated	No secondary stres included - Design	s	
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 300 Pump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air	31.33	34.95	48.20	Not calculated	No secondary stres included - Design	s	
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 300 Pump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air		34.95	48.30	Not calculated	No secondary stres included - Design	s	
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 300 Pump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air	31.33	34.95	48.20	Not calculated	No secondary stres included - Design	s	
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 300 Pump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air		30.00	48.30	Not calculated	No secondary stres included - Design	s	
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 300 Pump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air	31.72	30.00	48.80	Not calculated	No secondary stres included - Design	s	
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 300 Pump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air		34.95	48.30	Not calculated	No secondary stres included - Design	s	
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 300 Pump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air	31.72	30.00	48.80	Not calculated	No secondary stres included - Design	s	
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 300 Pump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air		34.95	48.30	Not calculated	No secondary stres included - Design	s	
Emergency Core Cooling Systems (ECCS) Group 2	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 300 Pump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air	31.72	30.00	48.80	Not calculated	No secondary stres included - Design	s	
Emergency Core Cooling Systems (ECCS) Group 2	23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	- 37	Valve	2	0.344 SA182, GR. F304 or F316		Not Applicable		100	1500-1700	400 GPM 300 Pump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air		30.00	48.30	Not calculated	No secondary stres included - Design	s	
Emergency Core Cooling Systems (ECCS) Group 2	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 300 Pump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air		34.95	48.30	Not calculated	No secondary stres included - Design	s	
Emergency Core Cooling Systems (ECCS) Group 2	23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	- 39	Branch Connection Sockolet to 6" Line	2	0.344 SA182, GR. F304 or F316		SA376 GR. TP 304/316 (SMLS)	Field	100	1500-1700	400 GPM 300 Pump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air	31.33	34.95	48.20	Not calculated	No secondary stres included - Design stress only	INPOSB-A crack was found at the safe end to pipe weld on the High Pressure Injection to RCS cold 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	4	0.337 SA403 WP304/316 (SMLSAVELDED)		SA403 WP304/316	Field	100	1500-1700	400 GPM 300 Rump Rating	1750	650 GPM	Borated Water (2000-2500 ppm	Aux Bldg Air	31.40	30.00	48.30	Not	No secondary stres	s	
Emergency Core Cooling Systems (ECCS) Group	23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	- 41	Elbow - 4"x2" Reducer	4	0.337 SA403 WP304/316 (SMLS/WELDED)		SA182, GR. F304 or F316	Field	100	1500-1700	400 GPM 300 Pump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air	31.40	30.00	48.30	Not	No secondary stres	s	
Emergency Core Cooling Systems (ECCS) Group	23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	- 42	4"x2" Reducer	2	0.344 SA182, GR. F304 or E316		Not Applicable		100	1500-1700	400 GPM 300 Rump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in domin water)	Cont. Bldg. Air		34.95	48.30	Not	No secondary stres	s	
Emergency Core Cooling Systems (ECCS) Group	23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	- 43	4"x2" Reducer - Coupling	2	0.344 SA182, GR. F304 or E316		SA182, GR. F304 or	Field	100	1500-1700	400 GPM 300 Rump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air	31.33	34.95	48.20	Not	No secondary stres	s	
Emergency Core Cooling Systems (ECCS) Group	23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	- 44	Pipe - Tee	2	0.344 SA376 GR. TP 204/216 (SMLS)		SA182, GR. F304 or	Field	100	1500-1700	400 GPM 300 Rump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air	31.72	30.00	48.80	Not	No secondary stres	s	
Emergency Core Cooling Systems (ECCS) Group	23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	- 45	Straight Tee	2	0.344 SA182, GR. F304 or E316		Not Applicable		100	1500-1700	400 GPM 300 Bump Bating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air		34.95	48.30	Not	No secondary stres	\$	
Emergency Core Cooling Systems (ECCS) Group	23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	- 46	Flange	2	0.344 SA182, GR. F304 or E316		Not Applicable		100	1500-1700	400 GPM 300 Rump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air		34.95	48.30	Not	No secondary stres	s	
Emergency Core Cooling Systems (ECCS) Group	23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	47	Straight pipe	2	0.344 SA376 GR. TP 304/316 (SMI S)		Not Applicable	-	100	1500-1700	400 GPM 300 Pump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air		30.00	48.30	Not	No secondary stres	s	
Emergency Core Cooling Systems (ECCS) Group	23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	- 48	Elbow - Valve	2	0.344 SA182, GR. F304 or F316		SA182, GR. F304 or F316	-	100	1500-1700	400 GPM 300 Pump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air	31.33	34.95	48.20	Not	No secondary stres	g	
Emergency Core Cooling Systems (ECCS) Group	23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	- 49	Gate Valve	2	0.344 SA182, GR. F304 or F316		SA182, GR. F304 or F316	Field	100	1500-1700	400 GPM 300 Pump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air	31.33	34.95	48.20	Not	No secondary stres	s	
Emergency Core Cooling Systems (ECCS) Group	23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	- 50	Check Valve	2	0.344 SA182, GR. F304 or F316	1	SA182, GR. F304 or F316	Field	100	1500-1700	400 GPM 300 Pump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air	31.33	34.95	48.20	Not	No secondary stres	s	
Emergency Core Cooling Systems (ECCS) Group	23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	- 51	Pipe - Coupling	2	0.344 SA376 GR. TP 304/316 (SMLS)		SA182, GR. F304 or F316	Field	100	1500-1700	400 GPM 300 Pump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air	31.72	30.00	48.80	Not	No secondary stres	s	
Emergency Core Cooling Systems (ECCS) Group	23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	- 52	Tee - Pipe	2	0.344 SA182, GR. F304 or F316		SA376 GR. TP 304/316 (SMLS)	Field	100	1500-1700	400 GPM 300 Pump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air	31.33	34.95	48.20	Not	No secondary stres	s	
Emergency Core Cooling Systems (ECCS) Group	23 - SI Pump Discharge (SIPMPD)	ECCS-SIPMPD	- 53	Pipe - Valve	2	0.344 SA376 GR. TP 304/316 (SMLS)	1	SA182, GR. F304 or F316	Field	100	1500-1700	400 GPM 300 Pump Rating	1750	650 GPM	Borated Water (2000-2500 ppm boric acid in demin water)	Cont. Bldg. Air	31.72	30.00	48.80	Not	No secondary stres included - Design	s	

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness i inches	in Material A	Material W	Material B	Weld Type	Operating Temperature oF	Operating in Pressure in psi	Operating Flow	Design Temperature in oF	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal i Stress in k	Faulted si Stress in ks	CUF	Stress Comments	Operating Experience	General Comments	
Power Conversion Systems (PCS)	i) Group 24 - Main Steam (MS)	PCS-MS	-1	SG NOZZLE 1RC01BA	32	1.313"	SA508 CL.2A	N/A			527.6	1035 to 1235	4 million lbs/hr	500	1185	5	saturated steam <0.25% moistu content	ure CONT. with 3" type B insul		45.00	90.00	Not calculated	No secondary stress included - Design stress			
Power Conversion Systems (PCS)	i) Group 24 - Main Steam (MS)	PCS-MS	- 2	SAFE END - ELBOW	32	1.313"	SA350 GR.LF-2	SA23	34 GR.WPB	Field	527.6	1035 to 1235	4 million lbs/hr	500	1185	s	saturated steam <0.25% moistu	ure CONT. with 3" type B insul	23.00	22.95	45.90	Not	only No secondary stress included - Design stress			
Power Conversion Systems (PCS)	i) Group 24 - Main Steam (MS)	PCS-MS	- 3	32 x 31.25" Elbow	32	1.313" to 1.25	0" SA234 GR.WPB	N/A			527.6	1035 to 1235	4 million lbs/hr	500	1185		saturated steam <0.25% moistu	ure CONT. with 3" type B insul		28.05	53.80	Not	only No secondary stress			
Power Conversion Systems (PCS)	() Group 24 - Main Steam (MS)	PCS.MS	4	ELBOW - PIPE	30.25	1 250"	SA234 GR WPB	SA15	55 GR KC65	Shop	527.6	1035 to 1235	4 million lbs/br	500	1185	C	content	ure CONT with 3" type B insul	26.90	28.05	53.80	calculated	included - Design stress only No secondary stress	INPO101: thruwall leak at allow downstream in main		
	,,		_													d	content					calculated	included - Design stress only	steam pipes		
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS	- 5	Straight PIPE	30.25	1.250	SA155 GR.KU65	N/A			527.6	1035 to 1235	4 million ibs/nr	500	1185	5	saturated steam <0.25% moistu content	CON I. with 3" type B insul		25.95	51.90	calculated	included - Design stress only			
Power Conversion Systems (PCS)	 Group 24 - Main Steam (MS) 	PCS-MS	-6	3/4" SOL on 30.25" PIPE	3	1.250"	SA155 GR.KC65	SA15	55 GR.KC65	Shop	527.6	1035 to 1235	0	500	3000	s	saturated steam <0.25% moistu content	ure CONT. with 3" type B insul	27.00	25.95	51.90	Not calculated	No secondary stress included - Design stress	INPO529 Leak in Main Steam Drain Line. INPO818 - a steam leak was found near a Sensing Line for a flow		
Power Conversion Systems (PCS)	i) Group 24 - Main Steam (MS)	PCS-MS	-7	RT Acess Port - Bolted Cover	6" diamete	er 1.250"	SA155 GR.KC65	SA15	55 GR.KC65		527.6	1035 to 1235	0	500	1185		saturated steam <0.25% moistu	ure CONT, with 3" type B insul	27.00	25.95	51.90	Not	No secondary stress	the instrumentation tap.		
		200.140			00.05	1.0505	01155 00 1005	0.100		5 1.11	507.0	1005 - 1005	4 707 10 10		1.105		content		07.00	05.05	51.00	calculated	included - Design stress only			
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS	-8	PIPE - PENET. (1PC-078) PIPE	30.25	1.250	SA155 GR.KU65	5835	50 GR.LF-1	Field	527.6	1035 to 1235	4 million ibs/nr	500	1185	5	saturated steam <0.25% moistu content	ure CONT.	27.00	25.95	51.90	calculated	included - Design stress only			
	Group 24 - Main Steam (MS)	PCS-MS	- 9	MECHANICAL PENETRATION 1PC-078	36	1.250"	SA350 GR.LF-1	N/A			120	14.7	approx 15 cfm	500	150 (Cont. design)	0	Conditioned Air	CONT.		22.95	45.90	Not calculated	No secondary stress included - Design stress		Concentric portion of penetration is cooled by forced containment air	
Power Conversion Systems (PCS)	i) Group 24 - Main Steam (MS)	PCS-MS	- 10	PENETRATION (1PC-078) - PIPE	30.25	1.250"	SA350 GR.LF-1	SA15	55 GR.KC65	Field	527.6	1035 to 1235	4 million lbs/hr	500	1185	s	saturated steam <0.25% moistu content	ure VALVE ROOM	26.60	22.95	45.90	Not calculated	No secondary stress included - Design stress			
Power Conversion Systems (PCS)	i) Group 24 - Main Steam (MS)	PCS-MS	- 11	PIPE - TEE	30.25	1.250"	SA155 GR.KC65	SA23	34 GR.WPB	Shop	527.6	1035 to 1235	4 million lbs/hr	500	1185	s	saturated steam <0.25% moistu	ure VALVE ROOM with 3" type	27.00	25.95	51.90	Not	only No secondary stress included - Design stress			
Power Conversion Systems (PCS)	i) Group 24 - Main Steam (MS)	PCS-MS	- 12	30.25" x 28" TEE	30.25	1.250"	SA234 GR.WPB	N/A			527.6	1035 to 1235	4 million lbs/hr	500	1185		saturated steam <0.25% moistu	ure VALVE ROOM with 3" type	•	28.05	53.80	Not	only No secondary stress			
Power Conversion Systems (PCS)) Group 24 - Main Steam (MS)	PCS-MS	-13	TEE - PIPE	30.25	1 250"	SA234 GR WPB	SA15	55. GR KC65	Shop	527.6	1035 to 1235	4 million lbs/br	500	1185	C	content	B insulation	26.90	28.05	53.80	calculated Not	included - Design stress only No secondary stress	INPO617-A through wall steam leak developed in the		
	,,															c	content	B insulation				calculated	included - Design stress only	weld downstream of a coupling located in a steam line		
Power Conversion Systems (PCS)	 Group 24 - Main Steam (MS) 	PCS-MS	-14	12" WELDOLET on 30.25" PIPE	12	1.250"	SA155 GR.KC65	SA23	34 GR.WPB	Shop	527.6	1035 to 1235	23,000 lbs/hr	500	1185	s	saturated steam <0.25% moistu content	ure 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)	i) Group 24 - Main Steam (MS)	PCS-MS	- 15	WELDOLET - PIPE	12	0.688"	SA234 GR.WPB	SA10	06 GR.B	Shop	527.6	1035 to 1235	23,000 lbs/hr	500	1185	5	saturated steam <0.25% moistu content	URE VALVE ROOM with 3" type B insulation	26.90	28.05	53.80	Not calculated	No secondary stress included - Design stress			
Power Conversion Systems (PCS)	i) Group 24 - Main Steam (MS)	PCS-MS	- 16	12" STRAIGHT PIPE	12	0.688"	SA106 GR.B	N/A			527.6	1035 to 1235	23,000 lbs/hr	500	1185	s	saturated steam <0.25% moistu	ure VALVE ROOM with 3" type B insulation	•	26.85	53.60	Not calculated	only No secondary stress included - Design stress			
Power Conversion Systems (PCS)) Group 24 - Main Steam (MS)	PCS-MS	- 17	3" WELDOLET on 12" pipe	3	0.688"	SA106 GR.B	SA10	06 GR.B	Shop	527.6	1035 to 1235	23,000 lbs/hr	500	1185	2	saturated steam <0.25% moistu	ure VALVE ROOM with 3" type	26.80	26.85	53.60	Not	only No secondary stress			
Power Conversion Systems (PCS)) Group 24 - Main Steam (MS)	PCS-MS	- 18	PIPE - CAP	12	0.688"	SA106 GR.B	SA23	34 GR.WPB	Shop	527.6	1035 to 1235	0 4	500	1185		content saturated steam <0.25% moistu	B Insulation	26.80	26.85	53.60	Not	only No secondary stress			
Power Conversion Surtems (PCS)) Group 24 Main Steam (MS)	DCS MS	10	4" WELDOL ET an 20.26" DIRE	4	1 250"	SALEE OR KORE	8422	24 CR WDR	Shop	E27 6	1025 to 1225	0	500	1195		content	B insulation	27.00	26.05	E1 00	calculated	included - Design stress only			
- ower conversion systems (FCS)	(W3)	r 63-113	- 13	4 WEEDOEET ON 3023 FIFE	*	1.230	SATS GR.ROS	3420	54 GILINFD	апор	327.0	1033 10 1233	0	500	1105	ć	content	B insulation	27.00	23.85	51.80	calculated	included - Design stress only			
Power Conversion Systems (PCS)	i) Group 24 - Main Stearn (MS)	PCS-MS	- 20	PIPE - VALVE 1MS001A	30.25	1.250"	SA155 GR.KC65	SA21	16 GR.WCB	Field	527.6	1035 to 1235	4 million lbs/hr	500	1185	s	saturated steam <0.25% moistu content	ure 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)	i) Group 24 - Main Steam (MS)	PCS-MS	-21	MSIV - 1MS001A	30.25	1.250"	SA216 GR.WCB	N/A			527.6	1035 to 1235	4 million lbs/hr	500	1185	5	saturated steam <0.25% moistu content	URE VALVE ROOM with 3" type B insulation	•	27.60	55.20	Not calculated	No secondary stress included - Design stress			
Power Conversion Systems (PCS)	i) Group 24 - Main Steam (MS)	PCS-MS	- 22	VALVE 1MS001A - PIPE	30.25	1.250"	SA216 GR.WCB	SA15	55 GR.KC65	Field	527.6	1035	4 million lbs/hr	500	1185	s	saturated steam <0.25% moistu	ure VALVE ROOM with 3" type B insulation	27.60	27.60	55.20	Not calculated	only No secondary stress included - Design stress			
Power Conversion Systems (PCS)	i) Group 24 - Main Steam (MS)	PCS-MS	- 23	PIPE to HP TURBINE	30.25	1.250"	SA155 GR.KC65	N/A			527.6	1035	4 million lbs/hr	500	1185	e	saturated steam <0.25% moistu	ure VALVE ROOM with 3" type	,	25.95	51.90	Not	only No secondary stress	INPO260-A steam leak in piping under the High		
Power Conversion Systems (PCS)) Group 24 - Main Steam (MS)	PCS-MS	- 24	TEE - PIPE	28	1.188"	SA234 GR.WPB	SA15	55 GR.KC65	Field	527.6	1035	0 to 4 00,000	500	1185	5	saturated steam <0.25% moistu	ure VALVE ROOM with 3" type	26.80	28.05	53.60	Not	only No secondary stress	wall at a fitting upstream of Drain Valve.		
		200.140	0.5			1.100	01155 00 1005				507.0	1005	lbs/hr		1.105		content	B insulation		05.05	51.00	calculated	included - Design stress only			
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS	-25	STRAIGHT PIPE	28	1.186	5A155 GR.KU65	N/A			527.6	1035	0 to 4 00,000 1 lbs/hr	500	1185	s c	saturated steam <0.25% moistu content	B insulation		25.95	51.90	calculated	no secondary stress included - Design stress only			
Power Conversion Systems (PCS)	i) Group 24 - Main Steam (MS)	PCS-MS	-26	8" WELDOLET on 28" PIPE	8	1.188"	SA155 GR.KC65	SA23	34 GR.WPB	Shop	527.6	1035	0 to 4 00,000 (lbs/hr	500	1185	5	saturated steam <0.25% moistu content	ure VALVE ROOM with 3" type B insulation	27.00	25.95	51.90	Not calculated	No secondary stress included - Design stress			
Power Conversion Systems (PCS)	i) Group 24 - Main Steam (MS)	PCS-MS	- 27	WELDOLET - PIPE	8	0.906"	SA234 GR.WPB	SA10	06 GR.B	Shop	527.6	1035	0 to 4 00,000 (lbs/hr	500	1185	s	saturated steam <0.25% moistu content	ure VALVE ROOM with 3" type B insulation	26.80	28.05	53.60	Not calculated	No secondary stress included - Design stress			
Power Conversion Systems (PCS)	i) Group 24 - Main Steam (MS)	PCS-MS	-28	PIPE - ELBOW	8	0.906"	SA106 GR.B	SA23	34 GR.WPB	Field	527.6	1035	0 to 4 00,000	500	1185	s	saturated steam <0.25% moistu	ure VALVE ROOM with 3" type B insulation	26.80	26.85	53.60	Not	only No secondary stress included - Design stress			
Power Conversion Systems (PCS)) Group 24 - Main Steam (MS)	PCS-MS	- 29	ELBOW - PIPE	8	0.906"	SA234 GR.WPB	SA10	06 GR.B	Shop	527.6	1035	0 to 4 00,000	500	1185	e	saturated steam <0.25% moistu	ure VALVE ROOM with 3" type	26.80	28.05	53.60	Not	only No secondary stress			
Power Conversion Systems (PCS)) Group 24 - Main Steam (MS)	PCS-MS	- 30	PIPE - VALVE 1MS019A	8	0.906"	SA106 GR.B	SA21	16 GR.WCB	Field	527.6	1035	0 to 4 00,000	500	1185	5	content saturated steam <0.25% moistu	B insulation ure VALVE ROOM with 3" type	26.80	26.85	53.60	Not	only No secondary stress			
Power Conversion Systems (PCS)	() Group 24 - Main Steam (MS)	PCS_MS	31	Isolation Value 1MS0104	8	0.906	SA216 GR WCB	N/A			527.6	1035	lbs/hr	500	1185		content	B insulation		27.60	55.20	calculated	included - Design stress only No secondary stress			
	(interpretation of the second se	100 110			0	0.000	0.210 0.0100				627.0	1000	lbs/hr		1100	c	content	B insulation		27.00	00.20	calculated	included - Design stress only			
Power Conversion Systems (PCS)	 Group 24 - Main Steam (MS) 	PCS-MS	- 32	VALVE 1MS019A - ELBOW	8	0.906"	SA216 GR.WCB	SA23	34 GR.WPB		527.6	1035	0 to 4 00,000 lbs/hr	500	1185	s	saturated steam <0.25% moistu content	ure 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)	i) Group 24 - Main Steam (MS)	PCS-MS	-33	ELBOW - PIPE	8	0.906"	SA234 GR.WPB	SA10	06 GR.B		527.6	1035	0 to 4 00,000 (lbs/hr	500	1185	s	saturated steam <0.25% moistu content	URE VALVE ROOM with 3" type B insulation	26.80	28.05	53.60	Not calculated	No secondary stress included - Design stress			
Power Conversion Systems (PCS)	i) Group 24 - Main Steam (MS)	PCS-MS	- 34	PIPE - 8"X6" REDUCER	8	0.906"	SA106 GR.B	SA23	34 GR.WPB		527.6	1035	0 to 4 00,000 (lbs/hr	500	1185	s	saturated steam <0.25% moistu content	ure VALVE ROOM with 3" type B insulation	26.80	26.85	53.60	Not calculated	No secondary stress included - Design stress			
Power Conversion Systems (PCS)	i) Group 24 - Main Steam (MS)	PCS-MS	-35	8"X6" REDUCER - VALVE	6	0.719"	SA234 GR.WPB	SA21	16 GR.WCC		527.6	1035	0 to 4 00,000	500	1185	8	saturated steam <0.25% moistu	ure VALVE ROOM with 3" type	26.80	28.05	53.60	Not	only No secondary stress			
Power Conversion Systems (PCS)	i) Group 24 - Main Steam (MS)	PCS-MS	- 36	6" RELIEF VALVE	6	0.719"	SA216 GR.WCC	N/A			527.6	1035	0 to 4 00,000	500	1185	400,000 lbs/hr s	saturated steam <0.25% moistu	ure VALVE ROOM with 3" type	1	27.60	55.20	Not	only No secondary stress			
Power Conversion Systems (PCS)) Group 24 - Main Steam (MS)	PCS-MS	- 37	PIPE - ELBOW	28	1 188"	SA155 GR KC65	SA23	34 GR WPB	Shop	527 6	1035 to 1235	lbs/hr 0 to 4 85 000	500	1185	C	content	B insulation	27.00	25.95	51 90	calculated Not	included - Design stress only No secondary stress			
													lbs/hr			c	content	B insulation				calculated	included - Design stress only			
Power Conversion Systems (PCS)	 Group 24 - Main Steam (MS) 	PCS-MS	-38	28° ELBOW	28	1.188"	SA234 GR.WPB	N/A			527.6	1035 to 1235	0 to 4 85,000 (lbs/hr	500	1185	s 0	saturated steam <0.25% moistu content	B insulation		28.05	53.60	Not calculated	No secondary stress included - Design stress only			
Power Conversion Systems (PCS)	i) Group 24 - Main Steam (MS)	PCS-MS	- 39	ELBOW - PIPE	28	1.188"	SA234 GR.WPB	SA15	55 GR.KC65	Field	527.6	1035 to 1235	0 to 4 85,000 lbs/hr	500	1185	s	saturated steam <0.25% moistu content	ure VALVE ROOM with 3" type B insulation	26.80	28.05	53.60	Not calculated	No secondary stress included - Design stress	LER285-97-003:steam line ruptured at a large radius elbow due to FAC		
Power Conversion Systems (PCS)	i) Group 24 - Main Steam (MS)	PCS-MS	-40	Straight PIPE	28	1.188"	SA155 GR.KC65	N/A			527.6	1035 to 1235	0 to 4 85,000 (lbs/hr	500	1185	s	saturated steam <0.25% moistu content	ure VALVE ROOM with 3" type B insulation	•	25.95	51.90	Not calculated	No secondary stress included - Design stress			
Power Conversion Systems (PCS)	i) Group 24 - Main Steam (MS)	PCS-MS	-41	PIPE - SADDLE	28	1.188"	SA155 GR.KC65	SA23	34 GR.WPB	Shop	527.6	0	0 1	500	1185	r r	einforcement for the relief valve	e VALVE ROOM with 3" type B insulation	27.00	25.95	51.90	Not	only No secondary stress included - Design stress			
Power Conversion Systems (PCS)	i) Group 24 - Main Steam (MS)	PCS-MS	-42	SADDLE - PIPE	6	0.719"	SA234 GR.WPB	SA10	05	Shop	527.6	0	0 to 4 85,000	500	1185	8	saturated steam <0.25% moistu	ure VALVE ROOM with 3" type	26.80	28.05	53.60	Not	only No secondary stress	INPO941-steam leak at the U-2 Main Turbine doghouse		
Power Conversion Sustams (DOC)) Group 24 - Main Steam (MS)	DOG NO	43		6	0.710*	SA155 CR KCCF	0.440	05	Shor	527.6	1035 to 1225	Ibs/hr	500	1185		content	B insulation	27.00	25.05	51.00	calculated	Included - Design stress only	at Cold Reheat Steam to MSR Shell Side piping		
- Swer Conversion Systems (PCS)	, Group 24 - mail Otean (MO)	PUS-MS		to 28" PIPE		0.118	GRIGG GR.NU65	SATU		anop	027.0	1033 10 1235	lbs/hr			6	content	B insulation	. 21.00	23.83	01.00	calculated	included - Design stress only			
Power Conversion Systems (PCS)	i) Group 24 - Main Steam (MS)	PCS-MS	-44	6" PIPE BRANCH	6	0.719"	SA105	SA10	05	Shop	527.6	1035 to 1235	0 to 4 85,000 lbs/hr	500	1185	s	saturated steam <0.25% moistu content	ure 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)	i) Group 24 - Main Steam (MS)	PCS-MS	-45	FLANGE	6	0.719"	SA105	N/A			527.6	1035 to 1235	0 to 4 85,000 lbs/hr	500	1500	s	saturated steam <0.25% moistu content	ure VALVE ROOM		27.60	55.20	Not calculated	No secondary stress included - Design stress	INPO288-Through wall leak at the flange of MSR pipe in excess steam return line to main steam.		
Power Conversion Systems (PCS)	i) Group 24 - Main Steam (MS)	PCS-MS	-46	RELIEF VALVE - MS017A	6	0.719"	SA105	N/A		1	527.6	1035 to 1235	0 to 4 85,000 (lbs/hr	500	1175	485,000 lbs/hr	saturated steam <0.25% moistu content	ure VALVE ROOM	1	27.60	55.20	Not calculated	only No secondary stress included - Design stress		1175 is relief valve opening setpoint	
	1	1	1	1	1	1	1	1 1		1		1			1	i l		1	1	1	1	1	only	1	1	1

System Identification	Group Identification	Part Par Identification Num	art 1ber	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 S	Normal tress in ks	Faulted i Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-47	Stra	aight PIPE	28	1.188	SA155 GR.KC65		5A155 GR.KC65	Shop	527.6	1035 to 1235	0 to 4 85,000 lbs/hr	600	1185		content	B insulation	27.00 2	5.95	51.90	calculated	No secondary stress included - Design stress only		Note: stated design pressure is below relier valve setpoint
Power Conversion Systems (PCS)	Group 24 - Main Stearn (MS)	PCS-MS-48	PIP	PE - 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 2	5.95	51.90	Not calculated	No secondary stress included - Design stress only		Note: stated design pressure is below relief valve setpoint
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-49	SAL	DDLE - 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 2	8.05	53.60	Not calculated	No secondary stress included - Design stress only		Note: stated design pressure is below relief valve setpoint
Power Conversion Systems (PCS)	Group 24 - Main Stearn (MS)	PCS-MS-50	6" P to 2	PIPE BRANCH CONNECTION 0 28" PIPE	6	0.719"	SA155 GR.KC65		SA105	Shop	527.6	1035 to 1235	0 to 4 85,000 Ibs/hr	600	1185		saturated steam <0.25% moisture content	VALVE ROOM with 3" type B insulation	27.00 2	5.95	51.90	Not calculated	No secondary stress included - Design stress		Note: stated design pressure is below relief valve setpoint
Power Conversion Systems (PCS)	Group 24 - Main Stearn (MS)	PCS-MS-51	6" P	PIPE BRANCH	6	0.719"	SA105	:	SA105	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 2	7.60	54.00	Not calculated	No secondary stress included - Design stress		Note: stated design pressure is below relief valve setpoint
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-52	FLA	ANGE	6	0.719"	SA105		N/A		527.6	1035 to 1235	0 to 4 85,000 lbs/hr	600	1500		saturated steam <0.25% moisture content	VALVE ROOM	2	7.60	54.00	Not calculated	only No secondary stress included - Design stress		
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-53	REL	LIEF VALVE - MS016A	6	0.719"	SA105		N/A		527.6	1035 to 1235	0 to 4 85,000	600	1190	485,000 lbs/hr	saturated steam <0.25% moisture	VALVE ROOM	2	7.60	54.00	Not	only No secondary stress included - Design stress		1195 psi is relief valve opening setpoint
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-54	Stra	aight PIPE	28	1.188"	SA155 GR.KC65		SA155 GR.KC65	Shop	527.6	1035 to 1235	0 to 4 85,000	600	1185		saturated steam <0.25% moisture	VALVE ROOM with 3" type	27.00 2	5.95	51.90	Not	only No secondary stress		Note: stated design pressure is below relief valve setpoint
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-55	PIP	PE - SADDLE	28	1.188"	SA155 GR.KC65		SA234 GR.WPB	Shop	527.6	0	0	600	1185		reinforcement for the relief valve	VALVE ROOM with 3" type	27.00 2	5.95	51.90	Not	only No secondary stress		Note: stated design pressure is below relief valve setpoint
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-56	SAL	DDLE - PIPE	6	0.719"	SA234 GR.WPB		SA105	Shop	527.6	0	0 to 4 85,000	600	1185		pipe connection saturated steam <0.25% moisture	B insulation VALVE ROOM with 3" type	26.80 2	8.05	53.60	calculated Not	included - Design stress only No secondary stress		Note: stated design pressure is below relief valve setpoint
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-57	6" P	PIPE BRANCH CONNECTION	6	0 719"	SA155 GR KC65		SA105	Shop	527.6	1035 to 1235	lbs/hr 0 to 4 85 000	600	1185		content saturated steam <0.25% moisture	B insulation	27.00 2	5.95	51.90	calculated	included - Design stress only No secondary stress		Note: stated design pressure is below relief valve setopint
Deven Conversion Systems (PCC)	Come 24 Main Street (45)	DCC MC 70	to 2	28" PIPE		0.7405	CAAOF		CA405	Chan	F07.0	1005 - 1005	lbs/hr	600	4405		content	B insulation	07.00	7.00	65 00	calculated	included - Design stress only		
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PC3-M3-56	0 P	PIPE BRANCH	0	0.719	54105		5A105	Shop	527.6	1035101235	0 10 4 85,000 Ibs/hr	800	1165		content	B insulation	27.00 2	7.60	55.20	calculated	included - Design stress only		Note, stated design pressure is below relief valve setpolitic
Power Conversion Systems (PCS)	Group 24 - Main Stearn (MS)	PCS-MS-59	FLA	ANGE	6	0.719"	SA105		N/A		527.6	1035 to 1235	0 to 4 85,000 lbs/hr	600	1500		saturated steam <0.25% moisture content	VALVE ROOM	2	7.60	55.20	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-60	REL	LIEF VALVE - MS015A	6	0.719"	SA105		N/A		527.6	1035 to 1235	0 to 4 85,000 lbs/hr	600	1205	485,000 lbs/hr	saturated steam <0.25% moisture content	VALVE ROOM	2	7.60	55.20	Not calculated	No secondary stress included - Design stress		1195 is relief valve opening setpoint
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-61	Stra	aight PIPE	28	1.188"	SA155 GR.KC65		N/A		527.6	1035 to 1235	0 to 4 85,000 Ibs/hr	600	1185		saturated steam <0.25% moisture content	VALVE ROOM with 3" type B insulation	2	5.95	51.90	Not calculated	No secondary stress included - Design stress		Note: stated design pressure is below relief valve setpoint
Power Conversion Systems (PCS)	Group 24 - Main Stearn (MS)	PCS-MS-62	PIP	PE - 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 2	5.95	51.90	Not calculated	No secondary stress included - Design stress		Note: stated design pressure is below relief valve setpoint
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-63	SAL	DDLE - PIPE	6	0.719"	SA234 GR.WPB		SA105	Shop	527.6	0	0 to 4 85,000	600	1185		saturated steam <0.25% moisture content	VALVE ROOM with 3" type B insulation	26.80 2	8.05	53.60	Not calculated	only No secondary stress included - Design stress		Note: stated design pressure is below relief valve setpoint
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-64	6" P	PIPE BRANCH CONNECTION	6	0.719"	SA155 GR.KC65		SA105	Shop	527.6	1035 to 1235	0 to 4 85,000	600	1185		saturated steam <0.25% moisture	VALVE ROOM with 3" type	27.00 2	5.95	51.90	Not	only No secondary stress		Note: stated design pressure is below relief valve setpoint
Power Conversion Systems (PCS)	Group 24 - Main Stearn (MS)	PCS-MS-65	6" P	PIPE BRANCH	6	0.719"	SA105		SA105	Shop	527.6	1035 to 1235	0 to 4 85,000	600	1185		saturated steam <0.25% moisture	VALVE ROOM with 3" type	27.60 2	7.60	55.20	Not	only No secondary stress		Note: stated design pressure is below relief valve setpoint
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-66	FLA	ANGE	6	0.719"	SA105		N/A		527.6	1035 to 1235	lbs/hr 0 to 4 85,000	600	1500		saturated steam <0.25% moisture	B insulation VALVE ROOM	2	7.60	55.20	calculated Not	included - Design stress only No secondary stress		
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-67	REI	LIFE VALVE - MS014A	6	0.719"	S&105		N/A		527.6	1035 to 1235	lbs/hr	600	1220	485.000 lbs/br	content	VALVE ROOM	2	7 60	55.20	calculated	included - Design stress only No secondary stress		1215 nsi is ratief valve opening setopint
	Gloup 24 - Main Steam (MS)	P00-110-07									527.0	1005 10 1205	lbs/hr	000	1220	403,000 108/11	content		-		51.00	calculated	included - Design stress only		
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-68	Stra	aight PIPE	28	1.188	SA155 GR.KU65		N/A		527.6	1035 to 1235	0 to 4 85,000 lbs/hr	600	1185		saturated steam <0.25% moisture content	B insulation	2	5.95	51.90	calculated	no secondary stress included - Design stress only		Note: stated design pressure is below relier valve setpoint
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-69	PIP	PE - 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 2	5.95	51.90	Not calculated	No secondary stress included - Design stress only		Note: stated design pressure is below relief valve setpoint
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-70	SAL	DDLE - PIPE	6	0.719"	SA234 GR.WPB	1	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 2	8.05	53.60	Not calculated	No secondary stress included - Design stress		Note: stated design pressure is below relief valve setpoint
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-71	6" P to 2	PIPE BRANCH CONNECTION (28" PIPE	6	0.719"	SA155 GR.KC65		SA105	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 2	7.60	54.00	Not calculated	No secondary stress included - Design stress		Note: stated design pressure is below relief valve setpoint
Power Conversion Systems (PCS)	Group 24 - Main Stearn (MS)	PCS-MS-72	6* P	PIPE BRANCH	6	0.719"	SA105		SA105	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	27.60 2	7.60	55.20	Not calculated	No secondary stress included - Design stress		Note: stated design pressure is below relief valve setpoint
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-73	FLA	ANGE	6	0.719"	SA105		N/A		527.6	1035 to 1235	0 to 4 85,000	600	1500		saturated steam <0.25% moisture content	VALVE ROOM	2	7.60	55.20	Not calculated	only No secondary stress included - Design stress		
Power Conversion Systems (PCS)	Group 24 - Main Stearn (MS)	PCS-MS-74	REL	LIEF VALVE - MS013A	6	0.719"	SA105		N/A		527.6	1035 to 1235	0 to 4 85,000	600	1235	485,000 lbs/hr	saturated steam <0.25% moisture	VALVE ROOM	2	7.60	55.20	Not	only No secondary stress		1235 psi is relief valve opening setpoint
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-75	Stra	aight PIPE	28	1.188"	SA155 GR.KC65		SA155 GR.KC65	Shop	527.6	1035 to 1235	0	600	1185		saturated steam <0.25% moisture	VALVE ROOM with 3" type	27.00 2	5.95	51.90	Not	only No secondary stress		Note: stated design pressure is below relief valve setpoint
Power Conversion Systems (PCS)	Group 24 - Main Stearn (MS)	PCS-MS-76	PIP	PE - END CAP	28	1.188"	SA155 GR.KC65		SA234 GR.WPB	Shop	527.6	1035 to 1235	0	600	1185		saturated steam <0.25% moisture	B insulation VALVE ROOM with 3" type	27.00 2	5.95	51.90	calculated Not	included - Design stress only No secondary stress		Note: stated design pressure is below relief valve setpoint
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-77	4" \	WELDOLET to 4" PIPE	4		SA155 GR.KC65		SA105	Shop	445	1035	11.900 lbs/hr	600	1185		content saturated steam <0.25% moisture	B insulation VALVE ROOM with 2" type	27.00 2	5.95	51.90	calculated Not	included - Design stress only No secondary stress		
Power Conversion Sustems (PCS)	Group 24, Majo Steam (MS)	DCS MS 79	4-1		4		SA106		SAILEE OR KORE	Field	445	1025	11.000 lbs/br	600	1195		content	B insulation	27.60	7.60	EE 20	calculated	included - Design stress only		
	croup 24 main croam (mo)	100 110					0,1100				110	1000	11,500 100111		1100		content	B insulation	27.00		00.20	calculated	included - Design stress only		
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-79	4" 1	ELBOW TO VALVE	4		SA155 GR.KC65	:	SA234 GR.WPB	Field	445	1035	11,900 lbs/hr	600	1185		saturated steam <0.25% moisture content	VALVE ROOM with 2" type B insulation	27.00 2	5.95	51.90	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-80	VA	ALVE MS 101A	4		SA155 GR.KC65		N/A		445	1035	11,900 lbs/hr	600	1185		saturated steam <0.25% moisture content	VALVE ROOM with 2" type B insulation	2	5.95	51.90	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 24 - Main Stearn (MS)	PCS-MS-81	VA	ALVE TO PIPE	4		SA155 GR.KC65		SA105	Field	445	1035	11,900 lbs/hr	600	1185		saturated steam <0.25% moisture content	VALVE ROOM with 2" type B insulation	27.00 2	5.95	51.90	Not calculated	No secondary stress included - Design stress		
Power Conversion Systems (PCS)	Group 24 - Main Stearn (MS)	PCS-MS-82	PIP	PE TO MFW PUMP Turbine	4		SA105	:	SA105	Field	445	1035	11,900 lbs/hr	600	1185		saturated steam <0.25% moisture content	VALVE ROOM with 2" type B insulation	27.60 2	7.60	55.20	Not calculated	No secondary stress included - Design stress		Steam Suppy for MFW Pump Turbine
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-83	3" \	WELDOLET to 3" PIPE	3		SA155 GR.KC65		SA105	Shop	445	1035	11,900 lbs/hr	600	1185		saturated steam <0.25% moisture content	VALVE ROOM with 2" type B insulation	27.00 2	5.95	51.90	Not calculated	only No secondary stress included - Design stress		
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-84	3" [PIPE TO ELBOW	3		SA105		SA155 GR.KC65	Field	445	1035	11,900 lbs/hr	600	1185		saturated steam <0.25% moisture	VALVE ROOM with 2" type B insulation	27.60 2	7.60	55.20	Not	only No secondary stress included - Design stress		
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-85	3" 8	ELBOW TO VALVE	3		SA155 GR.KC65		SA234 GR.WPB	Field	445	1035	11,900 lbs/hr	600	1185		saturated steam <0.25% moisture	VALVE ROOM with 2" type	27.00 2	5.95	51.90	Not	only No secondary stress		
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-86	VA	ALVE MS 20A	3		SA155 GR.KC65		N/A		445	1035	11,900 lbs/hr	600	1185		saturated steam <0.25% moisture	VALVE ROOM with 2" type	2	5.95	51.90	Not	only No secondary stress		
Power Conversion Systems (PCS)	Group 24 - Main Stearn (MS)	PCS-MS-87	VA	ALVE TO PIPE	3		SA155 GR.KC65		SA105	Field	445	1035	11,900 lbs/hr	600	1185		saturated steam <0.25% moisture	B insulation VALVE ROOM with 2" type	27.00 2	5.95	51.90	Not	included - Design stress only No secondary stress		
Power Conversion Systems (PCS)	Group 24 - Main Steam (MS)	PCS-MS-88	VA	LVE MS21A	3		SA155 GR KC65		N/A		445	1035	11.900 lbs/br	600	1185		content saturated steam <0 25% moieture	B insulation		5.95	51.90	calculated	included - Design stress only No secondary stress		
Power Conversion Systems (PCC)	Group 24 - Main Stoom (MS)	PCc MC 60	Din	PE TO MEW PI IMP Turking	3		SA155 GP KCEF		S&105	Field	445	1035	11 000 lbs/k-	600	1185		content	B insulation	27.00	5.05	51.90	calculated	included - Design stress only	INPOS22/542-Steam lank in Stoom Con-	Steam Suppy for MEW Pump Turking
. ower conversion systems (PCS)	Sroup 24 - mail Oldatti (MO)	1.00-000	rir	. C . O WE W FOMP TUDDIE .	2		GR.R000			. 1014	+10	.000	. 1,800 IDS/NF	500	. 103		content	B insulation	21.00 2		51.80	calculated	included - Design stress only	Feedwater Pump (SGFP) Inlet Piping. The leak appeared to be at a weld at or near vent valve.	econ supprior in it runp runp
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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 mperature in oF	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ks	Normal i Stress in k	Faulted si Stress in ksi	CUF	Stress Operating Comments 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	3 5	6A508 CL.2A	Shop	250 to 450	655	600	12	200	19,800 GPM/pump	Treated/demineralized Water	CONT. with 3 ^e mirror insulation	26.90	26.85	53.70	Not calculated	No secondary stress LER 275-92-022: cracking due to thermal included - Design stress stratification induced fatigue [during Modes 2 only (Startup) and 3(Hot Standby), and during Mode 1 (Power Operation) below 12percent	:	
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW	1- 2	ELBOW - SAFE END	16	1.219"	SA234 GR.WP2	12 S	B-166 (I-690)	Field	250 to 450	655	600	12	200	19,800 GPM/pump	Treated/demineralized Water	CONT. with 3" mirror insulation	26.90	26.85	53.70	Not calculated	power] No secondary stress included - Design stress	+	+
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW	/- 3	PIPE - ELBOW	16	0.844"	SA106 GR.B	s	A234 GR.WP22	Field	250 to 450	655	600	12	200	19,800 GPM/pump	Treated/demineralized Water	CONT. with 3" mirror insulation	26.80	26.85	53.60	Not calculated	only No secondary stress included - Design stress		
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW	/- 4	PIPE	16	0.844"	SA106 GR.B	N	lot Applicable	Field	250 to 450	655	600	12	200	19,800 GPM/pump	Treated/demineralized Water	CONT. with 3" mirror insulation	26.80	26.85	53.60	Not calculated	only No secondary stress included - Design stress	+	
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW	/- 5	PIPE - PENETRATION (1PC-079)	16	0.844"	SA106 GR.B	s	6A350 GR.LF-1	Field	250 to 450	655	600	12	200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	26.80	26.85	53.60	Not calculated	only No secondary stress included - Design stress		-
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW	/- 6	6" VESSELET in 16" PIPE	6	0.844"	SA106 GR.B	s	A234 GR.WPB	Field	250 to 450	655	600	12	200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	26.80	26.85	53.60	Not calculated	only No secondary stress included - Design stress		+
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW	/- 7	Straight PIPE	16	0.844"	SA106 GR.B	N	lot Applicable	Shop	250 to 450	655	600	12	200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	26.80	26.85	53.60	Not calculated	only No secondary stress included - Design stress	+	+
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW	/- 8	PIPE - VALVE 1FW009A	16	1.219"	SA333 GR.6	s	SA105	Field	250 to 450	655	600	12	200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	26.80	26.85	53.60	Not calculated	only No secondary stress included - Design stress		+
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW	/- 9	VALVE 1FW009A	16	1.219"	SA333 GR.6	N	lot Applicable		250 to 450	655	600	12	200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation		26.85	53.60	Not calculated	only No secondary stress included - Design stress	+	
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW	/- 10	16" PIPE - 6" WELDOLET	6	1.219"	SA333 GR.6	s	A234 GR.WPB	Shop	250 to 450	655	600	12	200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	26.80	26.85	53.60	Not calculated	only No secondary stress included - Design stress		+
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW	/- 11	PIPE - VALVE 1FW079A	16	1.219"	SA216 GR.WCB	3 S	6A333 GR.6	Field	250 to 450	655	600	12	200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	27.60	27.60	55.20	Not calculated	only No secondary stress included - Design stress		+
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW	/- 12	VALVE 1FW079A	16	1.219"	SA333 GR.6	N	lot Applicable		250 to 450	655	600	12	200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation		26.85	53.60	Not calculated	only No secondary stress included - Desian stress		+
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	s	A234 GR.WPB	Shop	250 to 450	655	600	12	200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	34.84	26.85	53.60	Not calculated	only No secondary stress included - Desian stress		+
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW	/- 14	16"x6" VESSELET to 6" PIPE	6	0.432"	SA106 GR.B	s	A234 GR.WPB	Field	250 to 450	655	600	12	200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type B insulation	34.84	26.85	53.60	Not calculated	only No secondary stress included - Desian stress		+
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW	/- 15	ELBOW - PIPE	6	0.432"	SA234 GR.WPB	3 S	A106 GR.B	Field	250 to 450	655	600	12	200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type B	34.97	26.85	53.70	Not	only No secondary stress included - Design stress		+
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW	/- 16	TEE - PIPE	6	0.432"	SA234 GR.WPB	3 5	A106 GR.B	Field	250 to 450	655	600	12	200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type B insulation	34.97	26.85	53.70	Not calculated	only No secondary stress included - Desian stress		+
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW	/- 17	6"X4" REDUCER - TEE	6	0.432"	SA234 GR.WPB	3 5	A234 GR.WPB	Field	250 to 450	655	600	12	200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	34.97	26.85	53.70	Not calculated	only No secondary stress included - Desian stress		+
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW	/- 18	PIPE - TEE	6	0.432"	SA106 GR.B	s	A234 GR.WPB	Field	250 to 450	655	600	12	200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A	34.84	26.85	53.60	Not	No secondary stress	+	+
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW	/- 19	ELBOW - PIPE	6	0.432"	SA234 GR.WPB	3 S	A106 GR.B	Shop	250 to 450	655	600	12	200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A	34.97	26.85	53.70	Not	No secondary stress	+	+
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW	/- 20	Straight PIPE	6	0.432"	SA106 GR.B	N	lot Applicable	Field	250 to 450	655	600	12	200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A	34.84	26.85	53.60	Not	No secondary stress	+	
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW	/- 21	PIPE - VALVE 1FW039A	6	0.562"	SA106 GR.B	s	A216 GR.WCB	Field	250 to 450	655	600	12	200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A	26.80	26.85	53.60	Not	No secondary stress	+	
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW	1- 22	VALVE 1FW039A	6	0.562"	SA216 GR.WCB	3 N	lot Applicable		250 to 450	655	600	0 12	200	19,800 GPM/oump	Treated/demineralized Water	Valve Room with 2.5" type A		27.60	55.20	Not	only No secondary stress included - Design stress	+	
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW	/- 23	PIPE - VALVE 1FW041A	6	0.562"	SA216 GR.WCB	3 S	A106 GR.B	Field	250 to 450	655	600	12	200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A	27.60	27.60	55.20	Not	No secondary stress	1	
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW	/- 24	VALVE 1FW041A	6	0.562"	SA216 GR.WCB	3 N	lot Applicable		250 to 450	655	600	12	200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A		27.60	55.20	Not	No secondary stress	1	
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW	/- 25	VALVE 1FW041A - ELBOW	6	0.562"	SA216 GR.WCB	3 S	A234 GR.WPB	Field	250 to 450	655	600	12	200	19,800 GPM/oump	Treated/demineralized Water	Valve Room with 2.5* type A	27.60	27.60	55.20	Not	No secondary stress included - Design stress		+
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW	/- 26	ELBOW - PIPE	6	0.562"	SA234 GR.WPB	3 S	6A106 GR.B	Shop	250 to 450	655	600	12	200	19,800 GPM/oump	Treated/demineralized Water	Valve Room with 2.5" type A	26.90	26.85	53.70	Not	only No secondary stress included - Design stress	+	+
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW	1- 27	6" PIPE to WELDOLET in 16" PIPE	6	0.562"	SA106 GR.B	s	A234 GR.WPB	Field	250 to 450	655	600	12	200	19,800 GPM/oump	Treated/demineralized Water	VALVE ROOM	26.80	26.85	53.60	Not	only No secondary stress included - Design stress	+	+
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	s	A234 GR.WPB	Shop	250 to 450	655	600	12	200	19,800 GPM/pump	Treated/demineralized Water	VALVE ROOM	34.84	26.85	53.60	Not calculated	only No secondary stress ILER 400-92-014: Wall thinning in piping of included - Design stress Main feedwater and auxiliary feedwater only system/schedule 120 carbon steel pipe due	to	+
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	s	A234 GR.WPB	Shop	250 to 450	655	600	12	200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A insulation	26.80	26.85	53.60	Not calculated	FAC No secondary stress LER 255-98-009: pinhole leak due to residua included - Design stress 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	s	A234 GR.WPB	Field	250 to 450	655	600	12	200	19,800 GPM/oump	Treated/demineralized Water	Valve Room with 2.5" type A	26.80	26.85	53.60	Not	only No secondary stress Included - Design stress	1	+
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW	/- 31	Solenoid operated relief valve	16	1.219"	SA234 GR.WPB	3 N	I/A	Field	250 to 450	655	600	12	200	19,800 GPM/oump	Treated/demineralized Water	Valve Room with 2.5" type A	26.90	26.85	53.70	Not	No secondary stress	Set point is 850 psi, but valve can be manually opened from control from	+
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW	/- 32	PIPE - Valve 1FW006A	16	1.219"	SA106 GR.B	s	A234 GR.WPB	Field	250 to 450	655	600	12	200	19,800 GPM/oump	Treated/demineralized Water	Valve Room with 2.5* type A	26.80	26.85	53.60	Not	No secondary stress		+
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW	/- 33	Feedwater Regulating Valve	16	1.219"	SA234 GR.WPB	3 N	I/A	Field	250 to 450	655	600	12	200	19,800 GPM/oump	Treated/demineralized Water	Valve Room with 2.5" type A	26.90	26.85	53.70	Not	nolded - Design stress only No secondary stress included - Design stress	+	+
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW	/- 34	Valve 1FW006A to PIPE	16	1.219"	SA234 GR.WPB	3 S	A106 GR.B	Field	250 to 450	655	600	0 12	200	19,800 GPM/pump	Treated/demineralized Water	Valve Room with 2.5" type A	26.90	26.85	53.70	Not	No secondary stress	+	+
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	s	A234 GR.WPB	Shop	250 to 450	655	600	12	200	19,800 GPM/oump	Treated/demineralized Water	Valve Room with 2.5" type A	26.80	26.85	53.60	Not	No secondary stress	+	+
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW	/- 36	6" WELDOLET to 6" PIPE	6	0.562"	SA234 GR.WPB	3 5	6A106 GR.B	Shop	250 to 450	655	600	12	200	19,800 GPM/ourse	Treated/demineralized Water	Valve Room with 2.5" type A	26.90	26.85	53.70	Not	No secondary stress	+	+
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW	1- 37	6" PIPE TO VALVE FW055A	6	0.562"	SA106 GR.B	s	A234 GR.WPB	Field	250 to 450	655	600	12	200	19,800	Treated/demineralized Water	VALVE ROOM	26.80	26.85	53.60	Not	norudou - Design stress only No secondary stress	+	+
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW	/- 38	MOTOR OPERATED VALVE	6	0.562"	SA234 GR.WPB	3 N	I/A	Field	250 to 450	655	600	0 12	200	19,800	Treated/demineralized Water	VALVE ROOM	26.90	26.85	53.70	Not	Included - Design stress only No secondary stress	+	+
Power Conversion Systems (PCS)	Group 25 - Main Feedwater (MFW)	PCS-MFW	/- 39	VALVE FW055A TO PIPE	6	0.562"	SA234 GR.WPB	3 S	A106 GR.B	Field	250 to 450	655	600	12	200	GPM/pump 19,800	Treated/demineralized Water	VALVE ROOM	26.90	26.85	53.70	calculated Not	included - Design stress only No secondary stress	<u> </u>	+
,																GPM/pump					1	calculated	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 oF	Operating in Pressure in psi	Operating Flow	Design Temperature i oF	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ks	Normal i Stress in ks	Faulted i 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 Outside Re Environment Environment Stree	idual Norma s in ksi Stress in	Faulted si Stress in	cuf	Stress Comments	Operating Experience	General Comments
Power Conversion Systems (PCS	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 1	Flange - Tee	4	0.337"	SA106 GR. B (SMLS)	5A234, GR. WPB	Field	100	1750	140-469 GPM 1	00	2000	Not Available	Condensate (operation) or Essential Aux Bldg Air 39.00 Service Water (backup)	28.05	56.10	Not calculated	No secondary stress included - Design stres		
Power Conversion Systems (PCS	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 2	Straight Tee	4	0.337"	SA234, GR. WPB	1	Not Applicable		100	1750	140-469 GPM 1	00	2000	Not Available	Condensate (operation) or Essential Aux Bldg Air	28.05	56.10	Not	No secondary stress		
Power Conversion Systems (PCS	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 3	Tee - Flange	4	0.337"	SA234, GR. WPB	5	6A234, GR. WPB	Shop	100	1750	140-469 GPM 1	00	2000	Not Available	Condensate (operation) or Essential Aux Bldg Air 39.00	28.05	56.10	Not	No secondary stress		
Power Conversion Systems (PCS	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 4	Blind Flange	4	0.337"	SA234, GR. WPB	1	Not Applicable		100	1750	140-469 GPM 1	00	2000	Not Available	Condensate (operation) or Essential Aux Bldg Air	28.05	56.10	Not	No secondary stress		
Power Conversion Systems (PCS	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 5	Straight Pipe	4	0.337"	SA106 GR. B (SMLS) ()	Not Applicable		100	1750	140-469 GPM 1	00	2000	Not Available	Condensate (operation) or Essential Aux Bldg Air	30.00	60.00	Not	No secondary stress	3	
Power Conversion Systems (PCS	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 6	Pipe - Elbow	4	0.337"	SA106 GR. B (SMLS)	SA234, GR. WPB	Shop	100	1750	140-469 GPM 1	00	2000	Not Available	Service Water (backup) Condensate (operation) or Essential Aux Bldg Air 45.50	30.00	60.00	calculated Not	included - Design stres No secondary stress		
Power Conversion Systems (PCS	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 7	Elbow	4	0.337"	SA234, GR. WPB	1	Not Applicable		100	1750	140-469 GPM 1	00	2000	Not Available	Service Water (backup) Condensate (operation) or Essential Aux Bldg Air	28.05	56.10	calculated Not	included - Design stres No secondary stress	LER 334-88-012: thermal stratification	
																	Service Water (backup)			calculated	included - Design stres only	induced cracking caused by the flow of localized and relatively cold auxiliary feedwater, which creates a localized and relatively cold auxiliary feedwater	
Power Conversion Systems (PCS	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 8	Pipe - Valve AF014E	4	0.337"	SA106 GR. B (SMLS))	SA234, GR. WPB	Field	100	1750	140-469 GPM 1	00	2000	Not Available	Condensate (operation) or Essential Aux Bldg Air 45.50 Service Water (backup)	30.00	60.00	Not calculated	No secondary stress included - Design stres		
Power Conversion Systems (PCS	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 9	Valve AF014	4	0.337"	SA234, GR. WPB	r	Not Applicable		100	1750	140-469 GPM 1	00	2000	Not Available	Condensate (operation) or Essential Aux Bldg Air Service Water (backup)	28.05	56.10	Not calculated	No secondary stress included - Design stres	5	
Power Conversion Systems (PCS	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 10	Pipe - Valve AF014A	4	0.337"	SA106 GR. B (SMLS)	SA234, GR. WPB	Field	100	1750	140-469 GPM 1	00	2000	Not Available	Condensate (operation) or Essential Aux Bldg Air 39.00 Service Water (backup)	28.05	56.10	Not calculated	No secondary stress included - Design stres		
Power Conversion Systems (PCS	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 11	Valve AF014A	4	0.337"	SA234, GR. WPB	1	Not Applicable		100	1750	140-469 GPM 1	00	2000	Not Available	Condensate (operation) or Essential Aux Bldg Air Service Water (backup)	28.05	56.10	Not calculated	No secondary stress included - Design stres		
Power Conversion Systems (PCS	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 12	Elbow <90 degrees	4	0.337"	SA234, GR. WPB	1	Not Applicable		100	1750	140-469 GPM 1	00	2000	Not Available	Condensate (operation) or Essential Aux Bldg Air	28.05	56.10	Not	No secondary stress		
Power Conversion Systems (PCS	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 13	Pipe - Pipe	4	0.337"	SA106 GR. B (SMLS)	SA106 GR. B (SMLS)	Field	100	1750	140-469 GPM 1	00	2000	Not Available	Condensate (operation) or Essential Aux Bldg Air 45.50	30.00	60.00	Not	No secondary stress		
Power Conversion Systems (PCS	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 14	Pipe - Flow Restrictor	4	0.337"	SA106 GR. B (SMLS)	6A234, GR. WPB	Field	100	1750	140-469 GPM 1	00	2000	Not Available	Condensate (operation) or Essential Aux Bldg Air 39.00	28.05	56.10	Not	No secondary stress		
Power Conversion Systems (PCS	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 15	Flow Rerstrictor	4	0.337"	SA234, GR. WPB	1	Not Applicable		100	1750	140-469 GPM 1	00	2000	Not Available	Condensate (operation) or Essential Aux Bldg Air	28.05	56.10	Not	No secondary stress	3	
Power Conversion Systems (PCS	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 16	Embeded pipe in concrete wall	4	0.337"	SA106 GR. B (SMLS))	ug material not	Field	100	1750	140-469 GPM 1	00	2000	Not Available	Service Water (backup) Condensate (operation) or Essential Aux Bldg Air 45.50	30.00	60.00	calculated Not	included - Design stres No secondary stress		
Power Conversion Systems (PCS	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 17	(external pipe weld) Pipe - 4"x3" reducer	4	0.337"	SA106 GR. B (SMLS)	nown SA234, GR. WPB	Field	100	1750	140-469 GPM 1	00	2000	Not Available	Service Water (backup) Condensate (operation) or Essential Aux Bldg Air 39.00	28.05	56.10	calculated Not	included - Design stres No secondary stress		
Power Conversion Systems (PCS	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 18	4"x3" reducer	4	0.337"	SA234, GR. WPB	1	Not Applicable		100	1750	140-469 GPM 1	00	2000	Not Available	Service Water (backup) Condensate (operation) or Essential Aux Bldg Air	28.05	56.10	calculated Not	included - Design stres No secondary stress		
Power Conversion Systems (PC	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 19	Reducer - Valve AE005A	3	0.3"	SA234, GR. WPB		SA234. GR. WPB	Field	100	1750	140-469 GPM 1	00	2000	Not Available	Service Water (backup) Condensate (operation) or Essential Aux Bldg Air 39.00	28.05	56.10	calculated Not	included - Design stres		
Rower Conversion Systems (RCS	Croup 26 Auxiliany Foodwater (AEW)	DCS AEW	20	Volue AE00EA	2	0.2"	84024 CB WDB				100	1750	140.460.CDM 1	00	2000	Not Available	Service Water (backup)	28.05	E6 10	calculated	included - Design stres		
Power Conversion Systems (PC	Croup 20 - Auxiliary Feedwater (AFW)	PC3-AFW	20	Diago AlluCil and unan	3	0.007	04204, GR. WFB			Calif	100	1750	140-409 GPM 1	00	2000	Not Available	Service Water (backup)	20.05	50.10	calculated	included - Design stress		
Power Conversion Systems (PC:	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 21	Pipe - 4 x6 Teducer	4	0.337	SATUD GR. B (SIVLS	.)	5A234, GR. WPB	Field	100	1750	140-469 GPM 1	00	2000	NOL AVAIIADIE	Service Water (backup)	28.05	56.10	calculated	included - Design stress		
Power Conversion Systems (PCS	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 22	4"x6" reducer	6	0.432"	SA234, GR. WPB	r	Not Applicable		100	1750	140-469 GPM 1	00	2000	Not Available	Condensate (operation) or Essential Aux Bldg Air Service Water (backup)	28.05	56.10	Not calculated	No secondary stress included - Design stres		
Power Conversion Systems (PCS	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 23	Elbow	6	0.432"	SA234, GR. WPB	r	Not Applicable		100	1750	140-469 GPM 1	00	2000	Not Available	Condensate (operation) or Essential Aux Bldg Air Service Water (backup)	28.05	56.10	Not calculated	No secondary stress included - Design stres		
Power Conversion Systems (PCS	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 24	Elbow - Tee	6	0.432"	SA234, GR. WPB	0	SA234, GR. WPB	Shop	100	1750	140-469 GPM 1	00	2000	Not Available	Condensate (operation) or Essential Aux Bldg Air 39.00 Service Water (backup)	28.05	56.10	Not calculated	No secondary stress included - Design stres		
Power Conversion Systems (PCS	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 25	Straight Tee	6	0.432"	SA234, GR. WPB	r	Not Applicable		100	1750	140-469 GPM 1	00	2000	Not Available	Condensate (operation) or Essential Aux Bldg Air Service Water (backup)	28.05	56.10	Not calculated	No secondary stress included - Design stres		
Power Conversion Systems (PCS	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 26	Tee - Pipe	6	0.432"	SA234, GR. WPB	ç	SA106 GR. B (SMLS)	Field	100	1750	140-469 GPM 1	00	2000	Not Available	Condensate (operation) or Essential Aux Bldg Air 39.00	28.05	56.10	Not	No secondary stress		
Power Conversion Systems (PCS	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 27	Straight Pipe	6	0.432"	SA106 GR. B (SMLS) ()	Not Applicable		100	1750	140-469 GPM 1	00	2000	Not Available	Condensate (operation) or Essential Aux Bldg Air	30.00	60.00	Not	No secondary stress		
Power Conversion Systems (PCS	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 28	Pipe - Valve AF029A	6	0.432"	SA106 GR. B (SMLS)	SA234, GR. WPB	Field	100	1750	140-469 GPM 1	00	2000	Not Available	Condensate (operation) or Essential Aux Bldg Air 39.00	28.05	56.10	Not	No secondary stress		
Power Conversion Systems (PCS	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 29	Valve AF029A	6	0.432"	SA234, GR. WPB	1	Not Applicable		100	1750	140-469 GPM 1	00	2000	Not Available	Condensate (operation) or Essential Aux Bldg Air	28.05	56.10	Not	No secondary stress		
Power Conversion Systems (PCS	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 30	Embeded pipe in concrete wall	6	0.432"	SA106 GR. B (SMLS))	ug material not	Field	100	1750	140-469 GPM 1	00	2000	Not Available	Service Water (backup) Condensate (operation) or Essential Aux Bldg Air 45.50	30.00	60.00	Not	No secondary stress		
Power Conversion Systems (PCS	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 31	(external pipe weld) Pipe - 3/4" sockolet	6	0.432"	SA106 GR. B (SMLS))	nown SA234, GR. WPB	Shop	100	1750	140-469 GPM 1	00	2000	Not Available	Service Water (backup) Condensate (operation) or Essential Aux Bldg Air 39.00	28.05	56.10	calculated Not	included - Design stres No secondary stress	INPO 134 - Initiation of the crack was due to	
																	Service Water (backup)			calculated	included - Design stres only	High cycle, low amplitude, vibration induced fatigue	
Power Conversion Systems (PCS	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 32	Pipe - 6"x4" reducer	6	0.432"	SA106 GR. B (SMLS)	SA234, GR. WPB	Field	100	1750	140-469 GPM 1	00	2000	Not Available	Condensate (operation) or Essential Aux Bldg Air 39.00 Service Water (backup)	28.05	56.10	Not calculated	No secondary stress included - Design stres	3	
Power Conversion Systems (PCS	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 33	6"x4" reducer	6	0.432"	SA234, GR. WPB	r	Not Applicable		100	1750	140-469 GPM 1	00	2000	Not Available	Condensate (operation) or Essential Aux Bldg Air Service Water (backup)	28.05	56.10	Not calculated	No secondary stress included - Design stres	5	
Power Conversion Systems (PCS	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 34	Reducer - AFW Pump Nozzle Flange (Motor driven)	¢4	0.337"	SA234, GR. WPB	5	SA234, GR. WPB Assumed)	Field	100	1750	140-469 GPM 1	00	2000	Not Available	Condensate (operation) or Essential Aux Bldg Air 39.00 Service Water (backup)	28.05	56.10	Not calculated	No secondary stress included - Design stres		
Power Conversion Systems (PCS	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 35	6"x4" reducer - Tee	6	0.562"	SA234, GR. WPB	5	6A234, GR. WPB	Shop	100	1750	140-469 GPM 1	00	2000	Not Available	Condensate (operation) or Essential Aux Bldg Air 30.00 Service Water (backup)	28.05	56.10	Not calculated	No secondary stress included - Design stres		
Power Conversion Systems (PCS	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 36	Tee - Tee	6	0.562"	SA234, GR. WPB	5	6A234, GR. WPB	Shop	100	1750	140-469 GPM 1	00	2000	Not Available	Condensate (operation) or Essential Aux Bldg Air 30.00	28.05	56.10	Not	No secondary stress		
Power Conversion Systems (PCS	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 37	Pipe - Valve AF029B	6	0.562"	SA106 GR. B (SMLS)	SA234, GR. WPB	Field	100	1750	140-469 GPM 1	00	2000	Not Available	Condensate (operation) or Essential Aux Bldg Air 30.00	28.05	56.10	Not	No secondary stress		
Power Conversion Systems (PCS	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 38	Valve AF029B	6	0.562"	SA234, GR. WPB	1	Not Applicable		100	1750	140-469 GPM 1	00	2000	Not Available	Condensate (operation) or Essential Aux Bldg Air	28.05	56.10	Not	No secondary stress		
Power Conversion Systems (PCS	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 39	Straight Pipe	6	0.562"	SA106 GR. B (SMLS) ()	Not Applicable		100	1750	140-469 GPM 1	00	2000	Not Available	Condensate (operation) or Essential Aux Bldg Air	30.00	60.00	Not	No secondary stress	INPO428 - Piping associated with level	
Power Conversion Systems (PC)	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 40	Pipe - Pipe	6	0.562"	SA106 GR. B (SMLS)	SA106 GR. B (SMLS)	Field	100	1750	140-469 GPM 1	00	2000	Not Available	Service Water (backup) Condensate (operation) or Essential Aux Bldg Air 30.00	30.00	60.00	calculated	included - Design stres only No secondary stress	transmitter for the condensate storage tank had through wall leaks due to general corrosion	
Power Conversion Systems (DO	S) Group 26 - Auxiliary Foodwater (AEM)	DOG AFIN	41	Pipe - Elbow	6	0.562"	SA106 CR B (SMLC)		24234 GR W/DP	Field	100	1750	140-460 CDM 4	00	2000	Not Available	Service Water (backup)	20.05	56 10	calculated	included - Design stres		
Power Conversion Systems (PCS	Croup 26 Auxiliary Feedwater (AFW)	DOG AFW	42	Elbow	6	0.502	64004 CP WDD		lot Application		100	1750	140.460.0DM	00	2000	Not Aucit-bis	Service Water (backup)	20.00	50.10	calculated	included - Design stres		
Fower Conversion Systems (PCS	2) Computer (AFW)	PGS-AFW	42		0	0.502	0A204, GK. WPB	ľ			100	1750	140-469 GPM 1	00	2000	NUL AVAIIADIE	Service Water (backup)	28.05	01.00	calculated	included - Design stress		
Power Conversion Systems (PCS	5) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 43	ripe - 6"X4" reducer	ь	U.562"	SATUD GR. B (SMLS	9 S	5AZ34, GR. WPB	rield	100	1/50	140-469 GPM 1	UU	2000	INOT AVAIIAble	Service Water (backup) Or Essential Aux Bldg Air 30.00	28.05	56.10	NOT calculated	included - Design stress		
Power Conversion Systems (PCS	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 44	Reducer to AFW Pump Nozzle Flange (Diesel driven)	4	0.437"	SA234, GR. WPB	6	SA234, GR. WPB Assumed)	⊦ield	100	1750	140-469 GPM 1	00	2000	Not Available	Condensate (operation) or Essential Aux Bldg Air 39.00 Service Water (backup)	28.05	56.10	Not calculated	No secondary stress included - Design stres		
Power Conversion Systems (PCS	S) Group 26 - Auxiliary Feedwater (AFW)	PCS-AFW	- 45	AFW Pumps Pressure Boundary	4	0.437"	SA234, GR. WPB (Assumed)	1	Not Applicable		100	1750	140-469 GPM 1	00	2000	Not Available	Condensate (operation) or Essential Aux Bldg Air Service Water (backup)	28.05	56.10	Not calculated	No secondary stress included - Design stres		

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 Flow	Design Temperature in oF	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Normal Stress in ksi Stress in ks	Faulted i Stress in ks	CUF	Stress Comments	Operating Experience	General Comments
Power Conversion Systems (PCS)	Group 27 - Steam Generator (SGBD)	Blowdown	PCS-SGBD-	1	SG Nozzle - Pipe	3	0.300"	SA234 GR. WPB		SA106 GR. B (SMLS)	Field	80 to 556	14.7 to 1092 0 to 87.5 GPM	567	1185	125 GPM	Demineralized water	Cont 3" metallic Type A insulation	26.80 26.85	53.60	Not calculated	No secondary stress included - Design stress		This line used for wet layup only of SG during shutdown periods
Power Conversion Systems (PCS)	Group 27 - Steam Generator (SGBD)	Blowdown	PCS-SGBD-	2	Straight Pipe	3	0.300"	SA106 GR.B (SMLS)		Not Applicable		80 to 556	14.7 to 1092 0 to 87.5 GPM	567	1185	125 GPM	Demineralized water	CONT 3" metallic Type A insulation	26.85	53.60	Not calculated	No secondary stress included - Design stress		This line used for wet layup only of SG during shutdown periods
Power Conversion Systems (PCS)	Group 27 - Steam Generator (SGBD)	Blowdown	PCS-SGBD-	3	Pipe - Elbow	3	0.300"	SA106 GR. B (SMLS)		SA234 GR. WPB	Field	80 to 556	14.7 to 1092 0 to 87.5 GPM	567	1185	125 GPM	Demineralized water	CONT 3" metallic Type A insulation	26.80 26.85	53.60	Not calculated	No secondary stress included - Design stress		This line used for wet layup only of SG during shutdown periods
Power Conversion Systems (PCS)	Group 27 - Steam Generator (SGBD)	Blowdown	PCS-SGBD-	4	Elbow	3	0.300"	SA234 GR. WPB		Not Applicable		80 to 556	14.7 to 1092 0 to 87.5 GPM	567	1185	125 GPM	Demineralized water	CONT 3" metallic Type A insulation	26.85	53.70	Not calculated	No secondary stress included - Design stress		This line used for wet layup only of SG during shutdown periods
Power Conversion Systems (PCS)	Group 27 - Steam Generator (SGBD)	Blowdown	PCS-SGBD-	5	Pipe - Pipe	3	0.300"	SA106 GR.B (SMLS)		SA106 GR. B (SMLS)	Field	80 to 556	14.7 to 1092 0 to 87.5 GPM	567	1185	125 GPM	Demineralized water	CONT 3" metallic Type A insulation	26.80 26.85	53.60	Not calculated	No secondary stress included - Design stress		This line used for wet layup only of SG during shutdown periods
Power Conversion Systems (PCS)	Group 27 - Steam Generator (SGBD)	Blowdown	PCS-SGBD-	6	Pipe - Elbow (<90 degrees)	3	0.300"	SA106 GR. B (SMLS)		SA234 GR. WPB	Field	80 to 556	14.7 to 1092 0 to 87.5 GPM	567	1185	125 GPM	Demineralized water	CONT 3" metallic Type A insulation	26.80 26.85	53.60	Not calculated	No secondary stress included - Design stress		This line used for wet layup only of SG during shutdown periods
Power Conversion Systems (PCS)	Group 27 - Steam Generator (SGBD)	Blowdown	PCS-SGBD-	7	Elbow (>90 degrees)	3	0.300"	SA234 GR. WPB		Not Applicable		80 to 556	14.7 to 1092 0 to 87.5 GPM	567	1185	125 GPM	Demineralized water	CONT 3" metallic Type A insulation	26.85	53.70	Not calculated	No secondary stress included - Design stress		This line used for wet layup only of SG during shutdown periods
Power Conversion Systems (PCS)	Group 27 - Steam Generator (SGBD)	Blowdown	PCS-SGBD-	8	Pipe - 6*x3" Reducer	3	0.300"	SA106 GR. B (SMLS)		SA234 GR. WPB	Field	80 to 556	14.7 to 1092 0 to 87.5 GPM	567	1185	125 GPM	Demineralized water	CONT 3" metallic Type A insulation	26.80 26.85	53.60	Not calculated	No secondary stress included - Design stress		This line used for wet layup only of SG during shutdown periods
Power Conversion Systems (PCS)	Group 27 - Steam Generator (SGBD)	Blowdown	PCS-SGBD-	9	6"x3" Reducer	3	0.300"	SA234 GR. WPB		Not Applicable		80 to 556	14.7 to 1092 0 to 87.5 GPM	567	1185	125 GPM	Demineralized water	CONT 3" metallic Type A insulation	26.85	53.70	Not calculated	No secondary stress included - Design stress only		This line used for wet layup only of SG during shutdown periods
Power Conversion Systems (PCS)	Group 27 - Steam Generator (SGBD)	Blowdown	PCS-SGBD-	10	Reducer - Pipe	6	0.432"	SA234 GR. WPB		SA106 GR. B (SMLS)	Field	80 to 556	14.7 to 1092 0 to 87.5 GPM	567	1185	125 GPM	Demineralized water	CONT 3" metallic Type A insulation	34.97 26.85	53.70	Not calculated	No secondary stress included - Design stress only		This line used for wet layup only of SG during shutdown periods
Power Conversion Systems (PCS)	Group 27 - Steam Generator (SGBD)	Blowdown	PCS-SGBD-	11	Elbow	6	0.432"	SA234 GR. WPB		Not Applicable		80 to 556	14.7 to 1092 0 to 87.5 GPM	567	1185	125 GPM	Demineralized water	CONT 3" metallic Type A insulation	26.85	53.70	Not calculated	No secondary stress included - Design stress only		This line used for wet layup only of SG during shutdown periods
Power Conversion Systems (PCS)	Group 27 - Steam Generator (SGBD)	Blowdown	PCS-SGBD-	12	Elbow - Pipe	6	0.432"	SA234 GR. WPB		SA106 GR. B (SMLS)	Field	80 to 556	14.7 to 1092 0 to 87.5 GPM	567	1185	125 GPM	Demineralized water	CONT 3" metallic Type A insulation	34.97 26.85	53.70	Not calculated	No secondary stress included - Design stress only		This line used for wet layup only of SG during shutdown periods
Power Conversion Systems (PCS)	Group 27 - Steam Generator (SGBD)	Blowdown	PCS-SGBD-	13	Pipe - Valve	6	0.432"	SA106 GR. B (SMLS)		SA234 GR. WPB	Shop	80 to 556	14.7 to 1092 0 to 87.5 GPM	567	1185	125 GPM	Demineralized water	CONT 3" metallic Type A insulation	34.84 26.85	53.60	Not calculated	No secondary stress included - Design stress only		This line used for wet layup only of SG during shutdown periods
Power Conversion Systems (PCS)	Group 27 - Steam Generator (SGBD)	Blowdown	PCS-SGBD-	14	Valve	6	0.432"	SA234 GR. WPB		Not Applicable		80 to 556	14.7 to 1092 0 to 87.5 GPM	567	1185	125 GPM	Demineralized water	CONT 3" metallic Type A insulation	26.85	53.70	Not calculated	No secondary stress included - Design stress only		This line used for wet layup only of SG during shutdown periods
Power Conversion Systems (PCS)	Group 27 - Steam Generator (SGBD)	Blowdown	PCS-SGBD-	15	Valve to Pipe	6	0.432"	SA234 GR. WPB		SA106 GR. B (SMLS)	Field	80 to 556	14.7 to 1092 0 to 87.5 GPM	567	1185	125 GPM	Demineralized water	CONT 3" metallic Type A insulation	26.85	53.60	Not calculated	No secondary stress included - Design stress only		This line used for wet layup only of SG during shutdown periods
Power Conversion Systems (PCS)	Group 27 - Steam Generator (SGBD)	Blowdown	PCS-SGBD-	16	Pipe - Pipe	6	0.432"	SA106 GR. B (SMLS)		SA106 GR. B (SMLS)	Shop	80 to 556	14.7 to 1092 0 to 87.5 GPM	567	1185	125 GPM	Demineralized water	CONT 3" metallic Type A insulation	34.84 26.85	53.60	Not calculated	No secondary stress included - Design stress only		This line used for wet layup only of SG during shutdown periods
Power Conversion Systems (PCS)	Group 27 - Steam Generator (SGBD)	Blowdown	PCS-SGBD-	17	Pipe - Elbow (>90 degrees)	6	0.432"	SA106 GR. B (SMLS)		SA234 GR. WPB	Field	80 to 556	14.7 to 1092 0 to 87.5 GPM	567	1185	125 GPM	Demineralized water	CONT 3" metallic Type A insulation	34.84 26.85	53.60	Not calculated	No secondary stress included - Design stress only		This line used for wet layup only of SG during shutdown periods
Power Conversion Systems (PCS)	Group 27 - Steam Generator (SGBD)	Blowdown	PCS-SGBD-	18	Elbow to penetration	6	0.432"	SA234 GR. WPB		SA105	Field	80 to 556	14.7 to 1092 0 to 87.5 GPM	567	1185	125 GPM	Demineralized water	CONT 3" metallic Type A insulation	26.85	53.70	Not calculated	No secondary stress included - Design stress only		This line used for wet layup only of SG during shutdown periods
Power Conversion Systems (PCS)	Group 27 - Steam Generator (SGBD)	Blowdown	PCS-SGBD-	19	MECHANICAL PENETRATION 1PC 100	10	0.432"	SA105		Not Applicable	Field	120	14.7 approx 15 cfm	600	150 (Cont. design)		Conditioned Air	CONT.	27.60	55.20	Not calculated	No secondary stress included - Design stress only		Concentric portion of penetration cooled by forced cont. air
Power Conversion Systems (PCS)	Group 27 - Steam Generator (SGBD)	Blowdown	PCS-SGBD-	20	Pipe - Sockolet (2" or less)	6	0.432"	SA106 GR. B (SMLS)		SA234 GR. WPB	Field	80 to 556	14.7 to 1092 0 to 87.5 GPM	567	1185	125 GPM	Demineralized water	Valve Room 3" metallic Type A insulation	34.84 26.85	53.60	Not calculated	No secondary stress included - Design stress only		This line used for wet layup only of SG during shutdown periods
Power Conversion Systems (PCS)	Group 27 - Steam Generator (SGBD)	Blowdown	PCS-SGBD-	21	Pipe - End cap	6	0.432"	SA106 GR. B (SMLS)		SA234 GR. WPB	Field	80 to 556	14.7 to 1092 0	567	1185	0	Demineralized water	Valve Room 3" metallic Type A insulation	34.84 26.85	53.60	Not calculated	No secondary stress included - Design stress only		This line used for wet layup only of SG during shutdown periods
Power Conversion Systems (PCS)	Group 27 - Steam Generator (SGBD)	Blowdown	PCS-SGBD-	22	SG Nozzle - 3"x2' Swage nipple	3	0.300"	SA234 GR. WPB		SA234 GR. WPB	Field	556	1092	567	1185		Saturated Steam/water	CONT 3" metallic 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 (SGBD)	Blowdown	PCS-SGBD-	23	3"x2" swage nipple	2	0.218"	SA234 GR. WPB		Not Applicable		556	1092	567	1185		Saturated Steam/water	CONT 3" metallic Type A insulation	26.85	53.70	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 27 - Steam Generator (SGBD)	Blowdown	PCS-SGBD-	24	nipple - Elbow	2	0.218"	SA234 GR. WPB		SA105 SW elbow	Field	556	1092	567	1185		Saturated Steam/water	CONT 3" metallic 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 (SGBD)	Blowdown	PCS-SGBD-	25	Elbow	2	0.218"	SA105 SW elbow		Not Applicable		556	1092	567	1185		Saturated Steam/water	CONT 3" metallic Type A insulation	27.60	55.20	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 27 - Steam Generator (SGBD)	Blowdown	PCS-SGBD-	26	Elbow - Pipe	2	0.218"	SA105 SW elbow		SA106 GR. B (SMLS)	Field	556	1092	567	1185		Saturated Steam/water	CONT 3" metallic Type A insulation	35.88 27.60	55.20	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 27 - Steam Generator (SGBD)	Blowdown	PCS-SGBD-	27	Straight Pipe	2	0.218"	SA106 GR. B (SMLS)		Not Applicable		556	1092	567	1185		Saturated Steam/water	CONT 3" metallic Type A insulation	26.85	53.60	Not calculated	No secondary stress included - Design stress only	INPO 528 - through-wall leak in Steam Generator Blowdown piping due to erosion- corrosion, FAC	
Power Conversion Systems (PCS)	Group 27 - Steam Generator (SGBD)	Blowdown	PCS-SGBD-	28	Pipe - Penetration	2	0.218"	SA106 GR. B (SMLS)		SA105 SW elbow	Field	556	1092	567	1185		Saturated Steam/water	CONT 3" metallic 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 (SGBD)	Blowdown	PCS-SGBD-	29	MECHANICAL PENETRATION 1PC 83	6	0.218"	SA105		Not Applicable		120	14.7 approx 15 cfm	600	150 (Cont. design)		Conditioned Air	CONT.	27.60	55.20	Not calculated	No secondary stress included - Design stress only		Concentric portion of penetration cooled by forced cont. air
Power Conversion Systems (PCS)	Group 27 - Steam Generator (SGBD)	Blowdown	PCS-SGBD-	30	Pipe - Valve	2	0.218"	SA106 GR. B (SMLS)		SA105 CS	Field	556	1092	567	1185		Saturated Steam/water	Valve Room 3" Type B insulation	34.84 26.85	53.60	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 27 - Steam Generator (SGBD)	Blowdown	PCS-SGBD-	31	Valve	2	0.218"	SA105 CS		Not Applicable		556	1092	567	1185		Saturated Steam/water	Valve Room 3" Type B insulation	27.60	55.20	Not calculated	No secondary stress included - Design stress only	INPO 305 - A through-wall steam leak was found downstream of Unit 2 S/G Blowdown Throttle Valve 2-BD-104.	
Power Conversion Systems (PCS)	Group 27 - Steam Generator (SGBD)	Blowdown	PCS-SGBD-	32	Pipe - Tee	2	0.218"	SA106 GR. B (SMLS)		SA105 CS	Field	556	1092	567	1185		Saturated Steam/water	Valve Room 3" Type B insulation	34.84 26.85	53.60	Not calculated	No secondary stress included - Design stress		
Power Conversion Systems (PCS)	Group 27 - Steam Generator (SGBD)	Blowdown	PCS-SGBD-	33	Straight Tee	2	0.218"	SA105 CS		Not Applicable		556	1092	567	1185		Saturated Steam/water	Valve Room 3" Type B insulation	27.60	55.20	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 27 - Steam Generator (SGBD)	Blowdown	PCS-SGBD-	34	Tee - 2*x3/4* reducer	2	0.218"	SA105 CS		SA105 CS	Field	556	1092	567	1185		Saturated Steam/water	Valve Room 3" Type B insulation	35.88 27.60	55.20	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 27 - Steam Generator (SGBD)	Blowdown	PCS-SGBD-	35	2"x3/4" reducer	2	0.218"	SA105 CS		Not Applicable		556	1092	567	1185		Saturated Steam/water	Valve Room 3" Type B insulation	27.60	55.20	Not calculated	No secondary stress included - Design stress only		
Power Conversion Systems (PCS)	Group 27 - Steam Generator (SGBD)	Blowdown	PCS-SGBD-	36	Pipe - Valve	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 (SGBD)	Blowdown	PCS-SGBD-	37	Valve	0.75"	0.154"	SA105 CS		Not Applicable		556	1092	567	1185		Saturated Steam/water	Valve Room 2" 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 Normal Stress in ksi Stress in k	Faulted si Stress in ks	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	INPO 929/185 - a steam leak coming from the Moisture Separator Reheater Shell Drain Pjping. The leak was downsteam of the isolation valve due to steam jet impingement	
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		
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		
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 ks	Normal si Stress in	Faulted ksi Stress in ks	CUF	Stress Comments	Operating Experience	General Comments
Support Systems (SS)	Group 28 - Service Water Suction From Pond (SWSUC)	SS-SWSUC-	1	Straight Pipe	30	0.500"	SA155 GR. KC65 CL. 2		Not Applicable		100	35	Total 37000 GPM at full power	125	35	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Lake Water	35.00	32.55	65.10	Not calculated	No secondary stress included - Design stress		
Support Systems (SS)	Group 28 - Service Water Suction From Pond (SWSUC)	SS-SWSUC-	2	Pipe - Seal Ring	30	0.500"	SA155 GR. KC65 CL. 2		Material Unknown. Perhaps CS	Shop	100	35	Total 37000 GPM at full power	125	35	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Valve Vault	35.00	32.55	65.10	Not calculated	No secondary stress included - Design stress		
Support Systems (SS)	Group 28 - Service Water Suction From Pond (SWSUC)	SS-SWSUC-	- 3	Pipe - Bend Pipe	30	0.500"	SA155 GR. KC65 CL. 2		SA155 GR. KC65 CL. 2	. Shop	100	35	Total 37000 GPM at full power	125	35	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Valve Vault	35.00	32.55	65.10	Not calculated	No secondary stress included - Design stress		
Support Systems (SS)	Group 28 - Service Water Suction From Pond (SWSUC)	SS-SWSUC-	4	Pipe - Valve	30	0.500"	SA155 GR. KC65 CL. 2		SA155 GR. KC65 CL. 2	Shop	100	35	Total 37000 GPM at full power	125	35	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Valve Vault	35.00	32.55	65.10	Not calculated	No secondary stress included - Design stress		
Support Systems (SS)	Group 28 - Service Water Suction From Pond (SWSUC)	SS-SWSUC-	• 5	Valve	30	0.500"	SA155 GR. KC65 CL. 2		Not Applicable		100	35	Total 37000 GPM at full power	125	35	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Valve Vault		32.55	65.10	Not calculated	No secondary stress included - Design stress		
Support Systems (SS)	Group 28 - Service Water Suction From Pond (SWSUC)	SS-SWSUC-	6	Pipe - Sockolet (<2")	30	0.500"	SA155 GR. KC65 CL. 2		SA106 GR.B	Field	100	35	Total 37000 GPM at full power	125	35	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Valve Vault	35.00	32.55	65.10	Not calculated	No secondary stress included - Design stress		
Support Systems (SS)	Group 28 - Service Water Suction From Pond (SWSUC)	SS-SWSUC-	7	Pipe - Pipe	30	0.500"	SA155 GR. KC65 CL. 2		SA155 GR. KC65 CL. 2	Shop	100	35	Total 37000 GPM at full power	125	35	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Buried Under Soil with cathodic protection provid	35.00 led	32.55	65.10	Not calculated	No secondary stress included - Design stress		
Support Systems (SS)	Group 28 - Service Water Suction From Pond (SWSUC)	SS-SWSUC-	8	Bend Pipe	30	0.500"	SA155 GR. KC65 CL. 2		Not Applicable		100	35	Total 37000 GPM at full power	125	35	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Buried Under Soil with cathodic protection provid	led	32.55	65.10	Not calculated	No secondary stress included - Design stress		
Support Systems (SS)	Group 28 - Service Water Suction From Pond (SWSUC)	SS-SWSUC-	9	Pipe - 30"x48" Reducer	30	0.500"	SA155 GR. KC65 CL. 2		SA155 GR. KC65 CL. 2	. Shop	100	35	Total 37000 GPM at full power	125	35	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Buried Under Soil with cathodic protection provid	35.00 led	32.55	65.10	Not calculated	No secondary stress included - Design stress		
Support Systems (SS)	Group 28 - Service Water Suction From Pond (SWSUC)	SS-SWSUC-	10	30*x48* Reducer	48	0.500"	SA155 GR. KC65 CL. 2		Not Applicable		100	35	Total 37000 GPM at full power	125	35	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Buried Under Soil with cathodic protection provid	led	32.55	65.10	Not calculated	No secondary stress included - Design stress		
Support Systems (SS)	Group 28 - Service Water Suction From Pond (SWSUC)	SS-SWSUC-	11	Pipe - Tee	48	0.500"	SA155 GR. KC65 CL. 2		SA155 GR. KC65 CL. 2	Shop	100	35	Total 37000 GPM at full power	125	35	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Buried Under Soil with cathodic protection provid	35.00 led	32.55	65.10	Not calculated	No secondary stress included - Design stress		
Support Systems (SS)	Group 28 - Service Water Suction From Pond (SWSUC)	SS-SWSUC-	12	Straight Tee	48	0.500"	SA155 GR. KC65 CL. 2		Not Applicable		100	35	Total 37000 GPM at full power	125	35	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Buried Under Soil with cathodic protection provid	led	32.55	65.10	Not calculated	No secondary stress included - Design stress		
Support Systems (SS)	Group 28 - Service Water Suction From Pond (SWSUC)	SS-SWSUC-	13	Bend Pipe - Pipe	48	0.500"	SA155 GR. KC65 CL. 2		SA155 GR. KC65 CL. 2	. Field	100	35	Total 37000 GPM at full power	125	35	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Buried Under Soil with cathodic protection provid	35.00 led	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-	14	Bend Pipe	48	0.500"	SA155 GR. KC65 CL. 2		Not Applicable		100	35	Total 37000 GPM at full power	125	35	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Buried Under Soil with cathodic protection provid	led	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-	• 15	Straight Pipe	48	0.500"	SA155 GR. KC65 CL. 2		Not Applicable		100	35	Total 37000 GPM at full power	125	35	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Buried Under Soil with cathodic protection provid	led	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-	16	Pipe - Elbow	48	0.500"	SA155 GR. KC65 CL. 2		SA155 GR. KC65 CL. 2	. Shop	100	35	Total 37000 GPM at full power	125	35	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Buried Under Soil with cathodic protection provid	35.00 led	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-	17	Elbow	48	0.500"	SA155 GR. KC65 CL. 2		Not Applicable		100	35	Total 37000 GPM at full power	125	35	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Buried Under Soil with cathodic protection provid	led	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-	18	Pipe - Sockolet (<2")	48	0.500"	SA155 GR. KC65 CL. 2		SA106 GR.B	Shop	100	35	Total 37000 GPM at full power	125	35	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Buried Under Soil with cathodic protection provid	35.00 led	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-	19	Pipe - Pipe	48	0.500"	SA155 GR. KC65 CL. 2		SA155 GR. KC65 CL. 2	. Field	100	35	Total 37000 GPM at full power	125	35	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Buried Under Soil with cathodic protection provid	35.00 led	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-	20	Pipe - Elbow (<90 degrees)	48	0.500"	SA155 GR. KC65 CL. 2		SA155 GR. KC65 CL. 2	. Shop	100	35	Total 37000 GPM at full power	125	35	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Buried Under Soil with cathodic protection provid	35.00 led	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-	21	Elbow (<90 degrees)	48	0.500"	SA155 GR. KC65 CL. 2		Not Applicable		100	35	Total 37000 GPM at full power	125	35	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Buried Under Soil with cathodic protection provid	led	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-	22	Elbow - Elbow	48	0.500"	SA155 GR. KC65 CL. 2		SA155 GR. KC65 CL. 2	. Shop	100	35	Total 37000 GPM at full power	125	35	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Buried Under Soil with cathodic protection provid	35.00 led	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-	23	Pipe - Tee	48	0.500"	SA155 GR. KC65 CL. 2		SA155 GR. KC65 CL. 2	Shop	100	35	Total 37000 GPM at full power	125	35	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Buried Under Soil with cathodic protection provid	35.00 led	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-	24	Tee - Pipe	48	0.500"	SA155 GR. KC65 CL. 2		SA155 GR. KC65 CL. 2	Field	100	35	Total 37000 GPM at full power	125	35	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Buried Under Soil with cathodic protection provid	35.00 led	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-	25	Tee - 48"x36" Reducer	48	0.500"	SA155 GR. KC65 CL. 2		SA155 GR. KC65 CL. 2	. Shop	100	35	Total 37000 GPM at full power	125	35	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Buried Under Soil with cathodic protection provid	35.00 led	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-	26	48*x36* Reducer	36	0.375"	SA155 GR. KC65 CL. 2		Not Applicable		100	35	Total 37000 GPM at full power	125	35	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Buried Under Soil with cathodic protection provid	led	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-	27	Reducer - Elbow (<90 degrees)	36	0.375"	SA155 GR. KC65 CL. 2		SA155 GR. KC65 CL. 2	. Shop	100	35	Total 37000 GPM at full power	125	35	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Buried Under Soil with cathodic protection provid	45.50 led	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-	28	Elbow (<90 degrees)	36	0.375"	SA155 GR. KC65 CL. 2		Not Applicable		100	35	Total 37000 GPM at full power	125	35	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Buried Under Soil with cathodic protection provid	led	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-	29	Straight Pipe	36	0.375"	SA155 GR. KC65 CL. 2		Not Applicable		100	35	Total 37000 GPM at full power	125	35	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Buried Under Soil with cathodic protection provid	lec	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-	30	Pipe - Seal Ring	36	0.375"	SA155 GR. KC65 CL. 2		Material Unknown. Perhaps CS		100	35	Total 37000 GPM at full power	125	35	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Valve Vault	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-	31	Pipe - Valve	36	0.375"	SA155 GR. KC65 CL. 2		SA155 GR. KC65 CL. 2	. Shop	100	35	Total 37000 GPM at full power	125	35	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Valve Vault	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-	32	Valve	36	0.375"	SA155 GR. KC65 CL. 2		Not Applicable		100	35	Total 37000 GPM at full power	125	35	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Valve Vault		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-	33	Pipe - Flange	36	0.375"	SA155 GR. KC65 CL. 2		SA155 GR. KC65 CL. 2	Shop	100	35	Total 37000 GPM at full power	125	35	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-	34	Flange	36	0.375"	SA155 GR. KC65 CL. 2		Not Applicable		100	35	Total 37000 GPM at full power	125	35	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	35	Elbow - 36"x30" Reducer	36	0.375"	SA155 GR. KC65 CL. 2		SA155 GR. KC65 CL. 2	Field	100	35	l'otal 37000 GPM at full power	125	35	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-	- 36	36"x30" Eccentric Reducer	36	U.375"	SA155 GR. KC65 CL. 2		5A155 GR. KC65 CL. 2		100	35	i otal 37000 GPM at full power	125	35	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-	- 37	Reducer - ESW Pump Suction	30	U.375"	SA155 GR. KC65 CL. 2		Material Unknown. Perhaps CS	rıeld	100	35	I otal 37000 GPM at full power	125	35	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-	- 38	ESW Pump	30	0.375"	Material Unknown. Perhaps CS		Not Applicable		100	100	rotal 37000 GPM at full power	100	125	19500/24000 GPM (Pump Rating)	Pond (Raw) Water	Aux. Bldg. Air	45	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-	39	ESW Pump Discharge Nozzle - Elbow (<90 deg rees)	30	0.375"	Material Unknown. Perhaps CS		SA155 GR. KC65 CL. 2	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		

System Identification	Group Identification	Part Part Identification Number	Part Description	Part Size in inches	Part Thickness in inches	n Material A	Material W	Material B	Weld Type	Operating Temperature in oF	Operating Pressure in psi	Operating Flow	Design Temperature ir oF	Design n Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in ks	Normal Stress in k	Faulter Stress in	d CUF ksi	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 i Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS	- 1	Strainer - Pipe	36	0.375"	SA234 GR. WPB		SA155 GR. KC65 0 2	CL. 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 stres only	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	I SS-SWDIS	- 2	Pipe	36	0.375"	SA155 GR. KC70 CL. 2		Not Applicable		100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air		34.95	69.90	Not calculated	No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	I SS-SWDIS	- 3	Pipe - Valve SX143A	36	0.375"	SA155 GR. KC70 CL. 2		SA234 GR. WPB	Shop	100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	45.50	34.95	69.90	Not calculated	No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	I SS-SWDIS	- 4	Valve SX143A	36	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 stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS	- 5	Pipe - Sockolet <2*	36	0.375"	SA155 GR. KC70 CL. 2		SA234 GR. WPB	Shop	100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	45.50	34.95	69.90	Not calculated	No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS	- 6	Pipe - 20" Weldolet	36	0.375"	SA155 GR. KC70 CL. 2		SA234 GR. WPB	Shop	100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	45.50	34.95	69.90	Not calculated	No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS	- 7	Pipe - Elbow	36	0.375"	SA155 GR. KC70 CL. 2		SA234 GR. WPB	Field	100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	45.50	34.95	69.90	Not calculated	No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	I SS-SWDIS-	- 8	Elbow	36	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 stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS	- 9	Pipe - Elbow (<90 degrees)	36	0.375"	SA155 GR. KC70 CL. 2		SA234 GR. WPB	Field	100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	45.50	34.95	69.90	Not calculated	No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS	- 10	Elbow (<90 degree)	36	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 stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	I SS-SWDIS	- 11	Pipe - 36"x36"x30" Tee	36	0.375"	SA155 GR. KC70 CL. 2		SA234 GR. WPB	Shop	100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	45.50	34.95	69.90	Not calculated	No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS	- 12	36"x36"x30" Tee	36	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 stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	I SS-SWDIS	- 13	Pipe - Pipe	36	0.375"	SA155 GR. KC70 CL. 2		SA155 GR. KC70 C 2	CL. Shop	100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	45.50	34.95	69.90	Not calculated	No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	I SS-SWDIS	- 14	Pipe - Lugs (external)	36	0.375"	SA155 GR. KC70 CL. 2		SA234 GR. WPB	Shop	100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	45.50	34.95	69.90	Not calculated	only No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS	- 15	Pipe - 5" weldolet	36	0.375"	SA155 GR. KC70 CL. 2		SA234 GR. WPB	Shop	100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	45.50	34.95	69.90	Not calculated	only No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS	- 16	Tee - Elbow	30	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	only No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS	- 17	Elbow	30	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	only No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	I SS-SWDIS	- 18	Pipe - 3" Weldolet	30	0.375"	SA155 GR. KC70 CL. 2		SA234 GR. WPB	Shop	100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	45.50	34.95	69.90	Not calculated	only No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	I SS-SWDIS	- 19	Pipe	30	0.375"	SA155 GR. KC70 CL. 2		Not Applicable		100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air		34.95	69.90	Not calculated	only No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	I SS-SWDIS	- 20	Pipe - Valve SxX004	30	0.375"	SA155 GR. KC70 CL. 2		SA234 GR. WPB	Shop	100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	45.50	34.95	69.90	Not calculated	only No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	I SS-SWDIS	- 21	Valve SX004A	30	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	only No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	I SS-SWDIS	- 22	Valve - Elbow (<90 degrees)	30	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	only No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS	- 23	Pipe - Flange	30	0.375"	SA155 GR. KC70 CL. 2		SA106 GR. II	Shop	100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	45.50	34.95	69.90	Not calculated	only No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	I SS-SWDIS	- 24	Flange	30	0.375"	SA106 GR. II		Not Applicable		100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air		30.00	60.00	Not calculated	only No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS	- 25	Pipe - 10" Weldolet	30	0.375"	SA155 GR. KC70 CL. 2		SA234 GR. WPB	Field	100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	45.50	34.95	69.90	Not calculated	only No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	I SS-SWDIS	- 26	Pipe	10	40S	SA106 GR. B (SMLS	3)	Not Applicable		100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air		30.00	60.00	Not calculated	only No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS	- 27	Pipe - Elbow	10		SA106 GR. B (SMLS	5)	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	only No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS	- 28	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	only No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS	- 29	Elbow - Valve	10		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	only No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS	- 30	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	only No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	I SS-SWDIS-	- 31	Pipe - CCW HX Nozzle	30	0.375"	SA155 GR. KC70 CL. 2		Material Unknown. Perhaps CS	Field	100	100	Load-Specific	100	125	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	45.50	34.95	69.90	Not calculated	only No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS	- 32	Tee - Elbow	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	only No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS	- 33	Elbow	20	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	only No secondary stress included - Design stres	4	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS	- 34	Elbow - Valve SX012A	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	only No secondary stress included - Design stress	4	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen	SS-SWDIS	- 35	Valve SX012A	20	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	only No secondary stress		
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen	I SS-SWDIS-	- 36	Elbow - Pipe	20	0.375"	SA234 GR. WPB		SA106 GR. B (SML	S) Field	100	100	Load-Specific	100	125	19500/24000 GPM (Rump)	Pond (Raw) Water	Aux. Bldg. Air	39.00	28.05	56.10	Not	only No secondary stress	LER286-02-001: weld toe area of the HAZ of	
																or m (r ump)						- around tou	only	oriented cament lined carbon steel 18 inch diameter service water (SW) supply header pipe to a tee connection in the Primary Auxiliary Building. Crevice corrosion	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	I SS-SWDIS	- 37	Pipe - 20"x20"x16" Tee	20	0.375"	SA106 GR. B (SMLS	3)	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 stres only	s	

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	esign erature in P oF	Design Pressure in psi	Design Flow	Inside Environment	Outside Residu Environment Stress in	al Normal ksi Stress in k	Faulted si Stress in ks	CUF	Stress Comments	Operating Experience	General Comments
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS-	38	20"x20"x16" Tee	20	0.375"	SA234 GR. WPB		Not Applicable		100	100	Load-Specific 100	12	5	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	28.05	56.10	Not calculated	No secondary stress included - Design stres only	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS-	39	Tee - Elbow	16	0.375"	SA234 GR. WPB		SA234 GR. WPB	Shop	100	100	Load-Specific 100	12	5	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air 39.00	28.05	56.10	Not calculated	No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS-	40	Elbow	16	0.375"	SA234 GR. WPB		Not Applicable		100	100	Load-Specific 100	12	5	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	28.05	56.10	Not calculated	No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS-	41	Pipe	16	0.375"	SA106 GR. B (SMLS)		Not Applicable		100	100	Load-Specific 100	12	5	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	30.00	60.00	Not calculated	No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen 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	12	5	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air 39.00	28.05	56.10	Not calculated	No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen 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	12	5	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air 39.00	28.05	56.10	Not calculated	No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS-	• 44	20"x14" Reducer	14	0.375"	SA234 GR. WPB		Not Applicable		100	100	Load-Specific 100	12	5	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	28.05	56.10	Not calculated	only No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS-	45	14" Straight Tee	14	0.375"	SA234 GR. WPB		Not Applicable		100	100	Load-Specific 100	12	5	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	28.05	56.10	Not calculated	No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS-	46	Tee - Tee	14	0.375"	SA234 GR. WPB		SA234 GR. WPB	Field	100	100	Load-Specific 100	12	5	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air 39.00	28.05	56.10	Not calculated	No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS-	47	14"x14"x6"Tee	14	0.375"	SA234 GR. WPB		Not Applicable		100	100	Load-Specific 100	12	5	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	28.05	56.10	Not calculated	No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS-	48	Tee - Reducer	14	0.375"	SA234 GR. WPB		Not Applicable	Shop	100	100	Load-Specific 100	12	5	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	28.05	56.10	Not calculated	No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS-	49	14"x10" Reducer	10	40S	SA234 GR. WPB		Not Applicable		100	100	Load-Specific 100	12	5	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	28.05	56.10	Not calculated	No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	I SS-SWDIS-	50	Pipe	10		SA106 GR. B (SMLS)		Not Applicable		100	100	Load-Specific 100	12	5	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	30.00	60.00	Not calculated	No secondary stress included - Design stres only	LER 281-86-006: galvanic corrosion cracking between the flanged section and the expanding ribbed section of an expansion join on the service water return line from a reticulation spray heat exchanger	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS-	51	Pipe - Elbow	10		SA106 GR. B (SMLS)		SA234 GR. WPB	Shop	100	100	Load-Specific 100	12	5	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air 52.50	30.00	60.00	Not calculated	No secondary stress included - Design stres only	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS-	52	Elbow	10		SA234 GR. WPB		Not Applicable		100	100	Load-Specific 100	12	5	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	28.05	56.10	Not calculated	No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS-	- 53	Valve	10		SA234 GR. WPB		Not Applicable		100	100	Load-Specific 100	12	5	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	28.05	56.10	Not calculated	No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	I SS-SWDIS-	54	Valve - Tee	10		SA234 GR. WPB		SA234 GR. WPB	Field	100	100	Load-Specific 100	12	5	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air 39.00	28.05	56.10	Not calculated	No secondary stress included - Design stres 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 valv due to MIC	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS-	- 55	Tee - 10"x8" Reducer	10		SA234 GR. WPB		SA234 GR. WPB	Field	100	100	Load-Specific 100	12	5	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air 39.00	28.05	56.10	Not calculated	No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS-	56	10"x8" Reducer	8		SA234 GR. WPB		Not Applicable		100	100	Load-Specific 100	12	5	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	28.05	56.10	Not calculated	No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS-	57	Pipe - Elbow	8		SA106 GR. B (SMLS)		SA234 GR. WPB	Field	100	100	Load-Specific 100	12	5	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air 52.50	30.00	60.00	Not calculated	No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS-	58	Elbow - Elbow	8		SA234 GR. WPB		SA234 GR. WPB	Shop	100	100	Load-Specific 100	12	5	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air 39.00	28.05	56.10	Not calculated	No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS-	- 59	Elbow	8		SA234 GR. WPB		Not Applicable		100	100	Load-Specific 100	12	5	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	28.05	56.10	Not calculated	No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS-	60	Pipe	8		SA106 GR. B (SMLS)		Not Applicable		100	100	Load-Specific 100	12	5	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	30.00	60.00	Not calculated	No secondary stress included - Design stres	INPO - Numerous reported leaks due to normal wear, general corrosion, MIC	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS-	61	Pipe - Sockolet <2*	8		SA106 GR. B (SMLS)		SA234 GR. WPB	Shop	100	100	Load-Specific 100	12	5	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air 52.50	30.00	60.00	Not calculated	No secondary stress included - Design stres only	INPO 533 - through wall leak was found at th socket weld of pipe 2"-CCB-6, the discharge of the charging pump at the inlet to check value due to envision	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS-	62	10"x10"x8" Tee	8		SA234 GR. WPB		Not Applicable		100	100	Load-Specific 100	12	5	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	28.05	56.10	Not calculated	No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen 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	12	5	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air 39.00	28.05	56.10	Not calculated	No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS-	64	Elbow	8		SA234 GR. WPB		Not Applicable		100	100	Load-Specific 100	12	5	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	28.05	56.10	Not calculated	only No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS-	65	Elbow - Pipe	8		SA234 GR. WPB		SA106 GR. B (SMLS)	Field	100	100	Load-Specific 100	12	5	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air 39.00	28.05	56.10	Not calculated	No secondary stress included - Design stres	s	
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	I SS-SWDIS-	66	Pipe	8		SA106 GR. B (SMLS)		Not Applicable		100	100	Load-Specific 100	12	5	19500/24000 GPM (Pump)	Pond (Raw) Water	Aux. Bldg. Air	30.00	60.00	Not calculated	only No secondary stress included - Design stres only	INPO 134 - Through wall leakage from pipe on inlet to 11 CCHX CL Relief valve. INPO68 - 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 Containmen and Auxiliary Buildings (SWDIS)	I SS-SWDIS-	67	CCW HX Shell	50	0.5	Carbon Steel		Not Applicable		130	150	200	150	0	3.07 x 10^6 lb/hr	Treated Water (CCW)	Aux. Bldg. Air	30	30		Assumed SA106 GR. E 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. admirally brass has a lower recommended flow rate than aluminum brass 4 6 ft/s instead degrees F 8 ft/s. Average opt	LER 483-95-006: turbulence caused the annular to vibrate. The annular, which is made of harder material than the ECW 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 Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS-	68	CCW HX Shell Side Fittings	0/48		Carbon Steel		Not Applicable		130	150	200	150	0	3.07 x 10^6 lb/hr	Treated Water (CCW)	Aux. Bldg. Air	30	30		Assumed SA106 GR. E SMLS		
Support Systems (SS)	Group 29 - Service Water Discharge to Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS-	69	CCW HX Tubes	3/4"		90-10 Cu-Ni		Not Applicable		130	150	200	15	U	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 Containmen and Auxiliary Buildings (SWDIS)	SS-SWDIS-	70	CCW HX Tubesheet	52	2.5	Carbon Steel		Not Applicable		130	150	200	150	0	9.96 x 10^6 lb/hr	Service Water	Aux. Bldg. Air	30	30		Assumed SA106 GR. E SMLS	8	

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 p	Design osi Flow	Inside Environment	Outside Environment	Residual Stress in ks	Normal i Stress in	Faulted ksi Stress in ks	i CUF	Stress Comments	Operating Experience	General Comments
Support Systems (SS)	Group 30 - Service Water Containment Fan (SWCONT)	SS-SWCONT-	- 1	Valve SX016A	16	0.375"	SA234 GR.WPB		Not Applicable		100	100	Load-specific	125	100	2660 GPM Max.	Pond (Raw) Water	AUX BLD. Air		28.05	56.10	Not calculated	No secondary stress included - Design stress		
Support Systems (SS)	Group 30 - Service Water Containment Fan (SWCONT)	SS-SWCONT-	- 2	Valve FLANGE - PIPE	16	0.375"	SA181 GR.II		SA106 GR.B (SMLS)	Field	100	100	Load-specific	125	100	2660 GPM Max.	Pond (Raw) Water	AUX BLD. Air	39.00	27.30	54.60	Not calculated	No secondary stress included - Design stress		
Support Systems (SS)	Group 30 - Service Water Containment Fan (SWCONT)	SS-SWCONT-	- 3	Pipe	16	0.375"	SA106 GR.B (SML	S)	Not Applicable	2	100	100	Load-specific	125	100	2660 GPM Max.	Pond (Raw) Water	CONT. Bldg.Air	15.50	30.00	60.00	Not calculated	No secondary stress included - Design stress		
Support Systems (SS)	Group 30 - Service Water Containment Fan (SWCONT)	SS-SWCONT-	- 4	PIPE - PIPE	16	0.375"	SA106 GR.B (SML)	5)	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-	- 5	PIPE - ELBOW	16	0.375"	SA106 GR.B (SML	S)	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-	- 6	Elbow	16	0.375"	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-	- 7	PIPE - 10" WELDOLET	10	0.375"	SA106 GR.B (SML	S)	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-	- 8	PIPE - 16"X14"REDUCER	16	0.375"	SA106 GR.B (SML	S)	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		
Support Systems (SS)	Group 30 - Service Water Containment Fan (SWCONT)	SS-SWCONT-	- 9	16"x14"REDUCER	16	0.375"	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-	- 10	16"X14"REDUCER - PIPE	14	0.375"	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-	- 11	PIPE - PIPE	14	0.375*	SA106 GR.B (SML	S)	SA106 GR.B (SMLS)	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-	- 12	PIPE - 14"x14"x10" TEE	14	0.375"	SA106 GR.B (SML	S)	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-	- 13	14"x14"x10" Tee	14	0.375"	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-	- 14	Pipe	14	0.375"	SA106 GR.B (SML	S)	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		
Support Systems (SS)	Group 30 - Service Water Containment Fan (SWCONT)	SS-SWCONT-	- 15	PIPE - 14"X10"REDUCER	14	0.375"	SA106 GR.B (SML	S)	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-	- 16	14*x10"REDUCER	10	0.365"	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-	- 17	14"X10"REDUCER - PIPE	10	0.365"	SA234 GR.WPB		SA106 GR.B (SMLS)	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		
Support Systems (SS)	Group 30 - Service Water Containment Fan (SWCONT)	SS-SWCONT-	- 18	Pipe	10	0.365"	SA106 GR.B (SML	S)	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 LER 1 included - Design stress	39/84 - Pin hole in the pipe due to MIC	
Support Systems (SS)	Group 30 - Service Water Containment Fan (SWCONT)	SS-SWCONT-	- 19	PIPE - ELBOW	10	0.365"	SA106 GR.B (SML	S)	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-	- 20	Elbow	10	0.365"	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		
Support Systems (SS)	Group 30 - Service Water Containment Fan (SWCONT)	SS-SWCONT-	- 21	16'x10" WELDOLET - PIPE	10	0.365"	SA234 GR.WPB		SA106 GR.B (SMLS)	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		
Support Systems (SS)	Group 30 - Service Water Containment Fan (SWCONT)	SS-SWCONT-	- 22	Pipe	10	0.365"	SA106 GR.B (SML	S)	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		
Support Systems (SS)	Group 30 - Service Water Containment Fan (SWCONT)	SS-SWCONT-	- 23	Pipe -Elbow	10	0.365"	SA106 GR.B (SML	S)	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		
Support Systems (SS)	Group 30 - Service Water Containment Fan (SWCONT)	SS-SWCONT-	- 24	Elbow	10	0.365"	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-	- 25	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		
Support Systems (SS)	Group 30 - Service Water Containment Fan (SWCONT)	SS-SWCONT-	- 26	Valve Flange	10	0.365"	SA105 GR.II		Not Applicable		100	100	Load-specific	125	100	2660 GPM Max.	Pond (Raw) Water	CONT. Bldg.Air		32.85	65.70	Not calculated	No secondary stress included - Design stress only		
Support Systems (SS)	Group 30 - Service Water Containment Fan (SWCONT)	SS-SWCONT-	- 27	Valve SX018C	10	0.365"	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-	- 28	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		
Support Systems (SS)	Group 30 - Service Water Containment Fan (SWCONT)	SS-SWCONT-	- 29	PIPE - PIPE	10	0.365"	SA106 GR.B (SML	S)	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-	- 30	10*x4" weldolet	4"	0.237*	SA106 GR.B (SML	S)	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-	- 31	PIPE - 10"X4"REDUCER	10	0.365"	SA106 GR.B (SML	S)	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-	- 32	10*x4" Reducer	10	0.365"	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-	- 33	14*x14*x10" TEE - 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-	- 34	PIPE - 10"X4"REDUCER	10	0.365"	SA106 GR.B (SML	S)	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-	- 35	14*x14*x10" TEE - 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		
Support Systems (SS)	Group 30 - Service Water Containment Fan (SWCONT)	SS-SWCONT-	- 36	PIPE - ELBOW	10	0.365"	SA106 GR.B (SML	S)	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		
Support Systems (SS)	Group 30 - Service Water Containment Fan (SWCONT)	SS-SWCONT-	- 37	ELBOW - ELBOW	10	0.365"	SA234 GR.WPB		SA234 GR.WPB	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		
Support Systems (SS)	Group 30 - Service Water Containment Fan (SWCONT)	SS-SWCONT-	- 38	ELBOW - FLANGE	10	0.365"	SA234 GR.WPB	1	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		
Support Systems (SS)	Group 30 - Service Water Containment Fan (SWCONT)	SS-SWCONT-	- 39	FLANGE - PIPE	10	0.365"	SA105 GR.II	1	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 LER 2 included - Design stress by the	213-95-017: Galvanic corrosion caused a attachment of carbon steel pipe to	
-	1		1	1		1		_1		1		1	1	1	1	1	1	1	1	1	1		stainie	505 5051 Harryss.	

System Identification	Group Identification	Part Identification	Part Number	Part r 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 ps	Design si Flow	Inside Environment	Outside Environment	Residua Stress in	I Normal ksi Stress in k	Faulted si Stress in ks	i 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) F	ield	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 S	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) F	ield	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 S	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) S	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 HVH-2 inside the Containment Vessel.* carbon steel and stainless steel bolts had been usedn 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) F	ield	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 S	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) F	ield	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) F	ïeld	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 Extroite Water discharge flow transmitter instrument line. The leak was on the welded connection between the stainless steel instrument line and the 10° discharge heade	
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) F	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	INPO1660 - 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 F	ield	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 F	ield	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 S	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 F (Assumed)	ield	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		

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 sure in psi	Design Flow	Inside Environment	Outside Environmen	Residua t Stress in	I Normal ksi Stress in ks	Faulted si Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Support Systems (SS)	Group 31 - CVCS Pumps to Crossover Leg Injection (CVXL)	SS-CVXL-	1 2" sockolet fro	rom 3* line	2	0.343	SA182 GR. F304 (FORG.)	N	ot Applicable		130	2250	Normally stagnant (n flow)	d 200 2485	1 P	100 GPM CVCS Pumps	Reactor Coolant	Aux. Bldg. Air		30	60				Drawings indicate Operating pressure of 2600 psi (presumably hydrostatic test pressure) greater than design pressure of 2485 psi
Support Systems (SS)	Group 31 - CVCS Pumps to Crossover Leg Injection (CVXI)	SS-CVXL-	2 Sockolet - pip	pe	2	0.343	SA182 GR. F304 (FORG.)	S.	A376 GR. TP304 SMLS PIPE)	Field	130	2250	Normally stagnant (n flow)	d 200 2485	1 P	100 GPM CVCS	Reactor Coolant	Aux. Bldg. Air	39	30	60				Operating flow 55-100 GPM from B/B-UFSAR, 9.3- 72
Support Systems (SS)	Group 31 - CVCS Pumps to Crossover Leg	SS-CVXL-	3 Straight Pipe		2	0.343	SA376 GR. TP304 (SMLS PIPE)	N	ot Applicable		130	2250	Normally stagnant (n	d 200 2485	1	100 GPM CVCS	Reactor Coolant	Aux. Bldg. Air		30	60				Design flow 100 GPM from B/B-UFSAR, 9.3-72
Support Systems (SS)	Group 31 - CVCS Pumps to Crossover Leg	SS-CVXL-	4 Pipe - elbow		2	0.343	SA376 GR. TP304	S.	A182 GR. F304	Field	130	2250	Normally stagnant (n	d 200 2485	1	100 GPM CVCS	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 31 - CVCS Pumps to Crossover Leg	SS-CVXL-	5 Elbow		2	0.343	SA182 GR. F304 (FORG.)	N	ot Applicable		130	2250	Normally stagnant (n	c 200 2485	1	100 GPM CVCS	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 31 - CVCS Pumps to Crossover Leg	SS-CVXL-	6 Pipe - 45 degr	gree Elbow	2	0.343	SA376 GR. TP304 (SMLS PIPE)	S. (F	A182 GR. F304	Field	130	2250	Normally stagnant (n	d 200 2485	1	100 GPM CVCS	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 31 - CVCS Pumps to Crossover Leg	SS-CVXL-	7 45 degree Elb	bow	2	0.343	SA182 GR. F304	N	ot Applicable		130	2250	Normally stagnant (n	c 200 2485	1	100 GPM CVCS	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 31 - CVCCS Pumps to Crossover Leg	SS-CVXL-	8 Pipe - Valve 1	1CV8345	2	0.343	SA376 GR. TP304	S	A182 GR. F316	Field	130	2250	Normally stagnant (n	c 200 2485	1	100 GPM CVCS	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 31 - CVCS Pumps to Crossover Leg	SS-CVXL-	9 Globe Valve 1	1CV8345	2	0.343	SA182 GR. F316 (FORG.)	N	ot Applicable		130	2250	Normally stagnant (n	d 200 2485	1 P	100 GPM CVCS	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 31 - CVCS Pumps to Crossover Leg	SS-CVXL-	10 Pipe - Flange	9	2	0.343	SA376 GR. TP304 (SMLS PIPE)	S.	A182 GR. F316	Field	130	2250	Normally stagnant (n	c 200 2485	1	100 GPM CVCS	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 31 - CVCS Pumps to Crossover Leg	SS-CVXL-	11 Flange		2	0.343	SA182 GR. F316 (FORG.)	N	ot Applicable		130	2250	Normally stagnant (n	c 200 2485	1	100 GPM CVCS	Reactor Coolant	Aux. Bldg. Air		30	60				Flange has SA 194, GR. B16 Bolts, SA 194 GR. 4 Nuts SS orifice plate and flexitallic Gaskets
Support Systems (SS)	Group 31 - CVCS Pumps to Crossover Leg	SS-CVXL-	12 Valve 1CV184	84	2	0.343	SA182 GR. F316 (FORG.)	N	ot Applicable		130	2250	Normally stagnant (n	d 200 2485	1 P	100 GPM CVCS	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 31 - CVCCS Pumps to Crossover Leg	SS-CVXL-	13 Pipe with 90 c	degree Bend	2	0.343	SA376 GR. TP304	N	ot Applicable		130	2250	Normally stagnant (n	c 200 2485	1	100 GPM CVCS	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 31 - CVCS Pumps to Crossover Leg	SS-CVXL-	14 Pipe - Tee		2	0.343	SA376 GR. TP304 (SMLS PIPE)	S. (F	A182 GR. F304	Field	130	2250	Normally stagnant (n	c 200 2485	1	100 GPM CVCS	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 31 - CVCS Pumps to Crossover Leg	SS-CVXL-	15 Tee		2	0.343	SA182 GR. F304	N	ot Applicable		130	2250	Normally stagnant (n	c 200 2485	1	100 GPM CVCS	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 31 - CVCS Pumps to Crossover Leg	SS-CVXL-	16 Tee - Reduce	ər	2	0.343	SA182 GR. F304	S.	A182 GR. F304	Field	130	2250	Normally stagnant (n	c 200 2485	T	Test Connection	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 31 - CVCCS Pumps to Crossover Leg	SS-CVXL-	17 2 x 3/4 Reduc	cer	2 x 3/4	0.343	SA182 GR. F304	N	ot Applicable		130	2250	Normally stagnant (n	c 200 2485	Т	Test Connection	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 31 - CVCCS Pumps to Crossover Leg	SS-CVXL-	18 Reducer - Pip	ре	0.75"	0.218	SA182 GR. F304	S.	A376 GR. TP304	Field	130	2250	Normally stagnant (n	c 200 2485	т	Test Connection	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 31 - CVCS Pumps to Crossover Leg	SS-CVXL-	19 Straight Pipe		0.75"	0.218	(FORG.) SA376 GR. TP304 (SMLS DIDE)	N	ot Applicable		130	2250	Normally stagnant (n	d 200 2485	Т	Test Connection	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 31 - CVCS Pumps to Crossover Leg	SS-CVXL-	20 Pipe - Valve 1	1CV070	0.75"	0.218	SA376 GR. TP304	S	A182 GR. F316	Field	130	2250	Normally stagnant (n	d 200 2485	Т	Test Connection	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 31 - CVCS Pumps to Crossover Leg	SS-CVXL-	21 Valve 1CV070	0	0.75"	0.218	(SML3 FIFE) SA182 GR. F316 (FORC.)	N	ot Applicable		130	2250	Normally stagnant (n	c 200 2485	т	Test Connection	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 31 - CVCS Pumps to Crossover Leg	SS-CVXL-	22 Cap (threaded	ed)	0.75"	0.218	SA182 GR. F304	N	ot Applicable		130	2250	Normally stagnant (n	c 200 2485	т	Test Connection	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 31 - CVCS Pumps to Crossover Leg	SS-CVXL-	23 Valve 1CV834	345	2	0.343	SA182 GR. F316	N	ot Applicable		130	2250	Normally stagnant (n	d 200 2485	1	00 GPM CVCS	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 31 - CVCS Pumps to Crossover Leg	SS-CVXL-	24 Pipe - Couplin	ing	2	0.343	(FORG.) SA376 GR. TP304 (SMLC DIDE)	S	A182 GR. F304	Field	130	2250	Normally stagnant (n	d 200 2485	1	OUMPS	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Group 31 - CVCS Pumps to Crossover Leg	SS-CVXL-	25 Coupling		2	0.343	(SMLS FIFE) SA182 GR. F304	N	ot Applicable		130	2250	Normally stagnant (n	d 200 2485	1	100 GPM CVCS	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 31 - CVCS Pumps to Crossover Leg	SS-CVXL-	26 Pipe - Couplin	ing	2	0.343	SA376 GR. TP304	S.	A182 GR. F304	Field	130	2250	Normally stagnant (n	c 200 2485	1	100 GPM CVCS	Reactor Coolant	Cont. Bldg. Air	39	30	60				
Support Systems (SS)	Group 31 - CVCS Pumps to Crossover Leg	SS-CVXL-	27 Coupling		2	0.343	(SMLS FIFE) SA182 GR. F304 (FORC)	N	ot Applicable		130	2250	Normally stagnant (n	c 200 2485	1	100 GPM CVCS	Reactor Coolant	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 31 - CVCCS Pumps to Crossover Leg	SS-CVXL-	28 Straight Pipe		2	0.343	SA376 GR. TP304	N	ot Applicable		130	2250	Normally stagnant (n	c 200 2485	1	100 GPM CVCS	Reactor Coolant	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 31 - CVCS Pumps to Crossover Leg	SS-CVXL-	29 Pipe - Check	Valve 1CV8348	2	0.343	(SMLS FIFE) SA376 GR. TP304 (SMLS PIPE)	S.	A182 GR. F316	Field	130	2250	Normally stagnant (n	d 200 2485	1	100 GPM CVCS	Reactor Coolant	Cont. Bldg. Air	39	30	60				
Support Systems (SS)	Group 31 - CVCS Pumps to Crossover Leg	SS-CVXL-	30 Check Valve	1CV8348	2	0.343	SA182 GR. F316	N	ot Applicable		130	2250	Normally stagnant (n	c 200 2485	1	100 GPM CVCS	Reactor Coolant	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 31 - CVCS Pumps to Crossover Leg	SS-CVXL-	31 Pipe - Elbow		2	0.343	SA376 GR. TP304	S.	A182 GR. F304	Field	130	2250	Normally stagnant (n	c 200 2485	1	100 GPM CVCS	Reactor Coolant	Cont. Bldg. Air	39	30	60				
Support Systems (SS)	Group 31 - CVCS Pumps to Crossover Leg	SS-CVXL-	32 Elbow		2	0.343	(SMLS FIFE) SA182 GR. F304 (FORG.)	N	ot Applicable		130	2250	Normally stagnant (n	c 200 2485	1	100 GPM CVCS	Reactor Coolant	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 31 - CVCS Pumps to Crossover Leg	SS-CVXL-	33 Pipe - Tee		2	0.343	SA376 GR. TP304 (SMLS PIPE)	S.	A182 GR. F304	Field	130	2250	Normally stagnant (n	c 200 2485	1	100 GPM CVCS	Reactor Coolant	Cont. Bldg. Air	39	30	60				
Support Systems (SS)	Group 31 - CVCS Pumps to Crossover Leg	SS-CVXL-	34 Tee		2	0.343	SA182 GR. F304 (FORG.)	N	ot Applicable		130	2250	Normally stagnant (n	c 200 2485	1	100 GPM CVCS	Reactor Coolant	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 31 - CVCS Pumps to Crossover Leg	SS-CVXL-	35 Tee - 2"x3/4"	Reducer	2	0.343	SA182 GR. F304 (FORG.)	S. (F	A182 GR. F304	Field	130	2250	Normally stagnant (n	c 200 2485	1	100 GPM CVCS	Reactor Coolant	Cont. Bldg. Air	39	30	60				
Support Systems (SS)	Group 31 - CVCCS Pumps to Crossover Leg	SS-CVXL-	36 2"x3/4" Reduc	icer	2 x 3/4	0.343	SA182 GR. F304	N	ot Applicable		130	2250	Normally stagnant (n	c 200 2485	1	100 GPM CVCS	Reactor Coolant	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 31 - CVCCS Pumps to Crossover Leg	SS-CVXL-	37 Reducer - 3/4	4* Pipe	0.75"	0.218	SA182 GR. F304	S.	A376 GR. TP304	Field	130	2250	Normally stagnant (n	c 200 2485	1	100 GPM CVCS	Reactor Coolant	Cont. Bldg. Air	39	30	60				
Support Systems (SS)	Group 31 - CVCCS Pumps to Crossover Leg	SS-CVXL-	38 Straight Pipe		0.75"	0.218	SA376 GR. TP304	N	ot Applicable		130	2250	Normally stagnant (n	c 200 2485	1	100 GPM CVCS	Reactor Coolant	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 31 - CVCCS Pumps to Crossover Leg	SS-CVXL-	39 Pipe - Valve 1	1CV8349	0.75"	0.218	SA376 GR. TP304	S.	A182 GR. F316	Field	130	2250	Normally stagnant (n	c 200 2485	1	100 GPM CVCS	Reactor Coolant	Cont. Bldg. Air	39	30	60				
Support Systems (SS)	Group 31 - CVCCS Pumps to Crossover Leg	SS-CVXL-	40 Valve 1CV834	149	0.75"	0.218	SA182 GR. F316	N	ot Applicable		130	2250	Normally stagnant (n	c 200 2485	1	100 GPM CVCS	Reactor Coolant	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 31 - CVCCS Pumps to Crossover Leg	SS-CVXL-	41 Pipe with 90 c	degree Bend	2	0.343	SA376 GR. TP304	N	ot Applicable		130	2250	Normally stagnant (n	c 200 2485	1	100 GPM CVCS	Reactor Coolant	Cont. Bldg. Air		30	60				
Support Systems (SS)	Group 31 - CVCS Pumps to Crossover Leg	SS-CVXL-	42 Globe Valve 1	1RC8036D	2	0.343	(SML3 FIFE) SA182 GR. F316 (FORC.)	N	ot Applicable		130	2250	Normally stagnant (n	c 200 2485	1	100 GPM CVCS	Reactor Coolant	Cont. Bldg. Air		30	60				Insulation - 1RC16AS-2" B 2.5"
Support Systems (SS)	Group 31 - CVCS Pumps to Crossover Leg	SS-CVXL-	43 Globe Valve 1	1RC8038D	2	0.343	SA182 GR. F316	N	ot Applicable	1	586	2250	Normally stagnant (n	d 200 2485	1	100 GPM CVCS	Reactor Coolant	Cont. Bldg. Air		30	60				Insulation - 1RC16AS-2" B 2.5"
Support Systems (SS)	Group 31 - CVCS Pumps to Crossover Leg	SS-CVXL-	44 Valve 1RC803	038D - Pipe	2	0.343	SA182 GR. F316	S	A376 GR. TP304	Field	586	2250	Normally stagnant (n	d 650 2485	1	100 GPM CVCS	Reactor Coolant	Cont. Bldg. Air	39	30	60	+			Insulation - 1RC16AS-2" B 2.5"
Support Systems (SS)	Group 31 - CVCS Pumps to Crossover Leg	SS-CVXL-	45 Straight Pipe		2	0.343	SA376 GR. TP304	N	ot Applicable	1	586	2250	Normally stagnant (n	d 650 2485	1	00 GPM CVCS	Reactor Coolant	Cont. Bldg. Air		24.6	49.2	+			Insulation - 1RC16AS-2" B 2.5"
Support Systems (SS)	Group 31 - CVCS Pumps to Crossover Leg	SS-CVXL-	46 Pipe - Elbow		2	0.343	SA376 GR. TP304	S	A182 GR. F304	Field	586	2250	Normally stagnant (n	c 650 2485	1	100 GPM CVCS	Reactor Coolant	Cont. Bldg. Air	23.79	24.6	49.2				Insulation - 1RC16AS-2" B 2.5"
Support Systems (SS)	Group 31 - CVCS Pumps to Crossover Leg	SS-CVXL-	47 Elbow		2	0.343	SA182 GR. F304	N	ot Applicable	1	586	2250	Normally stagnant (n	c 650 2485	1	100 GPM CVCS	Reactor Coolant	Cont. Bldg. Air		30	60				Insulation - 1RC16AS-2" B 2.5"
Support Systems (SS)	Group 31 - CVCS Pumps to Crossover Leg	SS-CVXL-	48 Pipe with 90 c	degree Bend	2	0.343	SA376 GR. TP304 (SMLS PIPE)	N	ot Applicable	1	586	2250	Normally stagnant (n	d 650 2485	1	100 GPM CVCS	Reactor Coolant	Cont. Bldg. Air		24.6	49.2				Insulation - 1RC16AS-2" B 2.5"
Support Systems (SS)	Group 31 - CVCS Pumps to Crossover Leg Injection (CVXL)	SS-CVXL-	49 Pipe - Sockole	let (X-over leg)	2	0.343	SA376 GR. TP304 (SMLS PIPE)	S	A182 GR. F304 ORG.)	Field	586	2250	Normally stagnant (n flow)	d 650 2485	1 P	100 GPM CVCS	Reactor Coolant	Cont. Bldg. Air	23.79	24.6	49.2				Insulation - 1RC16AS-2" B 2.5"
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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 ks	Normal i Stress in ksi	Faulted Stress in ksi CUF	Stress Comments	Operating Experience	General Comments
Support Systems (SS)	Group 32 - CVCS Normal Letdown	SS-CVLD	- 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	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	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	SS-CVLD	- 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	SS-CVLD	- 5	Pipe - Elbow (< 90 degrees)	3	0.438"	SA376 GR.TP304		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	SS-CVLD	- 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	SS-CVLD	- 7	Pipe - Valve 1RC8085	3	0.438"	SA376 GR.TP304		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	SS-CVLD	- 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	Insulation - Type B - 2 1/2*
Support Systems (SS)	Group 32 - CVCS Normal Letdown	SS-CVLD	- 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		THITO .	Insulation - Type B - 2 1/2*
Support Systems (SS)	Group 32 - CVCS Normal Letdown	SS-CVLD	- 10	Pipe - Pipe	3	0.438"	SA376 GR.TP304		SA376 GR.TP304	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	SS-CVLD	- 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	SS-CVLD	- 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	SS-CVLD	- 13	Pipe - 3 x 3/4 Weldolet	3	0.438"	SA376 GR.TP304		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	SS-CVLD	- 14	3 x 3/4 Weldolet	3 x 3/4	0.438"	SA403 GR.WP304		Not Applicable		560	2250	Normally stagnant	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	SS-CVLD	- 15	Weldolet - Valve 1CV215	3/4"	0.438"	SA403 GR.WP304		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	SS-CVLD	- 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	SS-CVLD	- 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	SS-CVLD	- 18	Cap (threaded)	3/4"	0.438"	SA403 GR.WP304		Not Applicable		560	2250	Normally stagnant	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	SS-CVLD	- 19	Тее	3	0.438"	SA403 GR.WP304		SA403 GR.WP304		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	SS-CVLD	- 20	Tee - Pipe	3	0.438"	SA403 GR.WP304		SA376 GR.TP304	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	SS-CVLD	- 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	SS-CVLD	- 22	Pipe - 1" Sockolet w/plug	3 " - 1"	0.438"	SA376 GR.TP304		SA403 GR.WP304	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	SS-CVLD	- 23	Pipe - Reg. HX Inlet Nozzle	3	0.438"	SA376 GR.TP304		SA312 GR.304	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	SS-CVLD	- 24	Reg. HX Inlet Nozzle Weld	8.625	0.437	SA312 GR. 304		SA312 GR. 304		115/517	2250	37.3K lb/hr(Shell) /	650	2485 (Shell)/ 310((Tubo)	0 150 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	SS-CVLD	- 25	Reg. HX Outlet Nozzle Weld	3	0.437	SA312 GR. 304		SA312 GR. 304		560/290	2250	37.3K lb/hr(Shell) /	650	2485 (Shell)/ 3100 (Tube)	0 150 GPM	Reactor Coolant	Cont. Bldg. Air	23.92	24.6	49.2			4" Insulation
Support Systems (SS)	Group 32 - CVCS Normal Letdown	SS-CVLD	- 26	Reg. HX Vertical to Horizontal Boo	y8.625		SA312 GR. 304		SA312 GR. 304		560/290	2250	37.3K lb/hr(Shell) /	650	2485 (Shell)/ 3100 (Tube)	0 150 GPM	Reactor Coolant	Cont. Bldg. Air	23.92	24.6	49.2			4" Insulation
Support Systems (SS)	Group 32 - CVCS Normal Letdown	SS-CVLD	- 27	Reg. HX Body End Weld	10.75		SA312 GR. 304		SA312 GR. 304		560/290	2250	37.3K lb/hr(Shell) /	650	(Tube) 2485 (Shell)/ 310((Tube)	0 150 GPM	Reactor Coolant	Cont. Bldg. Air	23.92	24.6	49.2			4" Insulation
Support Systems (SS)	Group 32 - CVCS Normal Letdown	SS-CVLD	- 28	Reg. HX Body End Weld	10.75		SA312 GR. 304		SA312 GR. 304		560/290	2250	37.3K lb/hr(Shell) /	650	2485 (Shell)/ 310((Tube)	0 150 GPM	Reactor Coolant	Cont. Bldg. Air	23.92	24.6	49.2			4" Insulation
Support Systems (SS)	Group 32 - CVCS Normal Letdown	SS-CVLD	- 29	Reg. HX Vertical to Horizontal Boo	iy8.625		SA312 GR. 304		SA312 GR. 304		560/290	2250	37.3K lb/hr(Shell) /	650	2485 (Shell)/ 310((Tube)	0 150 GPM	Reactor Coolant	Cont. Bldg. Air	23.92	24.6	49.2			4" Insulation
Support Systems (SS)	Group 32 - CVCS Normal Letdown	SS-CVLD	- 30	Reg. HX Inlet Nozzle Weld	3	0.437	SA312 GR. 304		SA312 GR. 304		560/290	2250	37.3K lb/hr(Shell) /	650	2485 (Shell)/ 310((Tube)	0 150 GPM	Reactor Coolant	Cont. Bldg. Air	23.92	24.6	49.2			4" Insulation
Support Systems (SS)	Group 32 - CVCS Normal Letdown	SS-CVLD	- 31	Reg. HX Outlet Nozzle Weld	8.625	0.437	SA312 GR. 304		SA312 GR. 304		115/517	2250	37.3K lb/hr(Shell) /	650	2485 (Shell)/ 310((Tube)	0 150 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	SS-CVLD	- 32	Reg. HX Tubes			SA213AW SS304		Not Applicable		115/517	2250	37.3K lb/hr(Shell) /	650	(Tube) 2485 (Shell)/ 310((Tube)	0 150 GPM	Reactor Coolant	Cont. Bldg. Air		24.3	48.6			
Support Systems (SS)	Group 32 - CVCS Normal Letdown	SS-CVLD	- 33	Reg. HX Tubesheet		1	SA182 SS304		Not Applicable		115/517	2250	37.3K lb/hr(Shell) /	650	2485 (Shell)/ 310((Tube)	0 150 GPM	Reactor Coolant	Cont. Bldg. Air	1	20.85	41.7			
Support Systems (SS)	Group 32 - CVCS Normal Letdown	SS-CVLD	- 34	Reg. HX Fittings			SA182 SS304		Not Applicable		115/517	2250	37.3K lb/hr(Shell) /	650	2485 (Shell)/ 310((Tube)	0 150 GPM	Reactor Coolant	Cont. Bldg. Air		20.85	41.7			Insulation - Type B - 2 1/2*
Support Systems (SS)	Group 32 - CVCS Normal Letdown	SS-CVLD	- 35	Reg. HX Outside Supports			SA515-70 CS		Not Applicable		Cont. Air with	2250	27.4K ID/hr(1000) 37.3K Ib/hr(Shell) / 27.4K Ib/hr(Tubo)	650	(Tube) 2485 (Shell)/ 310((Tube)	0 150 GPM	Reactor Coolant	Cont. Bldg. Air		29.1	58.2			Insulation - Type B - 2 1/2*
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System Identification	Group Identification	Part Part Identification 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 Residual Environment Stress in ks	Normal i Stress in ksi	Faulted Stress in ksi CUF	Stress Comments	Operating Experience	General Comments
Support Systems (SS)	Group 33 - CVCS Regenerative HX to Letdown HX (RHXLHX)	SS-RHXLHX-1	Reg. HX Nozzle - Pipe	3	0.438"	SA312 GR. 304		SA376 GR.TP304	Field	290	2235	75-120 GPM	450	2485	150 GPM	Reactor Coolant	Cont. Bldg. Air 39	30	60			
Support Systems (SS)	Group 33 - CVCS Regenerative HX to	SS-RHXLHX-2	Pipe - Branch w/plug	3	0.438"	SA376 GR.TP304		SA403 GR.WP304	Shop	290	2235	Normally Stagnant (n	c450	2485	Plugged	Reactor Coolant	Cont. Bldg. Air 39	30	60			
Support Systems (SS)	Group 33 - CVCS Regenerative HX to	SS-RHXLHX-3	Straight Pipe	3	0.438"	SA376 GR.TP304		Not Applicable		290	2235	flow) 75-120 GPM	450	2485	150 GPM	Reactor Coolant	Cont. Bldg. Air	30	60			
Support Systems (SS)	Group 33 - CVCS Regenerative HX to	SS-RHXLHX-4	Pipe - Elbow	3	0.438"	SA376 GR.TP304		SA403 GR.WP304		290	2235	75-120 GPM	450	2485	150 GPM	Reactor Coolant	Cont. Bldg. Air 39	30	60			
Support Systems (SS)	Group 33 - CVCS Regenerative HX to	SS-RHXLHX-5	Elbow	3	0.438"	SA403 GR.WP304		Not Applicable		290	2235	75-120 GPM	450	2485	150 GPM	Reactor Coolant	Cont. Bldg. Air	30	60			
Support Systems (SS)	Group 33 - CVCS Regenerative HX to	SS-RHXLHX-6	Pipe - 3 x 3/4 XXS Weldolet	3	0.438"	SA376 GR.TP304		SA403 GR.WP304	Shop	290	2235	Normally Stagnant (n	c450	2485	High point ver	nt Reactor Coolant	Cont. Bldg. Air 39	30	60			
Support Systems (SS)	Letdown HX (RHXLHX) Group 33 - CVCS Regenerative HX to	SS-RHXLHX-7	3 x 3/4 XXS Weldolet	3 X 3/4	0.438"	SA403 GR.WP304		Not Applicable		290	2235	flow) Normally Stagnant (n	c450	2485	? High point ver	nt Reactor Coolant	Cont. Bldg. Air	30	60			
Support Systems (SS)	Letdown HX (RHXLHX) Group 33 - CVCS Regenerative HX to	SS-RHXLHX-8	Weldolet - Valve 1CV224	3/4"	0.438"	SA403 GR.WP304		SA182 GR. F316		290	2235	flow) Normally Stagnant (n	c450	2485	? High point ver	nt Reactor Coolant	Cont. Bldg. Air 39	30	60			
Support Systems (SS)	Letdown HX (RHXLHX) Group 33 - CVCS Regenerative HX to	SS-RHXLHX-9	Valve 1CV224	3/4"	0.438"	SA182 GR. F316		Not Applicable		290	2235	flow) Normally Stagnant (n	c450	2485	? High point ver	nt Reactor Coolant	Cont. Bldg. Air	30	60			
Support Systems (SS)	Letdown HX (RHXLHX) Group 33 - CVCS Regenerative HX to	SS-RHXLHX-10	Pipe - Valve 1CV8322B	3	0.438"	SA376 GR.TP304		SA182 GR. F316	Field	290	2235	flow) 75-120 GPM	450	2485	? 150 GPM	Reactor Coolant	Cont. Bldg. Air 39	30	60			
Support Systems (SS)	Letdown HX (RHXLHX) Group 33 - CVCS Regenerative HX to	SS-RHXLHX-11	Valve 1CV8322B	3	0.438"	SA182 GR. F316		Not Applicable		290	2235	75-120 GPM	450	2485	150 GPM	Reactor Coolant	Cont. Bldg. Air	30	60			
Support Systems (SS)	Letdown HX (RHXLHX) Group 33 - CVCS Regenerative HX to	SS-RHXLHX-12	Check Valve 1CV8323B	3	0.438"	SA182 GR. F316		Not Applicable		290	2235	75-120 GPM	450	2485	150 GPM	Reactor Coolant	Cont. Bldg. Air	30	60			
Support Systems (SS)	Letdown HX (RHXLHX) Group 33 - CVCS Regenerative HX to	SS-RHXLHX-13	Pipe - Tee	3	0.438" 5	SA376 GR.TP304		SA403 GR.WP304		290	2235	75-120 GPM	450	2485	150 GPM	Reactor Coolant	Cont. Bldg. Air 39	30	60			
Support Systems (SS)	Letdown HX (RHXLHX) Group 33 - CVCS Regenerative HX to	SS-RHXLHX-14	Tee	3	0.438" 5	SA403 GR.WP304		Not Applicable		290	2235	75-120 GPM	450	2485	150 GPM	Reactor Coolant	Cont. Bldg. Air	30	60			
Support Systems (SS)	Letdown HX (RHXLHX) Group 33 - CVCS Regenerative HX to	SS-RHXLHX-15	Tee - Elbow	3	0.438" 5	SA403 GR.WP304		SA403 GR.WP304		290	2235	75-120 GPM	450	2485	150 GPM	Reactor Coolant	Cont. Bldg. Air 39	30	60			
Support Systems (SS)	Letdown HX (RHXLHX) Group 33 - CVCS Regenerative HX to	SS-RHXLHX-16	Pipe - 3 x 1-1/2 Reducer	3	0.438" 5	SA376 GR.TP304		SA403 GR.WP304	Shop	290	2235	75-120 GPM	450	2485	150 GPM	Reactor Coolant	Cont. Bldg. Air 39	30	60			
Support Systems (SS)	Letdown HX (RHXLHX) Group 33 - CVCS Regenerative HX to	SS-RHXLHX-17	3 x 1-1/2 Reducer	3 x 1-1/2	0.438" 5	SA403 GR.WP304		Not Applicable		290	2235	75-120 GPM	450	2485	150 GPM	Reactor Coolant	Cont. Bldg. Air	30	60			
Support Systems (SS)	Letdown HX (RHXLHX) Group 33 - CVCS Regenerative HX to	SS-RHXLHX-18	Reducer to Flow Restrictor	1 1/2"	0.438"	SA403 GR.WP304		SA403 GR.WP304	Field	290	2235	75-120 GPM	450	2485	150 GPM	Reactor Coolant	Cont. Bldg. Air 39	30	60			
Support Systems (SS)	Letdown HX (RHXLHX) Group 33 - CVCS Regenerative HX to	SS-RHXLHX-19	Valve 1CV8149A	3	0.438"	SA182 GR. F316		Not Applicable		290	2235	75-120 GPM	450	2485	150 GPM	Reactor Coolant	Cont. Blda. Air	30	60			
Support Systems (SS)	Letdown HX (RHXLHX) Group 33 - CVCS Regenerative HX to	SS-RHXLHX-20	Valve 1CV8149A - Pipe	3	0.438"	SA182 GR. F316		SA376 GR.TP304	Field	290	2235	75-120 GPM	450	2485	150 GPM	Reactor Coolant	Cont. Bldg. Air 39	30	60			
Support Systems (SS)	Letdown HX (RHXLHX) Group 33 - CVCS Regenerative HX to	SS-RHXLHX-21	Pipe - Elbow	3	0.216"	SA312 GR.TP304		SA403 GR.WP304		290	285	75-120 GPM	450	585	150 GPM	Reactor Coolant	Cont. Bldg. Air 39	30	60			
Support Systems (SS)	Letdown HX (RHXLHX) Group 33 - CVCS Regenerative HX to	SS-RHXI HX-22	Flbow	3	0.216"	SMLS)		(SMLS) Not Applicable		290	285	75-120 GPM	450	585	150 GPM	Reactor Coolant	Cont Bldg Air	30	60			
Support Systems (SS)	Letdown HX (RHXLHX) Group 33 - CVCS Regenerative HX to	SS PHYLHY 22	Straight Dine	2	0.216*	SMLS)		Not Applicable		200	295	75-120 GPM	450	595	150 GPM	Reactor Coolant	Cont Bida Air	30	60			
Support Systems (SS)	Letdown HX (RHXLHX)	00 DUXUX 04	Straight Tipe	5	0.210	(SMLS)				200	205	75-120 OF M	450	505	150 GI M	Reactor Coolant	Cont. Bldg. All	30	60			
Support Systems (SS)	Letdown HX (RHXLHX)	33-RHALHA-24	Too	2	0.210	SMLS)		(SMLS)		290	203	75-120 GPM	450	505	150 GPM	Reactor Coolant	Cont. Bldg. All 39	30	60			
Support Systems (SS)	Letdown HX (RHXLHX)	33-RHALHA-23		2	0.210	(SMLS)				290	200	73-120 GPW	450	200	150 GPM	Reactor Coolant	Cont. Blug. All	30	00			
Support Systems (SS)	Letdown HX (RHXLHX)	SS-RHALHA-26	Tee - Pipe	3	0.216	SMLS)		(SMLS)		290	285	75-120 GPM	450	282	150 GPM	Reactor Coolant	Cont. Bidg. Air 39	30	60			
Support Systems (SS)	Letdown HX (RHXLHX)	SS-RHXLHX-27	Pipe - Pipe	3	0.216 (SA312 GR.1P304 (SMLS)		SA312 GR. 1P304 (SMLS)	Snop	290	285	75-120 GPM	450	585	150 GPM	Reactor Coolant	Cont. Bldg. Air 39	30	60			
Support Systems (SS)	Group 33 - CVCS Regenerative HX to Letdown HX (RHXLHX)	SS-RHXLHX-28	Pipe - Valve 1CV8160	3	0.216"	SA312 GR.TP304 (SMLS)		SA182 GR. F316	Field	290	285	75-120 GPM	450	585	150 GPM	Reactor Coolant	Cont. Bldg. Air 39	30	60			
Support Systems (SS)	Group 33 - CVCS Regenerative HX to Letdown HX (RHXLHX)	SS-RHXLHX-29	Valve 1CV8160	3	0.216"	SA182 GR. F316		Not Applicable		290	285	75-120 GPM	450	585	150 GPM	Reactor Coolant	Cont. Bldg. Air	30	60			
Support Systems (SS)	Group 33 - CVCS Regenerative HX to Letdown HX (RHXLHX)	SS-RHXLHX-30	Pipe - Valve 1CV8152	3	0.216"	SA312 GR.TP304 (SMLS)		SA182 GR. F316	Field	290	285	75-120 GPM	450	585	150 GPM	Reactor Coolant	Aux. Bldg. Air 39	30	60			
Support Systems (SS)	Group 33 - CVCS Regenerative HX to Letdown HX (RHXLHX)	SS-RHXLHX-31	Valve 1CV8152	3	0.216"	SA182 GR. F316		Not Applicable		290	285	75-120 GPM	450	585	150 GPM	Reactor Coolant	Aux. Bldg. Air	30	60			
Support Systems (SS)	Group 33 - CVCS Regenerative HX to Letdown HX (RHXLHX)	SS-RHXLHX-32	Straight Pipe	3	0.216"	SA312 GR.TP304 (SMLS)		Not Applicable		290	285	75-120 GPM	450	585	150 GPM	Reactor Coolant	Aux. Bldg. Air	30	60			
Support Systems (SS)	Group 33 - CVCS Regenerative HX to Letdown HX (RHXLHX)	SS-RHXLHX-33	Pipe - Pipe	3	0.216"	SA312 GR.TP304 (SMLS)		SA312 GR.TP304 (SMLS)	Shop	290	285	75-120 GPM	450	585	150 GPM	Reactor Coolant	Aux. Bldg. Air 39	30	60			
Support Systems (SS)	Group 33 - CVCS Regenerative HX to Letdown HX (RHXLHX)	SS-RHXLHX-34	Pipe - Elbow	3	0.216"	SA312 GR.TP304		SA403 GR.WP304 (SMLS)		290	285	75-120 GPM	450	585	150 GPM	Reactor Coolant	Aux. Bldg. Air 39	30	60			
Support Systems (SS)	Group 33 - CVCS Regenerative HX to Letdown HX (RHXLHX)	SS-RHXLHX-35	Elbow	3	0.216"	SA403 GR.WP304		Not Applicable		290	285	75-120 GPM	450	585	150 GPM	Reactor Coolant	Aux. Bldg. Air	30	60			
Support Systems (SS)	Group 33 - CVCS Regenerative HX to	SS-RHXLHX-36	Elbow - Elbow	3	0.216"	SA403 GR.WP304		SA403 GR.WP304		290	285	75-120 GPM	450	585	150 GPM	Reactor Coolant	Aux. Bldg. Air 39	30	60			
Support Systems (SS)	Group 33 - CVCS Regenerative HX to	SS-RHXLHX-37	Pipe - Tee	3	0.216"	SA312 GR.TP304		SA403 GR.WP304	Field	290	285	75-120 GPM	450	585	150 GPM	Reactor Coolant	Aux. Bldg. Air 39	30	60			
Support Systems (SS)	Group 33 - CVCS Regenerative HX to	SS-RHXLHX-38	Tee	3	0.216"	SMLS) SA403 GR.WP304		(SMLS) Not Applicable		290	285	75-120 GPM	450	585	150 GPM	Reactor Coolant	Aux. Bldg. Air	30	60			
Support Systems (SS)	Letdown HX (RHXLHX) Group 33 - CVCS Regenerative HX to	SS-RHXLHX-39	Pipe - 45 degree Elbow	3	0.216"	SMLS) SA312 GR.TP304		SA403 GR.WP304	Shop	290	285	75-120 GPM	450	585	150 GPM	Reactor Coolant	Aux. Bldg. Air 39	30	60			
Support Systems (SS)	Letdown HX (RHXLHX) Group 33 - CVCS Regenerative HX to	SS-RHXLHX-40	45 degree Elbow	3	0.216"	SMLS) SA403 GR.WP304		(SMLS) Not Applicable		290	285	75-120 GPM	450	585	150 GPM	Reactor Coolant	Aux. Bldg. Air	30	60			
Support Systems (SS)	Letdown HX (RHXLHX) Group 33 - CVCS Regenerative HX to	SS-RHXLHX-41	Valve 1CV7037	3	0.216"	SMLS) SA182 GR. F316		Not Applicable		290	285	75-120 GPM	450	585	150 GPM	Reactor Coolant	Aux. Bldg. Air	30	60			
Support Systems (SS)	Letdown HX (RHXLHX) Group 33 - CVCS Regenerative HX to	SS-RHXLHX-42	Pipe - 3 x 4 Reducer	3	0.216"	SA312 GR.TP304		SA403 GR.WP304		290	285	75-120 GPM	450	585	150 GPM	Reactor Coolant	Aux. Bldg. Air 39	30	60			
Support Systems (SS)	Letdown HX (RHXLHX) Group 33 - CVCS Regenerative HX to	SS-RHXLHX-43	3 x 4 Reducer	3 x 4	0.216"	SMLS) SA403 GR.WP304		(SMLS) Not Applicable		290	285	75-120 GPM	450	585	150 GPM	Reactor Coolant	Aux. Bldg. Air	30	60			
Support Systems (SS)	Letdown HX (RHXLHX) Group 33 - CVCS Regenerative HX to	SS-RHXI HX-44	Reducer to LD Reheat HX 600 lb.	4	0.216"	SMLS) SA403 GR WP304		SA182 GR F304		290	285	75-120 GPM	450	585	150 GPM	Reactor Coolant	Aux Bldg Air 39	30	60			
Support Systems (SS)	Letdown HX (RHXLHX) Group 33 - CVCS Regenerative HX to	SS-RHXI HX-45	WN Flange Valve 1CV81074	3	0.216"	SMLS)		Not Applicable		290	285	75-120 GPM	450	585	150 GPM	Reactor Coolant	Aux Bida Air	30	60			
Support Systems (SS)	Letdown HX (RHXLHX) Group 33 - CVCS Regenerative HX to	SS-RHXLHX-46	Valve 1CV381B	3	0.216"	SA182 GR E316		Not Applicable		290	285	75-120 GPM	450	585	150 GPM	Reactor Coolant	Aux Bldg. Air	30	60			
Support Systems (SS)	Letdown HX (RHXLHX) Group 33 - CVCS Regenerative HX to	SS-RHXI HX-47	Elbow - Valve 1CV8107B	3	0.216"	SA403 GR WP304		SA182 GR E316	Field	290	285	75-120 GPM	450	585	150 GPM	Reactor Coolant	Aux Bldg Air 39	30	60			
Support Systems (SS)	Letdown HX (RHXLHX)	SS-PHYLHY-48	Valve 1CV/8107B	2	0.216*	(SMLS)		Not Applicable		200	295	75-120 GPM	450	595	150 GPM	Reactor Coolant	Aux Bidg Air	30	60			
Support Systems (SS)	Letdown HX (RHXLHX) Group 33 - CVCS Regenerative HX to	SS-PHYLHY-40	Valve 1CV8107B	3	0.216	SA182 GR E216		Not Applicable		290	203	75-120 GPM	450	585	150 GPM	Reactor Coolant	Aux. Bidg. Air	30	60			
Support Systems (SS)	Letdown HX (RHXLHX) Group 33 - CVCS Regenerative HX to	SS-RHXI HX-50	Pipe - LD HX 600 lb WN Flance	3	0.216"	SA312 GR TP304		SA182 GR F304		290	285	75-120 GPM	450	600	150 GPM	Reactor Coolant	Aux Bldg. Air 39	30	 60			
Support Systems (SS)	Letdown HX (RHXLHX)	SS-RHXI HY 51	I D HX Shell Side Mozzlee	8		(SMLS)		Not Applicable		105 to 137	150	204 7K lb/br	250	150	498K /b/br	Treated Water (CCW)	Aux Bido Air					HX ratings from R/R-I IFSAP 0 2.76 2.77
Support Systems (SO)	Letdown HX (RHXLHX)		L D HY Shall Side Disise	5		Carbon Steel		Not Applicable		105 to 127	150	204.71(16/64	250	150	109K Ib /br	Treated Water (COW)	Aux Bida Air					ros raunga nom bro-or oArt 9.3-ro & //
Support Systems (00)	Letdown HX (RHXLHX)		LD LLV Shall Side Fibling			Corbon Sto-1		Not Applies		105 to 137	150	204.7K Ib/h-	250	150	409K/h-h-	Treated Water (CCW)	Aux Dida Air					
Support Systems (SS)	Letdown HX (RHXLHX)	00-REALERA-03	LD HY Tube Side Marries	3		SA 192 SS204		Not Applicable		200 to 115	295	27 2K lb/br	400	600	50 6K lb/br	Reactor Coolant	Aux Bida Air	30	03			
Support Systems (SS)	Letdown HX (RHXLHX)	SS-RHYI HV. 65	LD HX Tubes	5		Stainlese Steel 2		Not Applicable		290 to 115	285	37 3K lb/br	400	600	59.6K Ib/br	Reactor Coolant	Aux Bida Air	50	~			
Support Systems (SS)	Letdown HX (RHXLHX)	SS-RHYI HV-K*	LD HX Tubesheet			SA240 SS204		Not Applicable		290 to 115	285	37 3K lb/br	400	600	59.6K Ib/br	Reactor Coolant	Aux Bida Air	30	03			
Subbour Systems (SS)	Letdown HX (RHXLHX)	00*NIIALIIA*00	LD IIA TUDESHEEL			000004		Not Applicable		200 10 1 10	200	Sr. Sr. ID/IIf		000	39.0K ID/NF	reactor coorant	Aux. Diuy. All	50				

Solutione Mode Mode Mode Mode <	System Identification	Group Identification	Part P Identification Nu	rt Part ber 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 I Stress in ksi Str	ormal F ss in ksi Stre	aulted ss in ksi	CUF	Stress Comments	Operating Experience	General Comments
Scheder <	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
Subset Subset Subset Subset </td <td>Support Systems (SS)</td> <td>Group 34 - CVCS Letdown HX to VCT (LHXVCT)</td> <td>SS-LHXVCT-2</td> <td>Elbow</td> <td>3</td> <td>0.216</td> <td>SA403 GR.WP304</td> <td></td> <td>Not Applicable</td> <td></td> <td>115</td> <td>285</td> <td>75-120 GPM</td> <td>250</td> <td>585</td> <td>150 GPM</td> <td>Reactor Coolant</td> <td>Aux. Bldg. Air</td> <td>30</td> <td>60</td> <td></td> <td></td> <td></td> <td></td> <td>Operating flow 75-120 gpm from B/B-UFSAR 9.3-72</td>	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
B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B	Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT	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-LIESAR 9.3-79
Bit All	Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT	SS-LHXVCT- 4	Straight Pipe	3	0.216	SA312 GR.TP304		Not Applicable		115	285	75-120 GPM	250	585	150 GPM	Reactor Coolant	Aux. Bldg. Air	30	60					all of one of the
B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B	Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT	SS-LHXVCT-5	Pipe - 3 x 3/4 3000 lb Weldolet	3	0.216	SA312 GR.TP304		SA403 GR.WP304	Shop	115	285	75-120 GPM	250	585	150 GPM	Reactor Coolant	Aux. Bldg. Air	39 30	60					
B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B B	Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT	SS-LHXVCT-6	3 x 3/4 3000 lb Weldolet	3x3/4	0.216	SA403 GR.WP304		Not Applicable		115	285	Normally Stagnant (no	250	585	High point ven	t Reactor Coolant	Aux. Bldg. Air	30	60					
Marked Marked </td <td>Support Systems (SS)</td> <td>Group 34 - CVCS Letdown HX to VCT</td> <td>SS-LHXVCT-7</td> <td>Weldolet - Valve ICV229</td> <td>3/4"</td> <td>0.216</td> <td>SA403 GR.WP304</td> <td></td> <td>SA182 GR.F316</td> <td>Shop</td> <td>115</td> <td>285</td> <td>Normally Stagnant (no</td> <td>250</td> <td>585</td> <td>High point ven</td> <td>t Reactor Coolant</td> <td>Aux. Bldg. Air</td> <td>39 30</td> <td>60</td> <td></td> <td></td> <td></td> <td></td> <td></td>	Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT	SS-LHXVCT-7	Weldolet - Valve ICV229	3/4"	0.216	SA403 GR.WP304		SA182 GR.F316	Shop	115	285	Normally Stagnant (no	250	585	High point ven	t Reactor Coolant	Aux. Bldg. Air	39 30	60					
Shale Shale <t< td=""><td>Support Systems (SS)</td><td>Group 34 - CVCS Letdown HX to VCT</td><td>SS-LHXVCT-8</td><td>Valve 1CV229</td><td>3/4"</td><td>0.216</td><td>SA182 GR.F316</td><td></td><td>Not Applicable</td><td></td><td>115</td><td>285</td><td>Normally Stagnant (no</td><td>250</td><td>585</td><td>? High point ven</td><td>t Reactor Coolant</td><td>Aux. Bldg. Air</td><td>30</td><td>60</td><td></td><td></td><td></td><td></td><td></td></t<>	Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT	SS-LHXVCT-8	Valve 1CV229	3/4"	0.216	SA182 GR.F316		Not Applicable		115	285	Normally Stagnant (no	250	585	? High point ven	t Reactor Coolant	Aux. Bldg. Air	30	60					
Matheffer M	Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT	SS-LHXVCT- 9	Valve 1CV229 - Pipe	3/4"	0.216	SA182 GR.F316		SA312 GR.TP304		115	285	Normally Stagnant (no	250	585	? High point ven	t Reactor Coolant	Aux. Bldg. Air	39 30	60					
A. M.	Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT	SS-LHXVCT- 10	Straight Pipe	3/4"	0.216	SA312 GR.TP304		Not Applicable		115	285	Normally Stagnant (no	250	585	? High point ven	t Reactor Coolant	Aux. Bldg. Air	30	60					
A. J. M.	Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT	SS-LHXVCT-11	Pipe Cap	3/4"	0.216	(SMLS) SA403 GR.WP304		Not Applicable		115	285	Normally Stagnant (no	250	585	? High point ven	t Reactor Coolant	Aux. Bldg. Air	30	60					
Same and	Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT	SS-LHXVCT- 12	Pipe - Pipe	3	0.216	SA312 GR.TP304		SA312 GR.TP304	Shop	115	285	10w) 75-120 GPM	250	585	? 150 GPM	Reactor Coolant	Aux. Bldg. Air	39 30	60					
bit bit< bit< bit< bit	Support Systems (SS)	(LHXVCT) Group 34 - CVCS Letdown HX to VCT	SS-LHXVCT- 13	Elbow - Check Valve 1CV8466A	3	0.216	(SMLS) SA403 GR.WP304		(SMLS) SA182 GR.F316	Field	115	285	75-120 GPM	250	585	150 GPM	Reactor Coolant	Aux. Bldg. Air	39 30	60					
Shares	Support Systems (SS)	(LHXVCT) Group 34 - CVCS Letdown HX to VCT	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					
Description Description <thdescription< th=""> <thdescription< th=""></thdescription<></thdescription<>	Support Systems (SS)	(LHXVCT) Group 34 - CVCS Letdown HX to VCT	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					
Barbon Barbon Barbon Barbon </td <td>Support Systems (SS)</td> <td>(LHXVCT) Group 34 - CVCS Letdown HX to VCT</td> <td>SS-LHXVCT- 16</td> <td>Valve 1CV8467A</td> <td>3</td> <td>0.216</td> <td>SA182 GR.F316</td> <td></td> <td>Not Applicable</td> <td></td> <td>115</td> <td>285</td> <td>75-120 GPM</td> <td>250</td> <td>585</td> <td>150 GPM</td> <td>Reactor Coolant</td> <td>Aux. Bldg. Air</td> <td>30</td> <td>60</td> <td></td> <td></td> <td></td> <td></td> <td></td>	Support Systems (SS)	(LHXVCT) Group 34 - CVCS Letdown HX to VCT	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					
Carbon Carbon Carbon Carbon <td>Support Systems (SS)</td> <td>(LHXVCT) Group 34 - CVCS Letdown HX to VCT</td> <td>SS-LHXVCT- 17</td> <td>Pipe - Tee</td> <td>3</td> <td>0.216</td> <td>SA312 GR.TP304</td> <td></td> <td>SA403 GR.WP304</td> <td>Shop</td> <td>115</td> <td>285</td> <td>75-120 GPM</td> <td>250</td> <td>585</td> <td>150 GPM</td> <td>Reactor Coolant</td> <td>Aux. Bldg. Air</td> <td>39 30</td> <td>60</td> <td></td> <td></td> <td></td> <td></td> <td></td>	Support Systems (SS)	(LHXVCT) Group 34 - CVCS Letdown HX to VCT	SS-LHXVCT- 17	Pipe - Tee	3	0.216	SA312 GR.TP304		SA403 GR.WP304	Shop	115	285	75-120 GPM	250	585	150 GPM	Reactor Coolant	Aux. Bldg. Air	39 30	60					
Scale Scale <t< td=""><td>Support Systems (SS)</td><td>(LHXVCT) Group 34 - CVCS Letdown HX to VCT</td><td>SS-LHXVCT- 18</td><td>Tee</td><td>3</td><td>0.216</td><td>(SMLS) SA403 GR.WP304</td><td></td><td>Not Applicable</td><td></td><td>115</td><td>285</td><td>75-120 GPM</td><td>250</td><td>585</td><td>150 GPM</td><td>Reactor Coolant</td><td>Aux. Bldg. Air</td><td>30</td><td>60</td><td></td><td></td><td></td><td></td><td></td></t<>	Support Systems (SS)	(LHXVCT) Group 34 - CVCS Letdown HX to VCT	SS-LHXVCT- 18	Tee	3	0.216	(SMLS) SA403 GR.WP304		Not Applicable		115	285	75-120 GPM	250	585	150 GPM	Reactor Coolant	Aux. Bldg. Air	30	60					
Name Name <t< td=""><td>Support Systems (SS)</td><td>(LHXVCT) Group 34 - CVCS Letdown HX to VCT</td><td>SS-LHXVCT- 19</td><td>Elbow- Elbolet</td><td>3 x 1-1/4</td><td>0.216</td><td>SA403 GR.WP304</td><td></td><td>SA403 GR.WP304</td><td>Shop</td><td>115</td><td>285</td><td>75-120 GPM</td><td>250</td><td>585</td><td>150 GPM</td><td>Reactor Coolant</td><td>Aux. Bldg. Air</td><td>39 30</td><td>60</td><td></td><td></td><td></td><td></td><td></td></t<>	Support Systems (SS)	(LHXVCT) Group 34 - CVCS Letdown HX to VCT	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					
Name Name Name Name N	Support Systems (SS)	(LHXVCT) Group 34 - CVCS Letdown HX to VCT	SS-LHXVCT- 20	Pipe - Flange	3	0.216	SA312 GR.TP304		SA182 GR.F304		115	285	75-120 GPM	250	585	150 GPM	Reactor Coolant	Aux. Bldg. Air	39 30	60					
	Support Systems (SS)	(LHXVCT) Group 34 - CVCS Letdown HX to VCT	SS-LHXVCT- 21	Flange	3	0.216	(SMLS) 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;
Condence	Support Systems (SS)	(LHXVCT) Group 34 - CVCS Letdown HX to VCT	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					Nuts - SA194 GR.4; Gasket - 1/8"gap, Flexitallic, Style CG
Description Description <thdescription< th=""> <thdescription< th=""></thdescription<></thdescription<>	Support Systems (SS)	(LHXVCT) Group 34 - CVCS Letdown HX to VCT	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					
Import Import<	Support Systems (SS)	(LHXVCT) Group 34 - CVCS Letdown HX to VCT	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					
Method Method<	Support Systems (SS)	(LHXVCT) Group 34 - CVCS Letdown HX to VCT	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 -
Added matrix		(LHXVCT)																							SA194 GR.2H; Gasket - 1/8"gap, Flexitallic, Style CG
Subsect <	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.
Mathematic Mathematic Mathematic Mathemat	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					
Image and set in the	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					
Added matrix Added matrix<	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					
Bardondo Bardond	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					
Bardener	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					
Separation Separa	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					
Second Marce	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
Image many many many many many many many many	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					
Sector Sector<	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					
Separt Mail	Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT	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					
Sport Molify Moles Sport Moles Mar UNACC Sport Moles	Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT	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							
Board Y UNCLINEWNIE W GLAWNET By Cold Wink TONE C 3 210 State Cold Wink TONE C State Cold Wink TONE C And Eq. W No. Eq. W <	Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT	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					
Specify Appendix Specify Appendix<	Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT	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					
bages 34 - OC 24 laber 14 vol 24 Sec 14 vol 24	Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT	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.
Spep 1-VCS Ledeen HV VC Spec VVCS Ledee HV VC	Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT	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					
Supply from CSL construction Supply from CSL construction <th< td=""><td>Support Systems (SS)</td><td>Group 34 - CVCS Letdown HX to VCT</td><td>SS-LHXVCT- 42</td><td>Check Valve 1CV8417</td><td>3</td><td>0.216</td><td>SA182 GR.F316</td><td></td><td>Not Applicable</td><td></td><td>115</td><td>75</td><td>75-120 GPM</td><td>140</td><td>300</td><td>150 GPM</td><td>Reactor Coolant</td><td>Aux. Bldg. Air</td><td>30</td><td>60</td><td></td><td></td><td></td><td></td><td></td></th<>	Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT	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					
LUNCL CMAL CMAL CMAL <td>Support Systems (SS)</td> <td>Group 34 - CVCS Letdown HX to VCT</td> <td>SS-LHXVCT- 43</td> <td>Valve 1CV8416</td> <td>3</td> <td>0.216</td> <td>SA182 GR.F316</td> <td></td> <td>Not Applicable</td> <td></td> <td>115</td> <td>75</td> <td>75-120 GPM</td> <td>140</td> <td>300</td> <td>150 GPM</td> <td>Reactor Coolant</td> <td>Aux. Bldg. Air</td> <td>30</td> <td>60</td> <td></td> <td></td> <td></td> <td></td> <td></td>	Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT	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 System (5) Concept 4 - Officie Leddown HX b VC Support System (S) Concept 4 - Officie Leddown HX b VC Support System (S) Concept 4 - Officie Leddown HX b VC Support System (S) Support System (S) Support System (S) Concept 4 - Officie Leddown HX b VC Support System (S) Support Sys	Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT	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					
Image: Marrie	Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT	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
intraction intract	Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT	SS-LHXVCT-46	Filter Shell - Filter Outlet Nozzle	7" shell	0.165 Shell	SA312 TP304		SA312 TP304 ?	Shop	115	75	75-120 GPM	250	300	150 GPM	Reactor Coolant	Aux. Bldg. Air	30	60					
Label Normal Label Normal	Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT	SS-LHXVCT- 47	Filter Shell - Filter Seal Ring	3 nozzle 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					
Introver	Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT	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					Qty. Four - 5/8-11 UNC Stud bolts in Seal Ring; Stud bolts
Introvent Introvent <t< td=""><td>Support Systems (SS)</td><td>Group 34 - CVCS Letdown HX to VCT</td><td>SS-LHXVCT- 49</td><td>VCT Inlet Nozzle - VCT Upper Head</td><td>3</td><td>0.312</td><td>SA182 F304</td><td></td><td>SA240 304</td><td>Shop</td><td>115</td><td>75</td><td>75-120 GPM</td><td>250</td><td>75</td><td>150 GPM</td><td>Reactor Coolant</td><td>Aux. Bldg. Air</td><td>39 30</td><td>60</td><td></td><td></td><td></td><td></td><td>Design flow, temp., press., from Westinghouse dwg.</td></t<>	Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT	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.
Intervent Intervent <t< td=""><td>Support Systems (SS)</td><td>Group 34 - CVCS Letdown HX to VCT</td><td>SS-LHXVCT- 50</td><td>VCT Upper Head - VCT Cylinder</td><td>90</td><td>0.312 - 0.25</td><td>SA240 304</td><td></td><td>SA240 304</td><td>Shop</td><td>115</td><td>75</td><td>75-120 GPM</td><td>250</td><td>75</td><td>150 GPM</td><td>Reactor Coolant</td><td>Aux. Bldg. Air</td><td>39 30</td><td>60</td><td></td><td></td><td></td><td></td><td>VCT volume - 400 cubic feet from B/B - UFSAR pg. 9.3-75 (Toble 0.2.2)</td></t<>	Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT	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. 9.3-75 (Toble 0.2.2)
Intervention Interventin Interventin I	Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT	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					(1 aule 9.3.3)
ILLTAVE 1	Support Systems (SS)	Group 34 - CVCS Letdown HX to VCT	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-LHXVCT- 53	VCT Lower Head - VCT Outlet Nozzle	в 4	0.312	SA240 304		SA240 304	Shop	115	75	75-120 GPM	250	75	150 GPM	Reactor Coolant	Aux. Bldg. Air	39 30	60					

System	Group	Part Identification	Part Number	Part Description	Part Size in	Part Thickness in	Material Material A W	Material B	Weld	Operating Temperature in	Operating Pressure in	Operating Design	Design Pressure in	Design Flow	Inside Environment	Outside Residual Environment Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Current Curtama (CC)	Course of a OVOC Mined Bad to Filter			Neede Shew	inches	inches		CA400 CD 5004	- Jpc	oF	psi	oF	psi	450.000	Departure Caralant		20	co.		Commonto	Experience	
Support Systems (SS)	(MBFTR)	55-MDF 18	- 1	NOZZIE - EIDOW	3	0.216	(SMLS)	SA162 GR.F304	Field	115	265	140	300	150 GPW	Reactor Coolant	Aux. Bidg. Air 39	30	60				Design flow from B/B-OFSAR 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	8-3	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	8-4	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	8-5	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	8-6	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	8-7	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 (MBETR)	SS-MBFTR	8-8	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	SS-MBFTR	8-9	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	SS-MBFTR	R-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)	(MBFTR) Group 35 - CVCS Mixed Bed to Filter	SS-MBFTR	R- 11	Pipe - Pipe	3	0.216	SA312 GR.TP304	SA312 GR.TP304	Shop	115	285	140	300	150 GPM	Reactor Coolant	Aux. Bldg. Air 39	30	60				
Support Systems (SS)	(MBFTR) Group 35 - CVCS Mixed Bed to Filter	SS-MBFTR	8-12	Valve 1CV8514	3	0.216	(SMLS) SA351 GR.CF8	(SMLS) Not Applicable		115	285	140	300	150 GPM	Reactor Coolant	Aux. Bldg. Air	30	60				
Support Systems (SS)	(MBFTR) Group 35 - CVCS Mixed Bed to Filter	SS-MBFTR	8-13	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.
Support Systems (SS)	(MBFTR) Group 35 - CVCS Mixed Bed to Filter	SS-MBETR	2-14	Pipe - Weldolet	3	0.216	SA312 GR TP304	SA182 GR E304	Shop	115	285	140	300	High point yent	Reactor Coolant	Aux Bldg Air 39	30	60				1A-CV-08 This branch line normally has no flow
Support Systems (SS)	(MBFTR)		15	2 x 2/4 Woldolot	2 2 2/4	0.216	(SMLS)	Not Applicable	onop	115	200	140	200	High point von	t Reactor Coolant	Aux Bidg. Air	20	60				This branch line normally has no flow
Support Systems (SS)	(MBFTR)	SS-MBFTR	- 15	3 x 3/4 Weldblet	3 X 3/4	0.216	SA182 GR.F304	Not Applicable	21	115	265	140	300	High point veni	Reactor Coolant	Aux. Bidg. Air	30	60				This branch line normally has no now
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR	R-16	Weldolet - Valve 1CV231	3/4"	0.216	SA182 GR.F304	SA351 GR.CF8	Shop	115	285	140	300	High point vent	t 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	R-17	Valve 1CV231	3/4"	0.216	SA351 GR.CF8	Not Applicable		115	285	140	300	High point vent	t 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	R-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	R-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	R-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	SS-MBFTR	8-21	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	SS-MBFTR	8-22	Coupling - Pipe	2	0.154	SA182 GR.F304	SA312 GR.TP304		115	285	140	300	75 GPM	Reactor Coolant	Aux. Bldg. Air 39	30	60		L	ER 247-1996-024: Toe of socket weld leak	
	(MBFTR)							(SMLS)												ť	han 1/32 inch diameter with dry boric acid	
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter	SS-MBFTR	8-23	Straight Pipe	2	0.154	SA312 GR.TP304	Not Applicable		115	285	140	300	75 GPM	Reactor Coolant	Aux. Bldg. Air	30	60		r	esique.	
Support Systems (SS)	(MBFTR) Group 35 - CVCS Mixed Bed to Filter	SS-MBFTR	8-24	Pipe with 90 degree bend	2	0.154	(SMLS) SA312 GR.TP304	Not Applicable		115	285	140	300	75 GPM	Reactor Coolant	Aux. Bldg. Air	30	60				
Support Systems (SS)	(MBFTR) Group 35 - CVCS Mixed Bed to Filter	SS-MBETR	2-25	Pipe - Elange	2	0.154	(SMLS) SA312 GR TP304	SA182 GR F304	Field	115	285	140	300	75 GPM	Reactor Coolant	Aux, Bldg, Air 39	30	60				
Support Systems (SS)	(MBFTR) Group 35 - CVCS Mixed Bed to Filter	SS-MRETR	26	Elance	2	0.154	(SMLS)	Not Applicable		115	285	140	300	75 GPM	Reactor Coolant	Aux Bldg Air	30	60			EP 255-1008-001: Elance gasket material	2" 300 lb Orifice Elange: 5/8" Stud Bolte
Support Systems (SS)	(MBFTR)	33-WIDP TR	-20	Fiange	2	0.134	3A102 GR.F304	Not Applicable		115	285	140	300	75 GPW	Reactor Coolant	Aux. Blug. All	30	80		r	ated for only 100 psi whereas the system	(SA193 GR.B7); 5/8" Nuts (SA194 GR2H);
																				n	nade as a one piece gasket, but as a threee	Fiexitaliic Gasket
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter	SS-MBFTR	R-27	Pipe - Elbow	2	0.154	SA312 GR.TP304	SA182 GR.F304	Field	115	285	140	300	75 GPM	Reactor Coolant	Aux. Bldg. Air 39	30	60			JECE YASKEI.	
Support Systems (SS)	(MBFTR) Group 35 - CVCS Mixed Bed to Filter	SS-MBFTR	8-28	Elbow	2	0.154	(SMLS) SA182 GR.F304	Not Applicable		115	285	140	300	75 GPM	Reactor Coolant	Aux. Bldg. Air	30	60				
Support Systems (SS)	(MBFTR) Group 35 - CVCS Mixed Bed to Filter	SS-MBFTR	R- 29	Pipe - Valve 1CV8516	2	0.154	SA312 GR.TP304	SA351 GR.CF8	Field	115	285	140	300	75 GPM	Reactor Coolant	Aux. Bldg. Air 39	30	60				
Support Systems (SS)	(MBFTR) Group 35 - CVCS Mixed Bed to Filter	SS-MBETR	2-30	Valve 1CV8516	2	0 154	(SMLS) SA351 GR CE8	Not Applicable		115	285	140	300	75 GPM	Reactor Coolant	Aux Bldg Air	30	60				
Support Systems (SS)	(MBFTR)		2 24	4E dagrae Elbow	-	0.164	SA182 CR 5204	Not Applicable		115	200	140	200	75 CPM	Reactor Coolant	Aux Bidg. Air	20	60				
Support Systems (SS)	(MBFTR)	00 MDFTR		45 degree Elbow	2	0.154	3A102 GR.F304		5.11	115	200	140	300	75 GPM		Aux. Bldg. All	30	00				
Support Systems (SS)	(MBFTR)	22-WBFTR	- 32	45 degree Elbow - Pipe	2	0.154	SA182 GR.F304	(SMLS)	Field	115	285	140	300	75 GPM	Reactor Coolant	Aux. Bidg. Air 39	30	60				
Support Systems (SS)	Group 35 - CVCS Mixed Bed to Filter (MBFTR)	SS-MBFTR	8-33	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	8-34	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	8-35	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	8-36	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	SS-MBFTR	R-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	SS-MBFTR	8-38	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	SS-MBFTR	8-39	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)	(MBFTR) Group 35 - CVCS Mixed Bed to Filter	SS-MBFTR	R-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		L	ER 336-1995-023: OD initiated stress	
	(MBFTR)																			c A	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	R- 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 She	e 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	SS-MBFTR	43	Mixed Bed Shell - Mixed Bed Lower Hea	a:82	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	SS-MBFTR	8-44	Mixed Bed Lower Head - Mixed Bed	3	0.465 - 0.216	SA240 GR.TP304	SA312 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	SS-MBFTR	R- 45	Cation Bed Inlet Nozzle - Cation Bed	3	0.216 - 0.372	SA312 GR.TP304	SA240 GR.TP304	Shop	115	285	250	300	75 GPM	Reactor Coolant	Aux. Bldg. Air 39	30	60				
Support Systems (SS)	(MBFTR) Group 35 - CVCS Mixed Bed to Filter	SS-MBFTR	R-46	Upper Head Cation Bed Upper Head - Cation Bed	26	0.372 - 0.226	(SMLS) SA240 GR.TP304	SA240 GR.TP304	Shop	115	285	250	300	75 GPM	Reactor Coolant	Aux. Bldg. Air 39	30	60				
Support Systems (SS)	(MBFTR) Group 35 - CVCS Mixed Bed to Filter	SS-MBFTR	8-47	Shell Cation Bed Shell - Cation Bed Lower	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)	(MBFTR) Group 35 - CVCS Mixed Bed to Filter	SS-MRFTR	8-48	Head Cation Bed Lower Head - Cation Bed	3	0.372 - 0.216	SA240 GR.TP304	SA312 GR.TP304	Shop	115	285	250	300	75 GPM	Reactor Coolant	Aux. Bldg. Air 39	30	60				
	(MBFTR)		1	Outlet Nozzle	ľ			(SMLS)	1 .													1

System Identification	Group Identification	Part Part Identification 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	Operating Flow in gpm	Design Temperature in oF	Design Pressure in	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	SS-VCTCVP-1	Pipe - Elbow	2	0.154	SA312 GR.TP304		SA182 GR.F304 Field	1	160 95	5	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60				
Support Systems (SS)	Pump Suction (VCTCVP) Group 36 - CVCS VCT to Charging	SS-VCTCVP-2	Elbow	2	0.154	(SMLS) SA182 GR.F304		Not Applicable		160 95	5	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Pump Suction (VCTCVP) Group 36 - CVCS VCT to Charging	SS-VCTCVP- 3	Straight Pipe	2	0.154	SA312 GR.TP304		SA312 GR.TP304		160 95	5	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	50				
Support Systems (SS)	Pump Suction (VCTCVP) Group 36 - CVCS VCT to Charging	SS-VCTCVP-4	Pipe - Tee	2	0.154	(SMLS) SA312 GR.TP304		(SMLS) SA182 GR.F304 Field	1	160 95	õ	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux, Bldg, Air	39	30	30				
Support Systems (SS)	Pump Suction (VCTCVP) Group 36 - CVCS VCT to Charging	SS-VCTCVP-5	Тее	2	0.154	(SMLS) SA182 GR E304		Not Applicable		160 95	5	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux Bldg. Air		30	50				
Support Systems (SS)	Pump Suction (VCTCVP)	SS-VCTCVP-6	Tee - Reducer	2	0.154	SA403 GR WP304		SA182 GP E304 Eield		160 05		Normally stagpant	250	150	Instrument	Reactor Coolant	Aux Bldg Air	30	20	30				
Outpoint Gystems (GG)	Pump Suction (VCTCVP)		Dud Deducer	2	0.154	04400 OR 5004		Net Applicable		100 35	,	Normally stagnant	250	150	Conn.	Reactor Coolant	Aux Didy. All	55	20	20				
Support Systems (SS)	Pump Suction (VCTCVP)	33-VCTCVF-7		2 X I	0.154	3A162 GR.F304				100 95	,		250	150	Conn.	Reactor Coolant	Aux. Blug. All		50 1	50				
Support Systems (SS)	Pump Suction (VCTCVP)	SS-VCTCVP-8	Pipe - valve TCV8396A	2	0.154	(SMLS)		SA351 GR.CF8 Field		160 90)	75 - 120	250	150	150 GPM	Reactor Coolant	Aux. Bidg. Air	39	30 1	50				
Support Systems (SS)	Pump Suction (VCTCVP)	SS-VCTCVP-9	Valve 1CV8396A	2	0.154	SA351 GR.CF8		Not Applicable		160 95))	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bidg. Air		30 1	50				
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTCVP)	SS-VCTCVP-10	Pipe - 45 degree Elbow	2	0.154	SA312 GR.TP304 (SMLS)		SA182 GR.F304 Field	1	160 95	5	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30 4	50				
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTCVP)	SS-VCTCVP-11	45 degree Elbow	2	0.154	SA182 GR.F304		Not Applicable		160 95	5	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air		30 1	30				
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTCVP)	SS-VCTCVP- 12	Pipe - Coupling	2	0.154	SA312 GR.TP304 (SMLS)		SA182 GR.F304 Field		160 95	5	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30 (50				
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTCVP)	SS-VCTCVP- 13	Coupling	2	0.154	SA182 GR.F304		Not Applicable		160 95	5	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air		30 1	50				
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTCVP)	SS-VCTCVP- 14	Coupling - Reducer	2	0.154	SA182 GR.F304		SA182 GR.F304		160 95	ō	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	50				
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTCVP)	SS-VCTCVP- 15	2 x 3 Reducer	2 x 3	0.216	SA182 GR.F304		Not Applicable		160 95	5	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air		30 0	50				
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTCVP)	SS-VCTCVP- 16	Reducer - Pipe	3	0.216	SA182 GR.F304		SA312 GR.TP304 (SMLS)		160 95	5	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	50				
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTC)/P)	SS-VCTCVP- 17	Elbow	3	0.216	SA182 GR.F304		Not Applicable		160 95	õ	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	50				
Support Systems (SS)	Group 36 - CVCS VCT to Charging	SS-VCTCVP-18	Elbow - Pipe	3	0.216	SA182 GR.F304		SA312 GR.TP304		160 95	5	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	50				
Support Systems (SS)	Group 36 - CVCS VCT to Charging	SS-VCTCVP- 19	Pipe	3	0.216	SA312 GR.TP304		Not Applicable		160 95	5	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 36 - CVCS VCT to Charging	SS-VCTCVP-20	Pipe - Nozzle	3	0.216	(SMLS) SA312 GR.TP304		SA479 GR.304		160 95	5	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	50				
Support Systems (SS)	Pump Suction (VCTCVP) Group 36 - CVCS VCT to Charging	SS-VCTCVP- 21	Nozzle - Pipe	3	0.216	(SMLS)		SA312 GR.TP304		160 95	5	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air			50				
Support Systems (SS)	Pump Suction (VCTCVP) Group 36 - CVCS VCT to Charging	SS-VCTCVP- 22	Valve 1CV8396B	2	0.154	SA351 GR.CF8		(SMLS) Not Applicable		160 95	5	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	50				
Support Systems (SS)	Pump Suction (VCTCVP) Group 36 - CVCS VCT to Charging	SS-VCTCVP-23	Reducer - 45 degree Elbow	3	0.216	SA182 GR.F316		SA182 GR.F304		160 95	ō	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux, Bldg, Air	39	30	50				
Support Systems (SS)	Pump Suction (VCTCVP) Group 36 - CVCS VCT to Charging	SS-VCTCVP- 24	45 degree Flbow	3	0.216	SA182 GR E304		Not Applicable		160 95	5	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux Bldg. Air		30	50				
Support Systems (SS)	Pump Suction (VCTCVP) Group 36 - CVCS VCT to Charging	SS-VCTCVP- 25	45 degree Elbow - Pine	3	0.216	SA182 GR F304		SA312 GR TP304		160 95	5	75 - 120	250	150	150 GPM	Reactor Coolant	Aux Bldg Air	30	30	30				
Support Systems (SS)	Pump Suction (VCTCVP)	SS-VCTCVP-26	Pine - Pine	3	0.216	SA312 GP TP304		(SMLS)		160 95	5	75 - 120	250	150	150 GPM	Reactor Coolant	Aux Bidg Air	39	20	30				
Support Systems (SS)	Pump Suction (VCTCVP)	55-VCTCVI - 20	Elbow Elbow	2	0.210	(SMLS)		(SMLS)		160 05	,	75 120	250	150	150 CDM	Reactor Coolant	Aux Bldg Air	20	20	20				
Support Systems (SS)	Pump Suction (VCTCVP)	SS-VCTCVP-27	Elbow- Elbow	3	0.216	SA182 GR.F304		SA182 GR.F304 Field		160 95	,	75 - 120	250	150	150 GPM	Reactor Coolant	Aux. Bidg. Air	39	30 1	50				
Support Systems (SS)	Pump Suction (VCTCVP)	SS-VCTCVP-28	45 degree elbow - 45 degree Elbow	3	0.216	SA182 GR.F304		SA182 GR.F304		160 95))	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Blag. Air	39	30 1	50				
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTCVP)	SS-VCTCVP-29	45 degree elbow - 90 degree Elbow	3	0.216	SA182 GR.F304		SA182 GR.F304		160 95	5	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30 4	50				
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTCVP)	SS-VCTCVP-30	Pipe - Valve 1CV8398A	3	0.216	SA312 GR.TP304 (SMLS)		SA351 GR.CF8 Field		160 95	5	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30 1	30				
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTCVP)	SS-VCTCVP- 31	Valve 1CV8398A	3	0.216	SA351 GR.CF8		Not Applicable		160 95	5	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air		30 0	50				
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTCVP)	SS-VCTCVP- 32	Valve 1CV8398A - Elbow	3	0.216	SA351 GR.CF8		SA182 GR.F304 Field		160 95	5	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30 (50				
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTCVP)	SS-VCTCVP-33	Pipe - Reducer	3	0.216	SA312 GR.TP304 (SMLS)		SA182 GR.F304 Shop	0	160 95	5	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30 0	50				
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTCVP)	SS-VCTCVP- 34	3 x 4 Reducer	3 x 4	0.237	SA182 GR.F304		Not Applicable		160 95	5	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	50				
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTCVP)	SS-VCTCVP- 35	Reducer - Elbow	4	0.237	SA182 GR.F304		Not Applicable Shop	0	160 95	5	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	50				
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTCVP)	SS-VCTCVP- 36	Elbow	4	0.237	SA182 GR.F304		Not Applicable		160 95	5	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air		30 4	50				
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTCVP)	SS-VCTCVP- 37	Elbow - Pipe	4	0.237	SA182 GR.F304		SA312 GR.TP304 Shop (SMLS)		160 95	5	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	50				
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTC)/P)	SS-VCTCVP- 38	Straight Pipe	4	0.237	SA312 GR.TP304		Not Applicable		160 95	5	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	50				
Support Systems (SS)	Group 36 - CVCS VCT to Charging	SS-VCTCVP- 39	Pipe - Flange	4	0.237	SA312 GR.TP304		SA182 GR.F304 Shop))	160 95	5	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	50				4" - 150 lb RFWN Flange; Bolts - SA193 GR.B7;
		00.107010	-			(SMLS)								150										Gap, Style "CG"
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTCVP)	SS-VCTCVP- 40	Flange	4	0.237	SA182 GR.F304		Not Applicable		160 95	5	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air		30 (50				
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTCVP)	SS-VCTCVP-41	vaive 1CV8398B	3	0.216	SA351 GR.CF8		Not Applicable		160 95)	/5 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air		50 0	su				
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTCVP)	SS-VCTCVP- 42	Elbow - Elbow	4	0.237	SA182 GR.F304		SA182 GR.F304		160 95	5	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30 4	50				
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTCVP)	SS-VCTCVP-43	Pipe - 45 degree Elbow	4	0.237	SA182 GR.F316		SA182 GR.F304		160 95	5	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30 4	50				
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTCVP)	SS-VCTCVP- 44	45 degree Elbow	4	0.237	SA182 GR.F304		Not Applicable		160 95	5	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air		30 0	50				
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTCVP)	SS-VCTCVP- 45	45 degree Elbow - 45 degree Elbow	4	0.237	SA182 GR.F304		SA182 GR.F304		160 95	5	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30 (50				
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTCVP)	SS-VCTCVP- 46	45 degree elbow - 90 degree Elbow	4	0.237	SA182 GR.F304		SA182 GR.F304		160 95	5	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30 (50				
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTCVP)	SS-VCTCVP- 47	Pipe - Pipe	4	0.237	SA312 GR.TP304 (SMLS)		SA312 GR.TP304 Shop (SMLS)	0	160 95	5	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30 0	50				
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTCVP)	SS-VCTCVP- 48	Elbow - Tee	4	0.237	SA182 GR.F304		SA182 GR.F304		160 95	5	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30 4	50				
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTCVP)	SS-VCTCVP- 49	Tee	4	0.237	SA182 GR.F304		Not Applicable		160 95	ō	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	50				
Support Systems (SS)	Group 36 - CVCS VCT to Charging	SS-VCTCVP-50	Tee - Valve 1CV8484	4	0.237	SA182 GR.F304		SA351 GR.CF8 Field	1	160 95	ō	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60	1			
Support Systems (SS)	Group 36 - CVCS VCT to Charging	SS-VCTCVP-51	Valve 1CV8484	4	0.237	SA351 GR.CF8		Not Applicable		160 95	5	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	50				
Support Systems (SS)	Group 36 - CVCS VCT to Charging	SS-VCTCVP- 52	Valve 1CV112C	4	0.237	SA351 GR.CF8		Not Applicable		160 95	5	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	50				
Support Systems (SS)	Pump Suction (VCTCVP) Group 36 - CVCS VCT to Charging	SS-VCTCVP-53	Valve 1CV112C - Elbow	4	0.237	SA351 GR.CF8		SA182 GR.F304 Field		160 95	5	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30 0	50				
Support Systems (SS)	Pump Suction (VCTCVP) Group 36 - CVCS VCT to Charging	SS-VCTCVP- 54	Valve 1CV112B	4	0.237	SA351 GR.CF8		Not Applicable		160 95	5	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air		30 (60				
Support Systems (SS)	Pump Suction (VCTCVP) Group 36 - CVCS VCT to Charging	SS-VCTCVP- 55	Elbow - Nozzle	4	0.237	SA182 GR.F304		SA240 GR.304 Field		160 95	ō	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air	39	30 0	50				
Support Systems (SS)	Pump Suction (VCTCVP) Group 36 - CVCS VCT to Charging	SS-VCTCVP-56	Pipe with 90 degree Bend	2	0.154	SA312 GR.TP304		Not Applicable		160 95	ō	75 - 120	250	150 1	150 GPM	Reactor Coolant	Aux. Bldg. Air		30	50				
Support Systems (SS)	Pump Suction (VCTCVP) Group 36 - CVCS VCT to Charging	SS-VCTCVP- 57	Pipe - Flance	2	0.154	(SMLS) SA312 GR TP304		SA182 GR F304 Field		160	ī	75 - 120	250	150	150 GPM	Reactor Coolant	Aux, Bldg. Air	39	30	50	┥ ┥			
.,,,	Pump Suction (VCTCVP)				1	(SMLS)	1					-	1	l l										1

System Identification	Group Identification	Part Identification	Part Numbe	Part r Description	Part Size in inches	Part Thickness i inches	Material in A	Material W	Material B	Weld Type	Operating Temperature in oF	Operating Pressure in psi	Operating Flow in gpm	Design Temperature i oF	Design n Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Stress in k	Normal si Stress in ks	Faulted Stress in ksi	CUF	Stress Comments	Operating Experience	General Comments
Support Systems (SS)	Group 36 - CVCS VCT to Charging Pump Suction (VCTCVP)	SS-VCTCVI	P- 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-VCTCVI	P- 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-VCTCV	P- 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-VCTCV	P- 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-VCTCV	P- 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-VCTCV	P- 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-VCTCV	P- 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-VCTCV	P- 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-VCTCV	P- 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-VCTCV	P- 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-VCTCV	P- 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-VCTCV	P- 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-VCTCV	P- 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 Part Identification Number	Part Description	Part Size in inches	Part Thickness in inches	Material A	Material W	Material Weld B Type	Operating Temperature in oF	Operating Pressure in psi	Operating Flow in gpm	Design Temperature in oF	Design n Pressure in psi	Design n Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ks	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	SS-CHPRHX- 2	Elbow	4	0.531	SA403 GR.WP		Not Applicable	130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air		30	60			
Support Systems (SS)	Regenerative HX (CVPRHX) Group 37 - CVCS Charging Pumps to	SS-CHPRHX-3	Elbow - Pipe	4	0.531	304/316 SMLS SA403 GR WP		SA376 GR TP304	130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux Bldg. Air	30	30	60			
Support Systems (SS)	Regenerative HX (CVPRHX)	SS-CHPPHY-4	Pipe - Check Valve 1CV8/81B		0.531	304/316 SMLS		(SMLS)	130	2225	55-100 GPM	200	2495	100 GPM	Reactor Coolant	Aux Bida Air	30	30	60			
Support Systems (SS)	Regenerative HX (CVPRHX)			-	0.331	(SMLS)			130	2235	33-100 GI MI	200	2400	100 01 10		Aux. Didg. All	50	50	00			
Support Systems (SS)	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. Blag. Air		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 Field 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-7	Elbow - Tee	4	0.531	SA403 GR.WP 304/316 SMLS		SA403 GR.WP Shop 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-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	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 (C)/PRHX)	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	60			
Support Systems (SS)	Group 37 - CVCS Charging Pumps to	SS-CHPRHX-11	Straight Pipe	4	0.531	SA376 GR.TP304		Not Applicable	130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air		30	60			
Support Systems (SS)	Group 37 - CVCS Charging Pumps to	SS-CHPRHX-12	Pipe - Weldolet	4	0.531	(SMLS) SA376 GR.TP304		SA403 GR.WP Shop	130	2235	Normally stagnant	200	2485	High point vent	t Reactor Coolant	Aux. Bldg. Air	30	30	60			
Support Systems (SS)	Group 37 - CVCS Charging Pumps to	SS-CHPRHX- 13	4 x 3/4 Weldolet	4 x 3/4	0.531	(SMLS) SA403 GR.WP		Not Applicable	130	2235	(no flow) Normally stagnant	200	2485	High point vent	t Reactor Coolant	Aux. Bldg. Air		30	60			
Support Systems (SS)	Group 37 - CVCS Charging Pumps to	SS-CHPRHX-14	Weldolet - Valve 1CV207	3/4"	0.218	304/316 SMLS SA403 GR.WP		SA182 GR.F316 Shop	130	2235	(no flow) Normally stagnant	200	2485	High point vent	t Reactor Coolant	Aux. Bldg. Air	39	30	60		LER 336-2002-004: High cycle vibration fatigue a	
	Regenerative HX (CVPRHX)					304/316 SMLS					(no flow)										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	t Reactor Coolant	Aux. Bldg. Air		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 Field (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 (C)/PRHX)	SS-CHPRHX-17	Pipe - Tee	4	0.531	SA376 GR.TP304 (SMLS)		SA403 GR.WP 304/316 SMI S	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 (C)/PRHX)	SS-CHPRHX-18	Tee - Reducer	4	0.531	SA403 GR.WP		SA403 GR.WP	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	SS-CHPRHX-19	4 x 3 Reducer	4 x 3	0.531	SA403 GR.WP		Not Applicable	130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air		30	60			
Support Systems (SS)	Group 37 - CVCS Charging Pumps to	SS-CHPRHX-20	Reducer - Elbow	3	0.437	SA403 GR.WP		SA403 GR.WP 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	SS-CHPRHX-21	Elbow - Valve 1CV8483A	3	0.437	SA403 GR.WP		SA182 GR.F316	130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60			
Support Systems (SS)	Regenerative HX (CVPRHX) Group 37 - CVCS Charging Pumps to	SS-CHPRHX-22	Valve 1CV8483A	3	0.437	304/316 SMLS SA182 GR.F316		Not Applicable	130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air		30	60			
Support Systems (SS)	Regenerative HX (CVPRHX) Group 37 - CVCS Charging Pumps to	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)	Regenerative HX (CVPRHX) Group 37 - CVCS Charging Pumps to	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	60			
Support Systems (SS)	Regenerative HX (CVPRHX) Group 37 - CVCS Charging Pumps to	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	60			
Support Systems (SS)	Regenerative HX (CVPRHX) Group 37 - CVCS Charging Pumps to	SS-CHPRHX-26	Valve 1CV8483B - 45 degree Elbow	3	0.437	SA182 GR.F316		SA403 GR.WP Field	130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60			
Support Systems (SS)	Regenerative HX (CVPRHX) Group 37 - CVCS Charging Pumps to	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	60			
Support Systems (SS)	Regenerative HX (CVPRHX) Group 37 - CVCS Charging Pumps to	SS-CHPRHX-28	Straight Pipe	3	0.437	304/316 SMLS SA376 GR TP304		Not Applicable	130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux Bldg Air		30	60			
Support Systems (SS)	Regenerative HX (CVPRHX)	SS-CHPRHX-29	45 degree Elbow - Pine	3	0.437	(SMLS) SA403 GR WP		SA376 GR TP304 Shop	130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux Bldg Air	39	30	60			
Support Systems (SS)	Regenerative HX (CVPRHX)	SS-CHPRHX-30	Pipe - Tee	3	0.437	304/316 SMLS		(SMLS)	130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux Bldg Air	39	30	60			
Support Systems (SS)	Regenerative HX (CVPRHX)	SS-CHPPHY-31	Tee	3	0.437	(SMLS)		304/316 SMLS	130	2225	55-100 GPM	200	2495	100 GPM	Reactor Coolant	Aux Bidg Air		30	60			
Outpoint Gystems (CO)	Regenerative HX (CVPRHX)		Too Elhow	о О	0.407	304/316 SMLS			100	2235	55 400 OPM	200	2405	100 01 10	Reactor Coolant	Aux. Didg. All	20	50	00			
Support Systems (SS)	Regenerative HX (CVPRHX)	SS-CHPRHX-32	Tee - Elbow	3	0.437	304/316 SMLS		304/316 SMLS	130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bidg. Air	39	30	60			
Support Systems (SS)	Regenerative HX (CVPRHX)	SS-CHPRHX-33	Pipe - Flange	3	0.437	(SMLS)		SA182 GR.F316	130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Blag. Air	39	30	60			
Support Systems (SS)	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. Bidg. Air		30	60			3" - 1500 Ib Orifice Flange; Bolts - SA193 GR.B- 16; Nuts SA194 GR.4; Flexitallic Gasket 1/8" Gap. Style "CG"
Support Systems (SS)	Group 37 - CVCS Charging Pumps to	SS-CHPRHX-35	Pipe - Valve 1CV8402B	3	0.437	SA376 GR.TP304		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	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	60			
Support Systems (SS)	Group 37 - CVCS Charging Pumps to	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	60			
Support Systems (SS)	Group 37 - CVCS Charging Pumps to	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	60			
Support Systems (SS)	Group 37 - CVCS Charging Pumps to	SS-CHPRHX-39	Valve 1CV8402A - Tee	3	0.437	SA182 GR.F316		SA403 GR.WP Field	130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air	39	30	60			
Support Systems (SS)	Regenerative HX (CVPRHX) Group 37 - CVCS Charging Pumps to	SS-CHPRHX-40	Valve 1CV8106-1	3	0.437	SA182 GR.F316		304/316 SMLS Not Applicable	130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air		30	60			
Support Systems (SS)	Regenerative HX (CVPRHX) Group 37 - CVCS Charging Pumps to	SS-CHPRHX-41	Valve 1CV8105-2	3	0.437	SA182 GR.F316		Not Applicable	130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Aux. Bldg. Air		30	60			
Support Systems (SS)	Regenerative HX (CVPRHX) Group 37 - CVCS Charging Pumps to	SS-CHPRHX-42	Straight Pipe	3	0.437	SA376 GR.TP304		Not Applicable	130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Cont. Bldg. Air		30	60			
Support Systems (SS)	Regenerative HX (CVPRHX) Group 37 - CVCS Charging Pumps to	SS-CHPRHX-43	Pipe - Elbow	3	0.437	(SMLS) SA376 GR.TP304		SA403 GR.WP	130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Cont. Bldg. Air	39	30	60			
Support Systems (SS)	Regenerative HX (CVPRHX) Group 37 - CVCS Charging Pumps to	SS-CHPRHX-44	Elbow	3	0.437	(SMLS) SA403 GR.WP		304/316 SMLS Not Applicable	130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Cont. Bldg. Air		30	60			
Support Systems (SS)	Regenerative HX (CVPRHX) Group 37 - CVCS Charging Pumps to	SS-CHPRHX-45	Pipe - Pipe	3	0.437	304/316 SMLS SA376 GR TP304		SA376 GR TP304 Shop	130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Cont. Bldg. Air	39	30	60			
Support Systems (SS)	Regenerative HX (CVPRHX)	SS-CHPRHY A6	Pipe - 45 degree Elbow	3	0.437	(SMLS)		(SMLS)	130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Cont Bidg Air	39	30	60			
Support Systems (00)	Regenerative HX (CVPRHX)		AF degree Elbow	2	0.427	(SMLS)		304/316 SMLS	120	2200	55 100 OFW	200	2405	100 0 0	Reader Coolert	Cont. Pld. Al	33	20	60			
Support Systems (SS)	Regenerative HX (CVPRHX)	35-URPKRX-4/	Houdgree Elbow	3	0.437	304/316 SMLS			130	2230	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Cont. Bldg. Air	20	30	00			
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX-48	Pipé - Cneck Valve 1CV8381	3	0.437	5A376 GR.TP304 (SMLS)		SA182 GR.F316 Field	130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Cont. Bldg. Air	39	JU	υu			
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX-49	Cneck Valve 1CV8381	3	0.437	5A182 GR.F316		NOT Applicable	130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Cont. Bldg. Air		JU	υu			
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX-50	Hib6 - 166	3	0.437	5A376 GR.TP304 (SMLS)		304/316 SMLS	130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Cont. Bldg. Air	39	JU	υu			
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX-51	166	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	60			
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX-52	Valve 1CV8324A	3	0.437	SA182 GR.F316		Not Applicable	130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Cont. Bldg. Air		30	60			
Support Systems (SS)	Group 37 - CVCS Charging Pumps to Regenerative HX (CVPRHX)	SS-CHPRHX-53	Elbow - Nozzle	3	0.437	SA403 GR.WP 304/316 SMLS		SA312 GR.304 Field SMLS	130	2235	55-100 GPM	200	2485	100 GPM	Reactor Coolant	Cont. Bldg. Air	39	30	60			

System Identification	Group Identification	Part Identificatio	Part Number	Part Description	Part Size in	Part Thickness in	Material A	Material W	Material B	Weld Type	Operating Temperature in	Operating Pressure in	Operating Flow in gpm	Design Temperature in	Design Pressure in	Design Flow	Inside Environment	Outside Reside Environment Stress in	al Normal ksi Stress in k	Faulted si Stress in ks	CUF	Stress Comments	Operating Experience	General Comments
Support Systems (SS)	Group 38 - CVCS Regenerative HX to	SS-RHXC	L- 1	Nozzle - Elbow	3	0.437	SA312 GR.F304 SMLS		SA403 GR.WP304 Fie	eld f	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.
Support Systems (SS)	Group 38 - CVCS Regenerative HX to Cold Leg (RHXCL)	SS-RHXC	L- 2	Elbow	3	0.437	SA403 GR.WP304 SMLS		Not Applicable	Ę	517	2305	55-100 GPM	550	2485	100 GPM	Reactor Coolant	Cont. Bldg. Air	24.6	49.2				Type D (2-1/2) piping insulation.
Support Systems (SS)	Group 38 - CVCS Regenerative HX to Cold Leg (RHXCL)	SS-RHXC	iL- 3	Elbow - Pipe	3	0.437	SA403 GR.WP304 SMLS		SA376 GR.TP304 Sh (SMLS)	nop 5	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-RHXC	iL- 4	Pipe - 45 degree Elbow	3	0.437	SA376 GR.TP304 (SMLS)		SA403 GR.WP304 Sh SMLS	nop 8	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-RHXC	:L- 5	45 degree Elbow	3	0.437	SA403 GR.WP304 SMLS		Not Applicable	Ę	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-RHXC	L- 6	Straight Pipe	3	0.437	SA376 GR.TP304 (SMLS)		Not Applicable	Ę	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-RHXC	:L- 7	Pipe - Valve 1CV8321A	3	0.437	SA376 GR.TP304 (SMLS)		SA182 GR.F316 Fie	eld f	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-RHXC	L- 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-RHXC	:L- 9	Check Valve 1CV8320A	3	0.437	SA182 GR.F316		Not Applicable	Ę	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-RHXC	L- 10	Pipe - Pipe	3	0.437	SA376 GR.TP304 (SMLS)		SA376 GR.TP304 Sh (SMLS)	nop §	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-RHXC	L- 11	Pipe - Tee	3	0.437	SA376 GR.TP304 (SMLS)		SA403 GR.WP304 SMLS	ę	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-RHXC	L- 12	Тее	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-RHXC	L- 13	Tee - Elbow	3	0.437	SA403 GR.WP304 SMLS		SA403 GR.WP304 Sh SMLS	nop 5	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-RHXC	L- 14	Pipe -Nipolet	3 x 3/4	0.437	SA376 GR.TP304 (SMLS)		SA403 GR.WP304 Sh SMLS	iop 5	517	2305	Normally stagnant (r flow)	c 550	2485	High point ve	ent Reactor Coolant	Cont. Bldg. Air 23.66	24.6	49.2				
Support Systems (SS)	Group 38 - CVCS Regenerative HX to Cold Leg (RHXCL)	SS-RHXC	L- 15	3/4 Nipolet	3/4"	0.218	SA403 GR.WP304 SMLS		Not Applicable	Ę	517	2305	Normally stagnant (r flow)	o550	2485	High point ve	ent Reactor Coolant	Cont. Bldg. Air	24.6	49.2				
Support Systems (SS)	Group 38 - CVCS Regenerative HX to Cold Leg (RHXCL)	SS-RHXC	L- 16	Nipolet - Valve 1CV226	3/4"	0.218	SA403 GR.WP304 SMLS		SA182 GR.F316 Sh	iop 8	517	2305	Normally stagnant (r flow)	c 550	2485	High point ve	ent Reactor Coolant	Cont. Bldg. Air 23.79	24.6	49.2				
Support Systems (SS)	Group 38 - CVCS Regenerative HX to Cold Leg (RHXCL)	SS-RHXC	L- 17	Valve 1CV226	3/4"	0.218	SA182 GR.F316		Not Applicable		517	2305	Normally stagnant (r flow)	o 550	2485	High point ve	ent Reactor Coolant	Cont. Bldg. Air	25.5	51				
Support Systems (SS)	Group 38 - CVCS Regenerative HX to Cold Leg (RHXCL)	SS-RHXC	L- 18	Valve 1CV226 - Pipe	3/4"	0.218	SA182 GR.F316		SA376 GR.TP304 (SMLS)	t.	517	2305	Normally stagnant (r flow)	o 550	2485	High point ve	ent Reactor Coolant	Cont. Bldg. Air 24.44	25.5	51				
Support Systems (SS)	Group 38 - CVCS Regenerative HX to Cold Leg (RHXCL)	SS-RHXC	L- 19	Straight Pipe	3/4"	0.218	SA376 GR.TP304 (SMLS)		Not Applicable	ę	517	2305	Normally stagnant (r flow)	o 550	2485	High point ve	ent Reactor Coolant	Cont. Bldg. Air	24.6	49.2				
Support Systems (SS)	Group 38 - CVCS Regenerative HX to Cold Leg (RHXCL)	SS-RHXC	L- 20	Cap (Threaded)	3/4"	0.218	SA403 GR.WP304 SMLS		Not Applicable	ţ	517	2305	Normally stagnant (r flow)	o 550	2485	High point ve	ent Reactor Coolant	Cont. Bldg. Air	24.6	49.2				
Support Systems (SS)	Group 38 - CVCS Regenerative HX to Cold Leg (RHXCL)	SS-RHXC	L- 21	Valve 1CV8146	3	0.437	SA182 GR.F316		Not Applicable	Ę	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-RHXC	L- 22	Check Valve 1CV8378B	3	0.437	SA182 GR.F316		Not Applicable	Ę	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-RHXC	L- 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-RHX0	L- 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 s 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 Residual Environment Stress in ks	Normal Stress in ks	Faulted CUF i Stress in ksi	Stress Comments	Operating Experience	General Comments
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP	SS-RCPIN	IJ 1	Straight Pipe	3	0.437	SA376 GR.TP304		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
Support Systems (SS)	Seals (RCPINJ) Group 39 - CVCS Injection Filter to RCP	SS-RCPIN	IJ2	Pipe - Elbow	3	0.437	SMLS SA376 GR.TP304		SA403 GR.WP304		130	2550	32 GPM	200	2735		Reactor Coolant	Aux. Bldg. Air 39	30	60			9.3-72. P & T taken from drawings
Support Systems (SS)	Seals (RCPINJ) Group 39 - CVCS Injection Filter to RCP	SS-RCPIN	IJЗ	Elbow	3	0.437	SMLS SA403 GR.WP304		SMLS Not Applicable		130	2550	32 GPM	200	2735		Reactor Coolant	Aux. Bldg. Air	30	60			
Support Systems (SS)	Seals (RCPINJ) Group 39 - CVCS Injection Filter to RCP	SS-RCPIN	IJ4	Pipe - Weldolet	3	0.437	SMLS SA376 GR.TP304		SA403 GR.WP304	Shop	130	2550	Normally Stagnant	200	2735	High point vent	Reactor Coolant	Aux. Bldg. Air 39	30	60			
Support Systems (SS)	Seals (RCPINJ) Group 39 - CVCS Injection Filter to RCP	SS-RCPIN	IJ 5	3 x 3/4 6000 lb Weldolet	3 x 3/4	0.437	SMLS SA403 GR.WP304		SMLS Not Applicable		130	2550	(no flow) Normally Stagnant	200	2735	High point vent	Reactor Coolant	Aux. Bldg. Air	30	60			
Support Systems (SS)	Seals (RCPINJ) Group 39 - CVCS Injection Filter to RCP	SS-RCPIN	IJ6	Weldolet - Valve 1CV205	3/4"	0.218	SMLS SA403 GR.WP304		SA182 GR.F316	Shop	130	2550	(no flow) Normally Stagnant	200	2735	High point vent	Reactor Coolant	Aux, Bldg, Air 39	30	60			
Support Systems (SS)	Seals (RCPINJ) Group 39 - CVCS Injection Filter to RCP	SS-RCPIN	117	Valve 1CV205	3/4"	0.218	SMLS SA182 GR E316	-	Not Applicable		130	2550	(no flow) Normally Stagnant	200	2735	High point vent	Reactor Coolant	Aux Blda Air	30	60			
Support Systems (SS)	Seals (RCPINJ) Group 39 - CVCS Injection Filter to RCP	SS-RCPIN	118	Valve 1CV205 - Pine	3/4"	0.218	SA182 GR E316		SA376 GR TP304		130	2550	(no flow)	200	2735	High point vent	Reactor Coolant	Aux Bldg Air 39	30	60			
Support Systems (SS)	Seals (RCPINJ) Group 39 - CVCS Injection Filter to RCP	SS-RCPIN	119	Straight Pipe	3/4"	0.218	SA376 GR TP304		SMLS		130	2550	(no flow)	200	2735	High point vent	Reactor Coolant	Aux Bldg Air	30	60			
Support Systems (SS)	Seals (RCPINJ) Group 39 - CVCS Injection Filter to RCP	SS-RCPIN	1110	Pine Can	3/4"	0.218	SMLS		Not Applicable		130	2550	(no flow)	200	2735	High point vent	Reactor Coolant	Aux Bldg Air	30	60			
Support Systems (SS)	Seals (RCPINJ) Group 39 - CVCS Injection Filter to RCP	SS-PCDIN	1111	Pine - Pine	3	0.437	SMLS		SA376 CP TP304	Shop	130	2550	(no flow)	200	2735	riigir point font	Reactor Coolant	Aux Bldg Air 29	30	60			
Support Systems (SS)	Seals (RCPINJ)	SE BODIN	1112	Dipo 45 degree Elhow	2	0.427	SMLS		SMLS	Gliop	120	2550	22 CDM	200	2725		Reader Coolant	Aux Bldg Air 20	20	60			
Support Systems (SS)	Seals (RCPINJ)		10 12	Fipe - 45 degree Elbow	3	0.437	SMLS		SMLS		130	2000	32 GPW	200	2735		Reactor Coolant	Aux. Bldg. All 39	30	60			
Support Systems (SS)	Seals (RCPINJ)	55-RUPIN	13	45 degree Elbow	3	0.437	SA403 GR.WP304 SMLS		Not Applicable		130	2000	32 GPM	200	2735		Reactor Coblant	Aux. Bidg. Air	30	60			
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPIN	IJ 14	Pipe - Tee	3	0.437	SA376 GR. 1P304 SMLS		SA376 GR. 1P304 SMLS		130	2550	32 GPM	200	2735		Reactor Coolant	Aux. Bidg. Air 39	30	60			
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPIN	IJ 15	Tee	3	0.437	SA403 GR.WP304 SMLS		Not Applicable		130	2550	32 GPM	200	2735		Reactor Coolant	Aux. Bidg. Air	30	60			
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPIN	IJ 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-RCPIN	IJ 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-RCPIN	IJ 18	3 x 2 Reducer	3 x2	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-RCPIN	IJ 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-RCPIN	IJ 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-RCPIN	IJ 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-RCPIN	IJ 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-RCPIN	IJ 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-RCPIN	IJ 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-RCPIN	IJ 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-RCPIN	IJ 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-RCPIN	IJ 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-RCPIN	IJ 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-RCPIN	IJ 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-RCPIN	IJ 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-RCPIN	IJ 31	Coupling - Nozzle	2	0.343	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-RCPIN	IJ 32	Nozzle - Elbow	2	0.343			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-RCPIN	IJ 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-RCPIN	IJ 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-RCPIN	IJ 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-RCPIN	IJ 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-RCPIN	IJ 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-RCPIN	IJ 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-RCPIN	IJ 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-RCPIN	IJ 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 (RCPIN.I)	SS-RCPIN	IJ 41	Pipe - Valve 1CV8369D	1	0.25	SA376 GR.TP304 SMI S		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-RCPIN	IJ 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-RCPIN	IJ 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 (RCPIN.I)	SS-RCPIN	IJ 44	Pipe - 45 degree Elbow	2	0.343	SA376 GR.TP304 SMI S		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-RCPIN	IJ 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-RCPIN	IJ 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 (RCPIN.I)	SS-RCPIN	IJ 47	Elbow	2	0.343	SA403 GR.WP304 SMI S		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 (RCPIN I)	SS-RCPIN	IJ 48	Pipe	2	0.343	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 (RCPIN.I)	SS-RCPIN	IJ 49	Pipe with Bend	2	0.343	SA376 GR.TP304 SMI S		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 (RCPIN.I)	SS-RCPIN	IJ 50	Pipe - Tee	2	0.343	SA376 GR.TP304 SMI S		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-RCPIN	IJ 51	Tee	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-RCPIN	IJ 52	Pipe - Check Valve 1CV8368D	2	0.343	SA376 GR.TP304 SMLS	1	SA182 GR.F316	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-RCPIN	IJ 53	Check Valve 1CV8368D	2	0.343	SA182 GR.F316	1	Not Applicable	1	130	2550	8 GPM	200	2735	1	Reactor Coolant	Cont. Bldg. Air	30	60			
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPIN	IJ 54	Valve 1CV8352D	2	0.343	SA182 GR.F316	1	Not Applicable	1	130	2550	8 GPM	200	2735	1	Reactor Coolant	Cont. Bldg. Air	30	60			
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP Seals (RCPINJ)	SS-RCPIN	IJ 55	Elbow - Elbow	2	0.343	SA403 GR.WP304 SMLS	1	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-RCPIN	IJ 56	Pipe - 45 degree Elbow	2	0.343	SA376 GR.TP304 SMLS	1	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-RCPIN	IJ 57	45 degree Elbow	2	0.343	SA403 GR.WP304 SMLS	1	Not Applicable		130	2550	8 GPM	200	2735		Reactor Coolant	Cont. Bldg. Air	30	60			

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System	Group	Part	Part	Part	Part	t Part	Material	Material	Material	Weld	Operating	Operating	Operating	Design	Design	Design	Inside	Outside	Residual	Normal Faulte	CUF	Stress	Operating	General
Identification	Identification	Identification	Number	Description	Size	in Thickness	n A	w	в	Type	Temperature i	n Pressure in	Flow in anm	Temperature in	Pressure in	Flow	Environment	Environment	Stress in ke	si Stress in ksi Stress in	kei	Comments	Experience	Comments
lacitation	lacitation	naonninoution		Decomption	lu alta	In Indiateoo			5	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	- E			- E	i ressure in		Entrioninoni	Linnonition	011000 111 112			oominicitio	Experience	ooninionio
					Inche	es incres					OF	psi		OF	psi									
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP	SS-RCPIN.	58	Check Valve 1CV8367D	2	0.343	SA182 GR E316		Not Applicable		130	2550	8 GPM	200	2735		Reactor Coolant	Cont. Bldg. Air		30 60				
	Seels (BCDIN I)				-																			
	Seals (RCFINJ)																							
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP	SS-RCPIN.	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				
	Seals (RCPINJ)																							
Support Systems (SS)	Group 39 - CV/CS Injection Eilter to PCP	SS-PCDIN	60	Elbow - Reducer	2	0.343	SA403 CP W/P304		SA403 GR WP304	Field	130	2550	8 GPM	200	2725		Reactor Coolant	Cont Bldg Air	30	20 60				
Support Systems (SS)	Croup 33 - CVCC Injection Filter to ICCI	00-101 110	00	Elbow - Reducer	~	0.345	04403 010.001 304		01403 010.001 304	1 1010	150	2000	0.01 M	200	2135		Reactor Coolant	Cont. Didg. All	55	50 00				
	Seals (RCPINJ)						SMLS		SMLS															
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP	SS-RCPIN.	61	2 x 1-1/2 Reducer	2 x 1-1/	2 0.343	SA403 GR.WP304		Not Applicable		130	2550	8 GPM	200	2735		Reactor Coolant	Cont. Bldg. Air		30 60				
	Seals (RCPINJ)						SMLS											-						
0	Oracia (100 allo)		00	Deduces Disc	4.4/01	0.004	04.400.00.14/0004		04070 OD TD004	mark.	400	0550	0.0014	000	0705		Baastas Gaalast	Orist Dista Ala	20	00 00		-		
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP	55-RUPINJ	62	Reducer - Pipe	1-1/2	0.281	SA403 GR.WP304		SA376 GR. IP304	Field	130	2000	8 GPM	200	2735		Reactor Coolant	Cont. Bidg. Air	39	30 60				
	Seals (RCPINJ)						SMLS		SMLS															
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP	SS-RCPIN.	63	Pipe	1-1/2"	0.281	SA376 GR TP304		Not Applicable		130	2550	8 GPM	200	2735		Reactor Coolant	Cont. Bldg. Air		30 60				
	Seale (PCPINI)				=		SMLS																	
	Seals (ICCI IIIIS)						GINES																	
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP	SS-RCPIN.	64	Pipe - Flange	1-1/2"	0.281	SA376 GR.TP304		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	
	Seals (RCPINJ)						SMLS																thermal barrier flange.	
Support Systems (SS)	Group 39 - CVCS Injection Filter to RCP	SS-RCPIN.	65	Flange	1-1/2"	0.281	SA182 GR E316		Not Applicable	1	130	2550	8 GPM	200	2735		Reactor Coolant	Cont. Bldg. Air		30 60			ER 395-1994-006: Defects in root pass of weld	1-1/2" - 1500 # REWN Flange : Bolts - SA193 GR. B16: Nuts -
	Seels (BCDIN I)				=																		connecting BCB cool injection line to thermal barrier	CA104 CB 4: Control 1500 lb Elevitellie
	Sedis (ROFINJ)																						connecting RCF searingection line to thermal barrier	SA194 GR.4, Gasket - 1500 ID Flexitallic
1		1	1			1	1	1		1			1		1	1		1		1		1	flange.	

System Identification	Group Identification	Part Identification	Part Number	Part Description	Part Size in inches	Part Thickness inches	Material in A	Material Material W B	Weld Type	Operating Temperature in oF	Operating Pressure in psi	Operating Flow in gpm	Design m Temperature ir oF	Design Pressure in psi	Design Flow	Inside Environment	Outside Environment	Residual Norm Stress in ksi Stress i	al Faulted n ksi Stress in ks	CUF	Stress Comments	Operating Experience	General Comments
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return	SS-RCPRET	- 1	Flange	3/4"	0.218	SA182 GR.F316	Not Applicable		250	2185	3 GPM	250	2485		Reactor Coolant Co	ont. Bldg. Air	30	60				3/4" RFSW 1500 lb Flange; Bolts - 3/4" SA193 GR.B16; 3/4"
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return	SS-RCPRET	- 2	Flange - Pipe	3/4"	0.218	SA182 GR.F316	SA376 GR.TP304	Field	250	2185	3 GPM	250	2485		Reactor Coolant Co	ont. Bldg. Air	32.5 30	60				Nuts - SA194 GR.4; 1500 Ib Hexitallic Gasket Operating flows from B/B-UFSAR 9.3-72. Insulation Type B 1
Support Systems (SS)	Filter (RCPRET) Group 40 - CVCS RCP Seals to Return	SS-RCPRET	- 3	Pipe with Bend	3/4"	0.218	SA376 GR.TP304	(SMLS) Not Applicable		250	2185	3 GPM	250	2485		Reactor Coolant Co	ont. Bldg. Air	30	60				Thick
Support Systems (SS)	Filter (RCPRET) Group 40 - CVCS RCP Seals to Return	SS-RCPRET	- 4	Straight Pipe	3/4"	0.218	(SMLS) SA376 GR TP304	Not Applicable		250	2185	3 GPM	250	2485		Reactor Coolant Co	ont Bldg. Air	30	60				
Support Systems (SS)	Filter (RCPRET)	SS-PCPPET	5	Bine - Tee	2/4"	0.218	(SMLS)	SA182 GR E304	Field	250	2195	3 GPM	250	2495		Reactor Coolant Co	ont Bida Air	32.5 30	60				
Support Systems (SS)	Filter (RCPRET)		- 5	T (pe - 166	0/4	0.210	(SMLS)	34102 311 304		200	2105	5 OF M	200	2403			. BUL AL	32.5 30	00				
Support Systems (SS)	Filter (RCPRET)	55-RUPRET	- 6	166	3/4	0.218	SA182 GR.F304	Not Applicable		250	2185	3 GPM	250	2480		Reactor Coolant Co	ont. Bidg. Air	30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET	- 7	Pipe - Elbow	3/4"	0.218	SA376 GR.TP304 (SMLS)	SA182 GR.F304	Field	250	2185	3 GPM	250	2485		Reactor Coolant Co	ont. Bldg. Air	32.5 30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET	- 8	Elbow	3/4"	0.218	SA182 GR.F304	Not Applicable		250	2185	3 GPM	250	2485		Reactor Coolant Co	ont. Bldg. Air	30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET	- 9	Pipe - Coupling	3/4"	0.218	SA376 GR.TP304 (SMLS)	SA182 GR.F304	Field	250	2185	3 GPM	250	2485		Reactor Coolant Co	ont. Bldg. Air	32.5 30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Eilter (RCPRET)	SS-RCPRET	- 10	Coupling 6000 lb	3/4"	0.218	SA182 GR.F304	Not Applicable		250	2185	3 GPM	250	2485		Reactor Coolant Co	ont. Bldg. Air	30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return	SS-RCPRET	- 11	Pipe - Orifice 1CV04MD	3/4"	0.218	SA376 GR.TP304	SA479 GR.304	Field	250	2185	3 GPM	250	2485		Reactor Coolant Co	ont. Bldg. Air	32.5 30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return	SS-RCPRET	- 12	Orifice 1CV04MD	3/4"	0.218	(SMLS) SA479 GR.304	Not Applicable		250	2185	3 GPM	250	2485		Reactor Coolant Co	ont. Bldg. Air	30	60				
Support Systems (SS)	Filter (RCPRET) Group 40 - CVCS RCP Seals to Return	SS-RCPRET	- 13	Pipe - Check Valve 1CV8359D	3/4"	0.218	SA376 GR.TP304	SA182 GR.F316	Field	250	2185	3 GPM	250	2485		Reactor Coolant Co	ont. Bldg. Air	32.5 30	60		-		
Support Systems (SS)	Filter (RCPRET) Group 40 - CVCS RCP Seals to Return	SS-RCPRET	- 14	Check Valve 1CV8359D	3/4"	0.218	(SMLS) SA182 GR.F316	Not Applicable		250	2185	3 GPM	250	2485		Reactor Coolant Co	ont. Bldg. Air	30	60				
Support Systems (SS)	Filter (RCPRET)	SS-PCPPET	15	Dine - Reducer	2/4"	0.218	SA376 GP TP304	SA182 GR E204	Field	250	2185	3 GPM	250	2495		Peactor Coolant Co	ont Bida Air	32.5 30	60				
Support Systems (GO)	Filter (RCPRET)		10	Pile - Reducer	0/4 0	0.210	(SMLS)	Net Applicable		250	2105	3 OF M	250	2403		Reactor Coolant Co	Didg. All	32.5 30	00				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET	- 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 Co	ont. Bidg. Air	30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET	- 17	Reducer - Coupling	2	0.343	SA182 GR.F304	SA182 GR.F304	Field	250	2185	3 GPM	250	2485		Reactor Coolant Co	ont. Bldg. Air	32.5 30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET	- 18	Coupling 6000 lb	2	0.343	SA182 GR.F304	Not Applicable		250	2185	3 GPM	250	2485		Reactor Coolant Co	ont. Bldg. Air	30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET	- 19	Coupling - Pipe	2	0.343	SA182 GR.F304	SA376 GR.TP304 (SMLS)	Field	250	2185	3 GPM	250	2485		Reactor Coolant Co	ont. Bldg. Air	32.5 30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return	SS-RCPRET	- 20	Straight Pipe	2	0.343	SA376 GR.TP304	Not Applicable		250	2185	3 GPM	250	2485		Reactor Coolant Co	ont. Bldg. Air	30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return	SS-RCPRET	- 21	Pipe - Flange	2	0.343	SA376 GR.TP304	SA182 GR.F316	Field	250	2185	3 GPM	250	2485		Reactor Coolant Co	ont. Bldg. Air	32.5 30	60		-		
Support Systems (SS)	Filter (RCPRET) Group 40 - CVCS RCP Seals to Return	SS-RCPRET	- 22	Flange	2	0.343	(SMLS) SA182 GR.F316	Not Applicable		250	2185	12 GPM	250	2485		Reactor Coolant Co	ont. Bldg. Air	30	60				2" RFSW 1500 lb Flange; Bolts - 7/8' SA193 GR.B16; Nuts -
Support Systems (SS)	Filter (RCPRET) Group 40 - CVCS RCP Seals to Return	SS-RCPRET	- 23	Valve 1CV8142	3/4"	0.218	SA182 GR.F316	Not Applicable		250	2185	12 GPM	250	2485		Reactor Coolant Co	ont. Bldg. Air	30	60				7/8" SA194 GR.4; 1500 lb Flexitallic Gasket
Support Systems (SS)	Filter (RCPRET) Group 40 - CVCS RCP Seals to Return	SS-RCPRET	- 24	Valve 1CV8142 - Pine	3/4"	0.113	SA182 GR E316	SA312 GR TP304	Field	160	95	12 GPM	250	150		Reactor Coolant Co	ont Bldg Air	39 30	60				
Support Systems (SS)	Filter (RCPRET)	SE RODRET	25	Ptrojekt Dine	2/4"	0.112	SA242 CR TD204	(SMLS)	1 1010	160	05	12 CPM	250	150		Reaster Coolant Co	ont Pida Air	20	60				
Support Systems (SS)	Filter (RCPRET)	33-KCFKET	- 23	Straight Fipe	3/4	0.113	(SMLS)	Not Applicable		100	90	12 GFM	200	150			JIII. BIUY. All	30	00				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET	- 26	Pipe - Reducer	3/4"	0.113	SA312 GR.TP304 (SMLS)	SA182 GR.F304	Field	160	95	12 GPM	250	150		Reactor Coolant Co	ont. Bldg. Air	39 30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET	- 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 Co	ont. Bldg. Air	30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET	- 28	Reducer - Tee	2	0.154	SA182 GR.F304	SA182 GR.F304	Field	160	95	12 GPM	250	150		Reactor Coolant Co	ont. Bldg. Air	39 30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET	- 29	Tee	2	0.154	SA182 GR.F304	Not Applicable		160	95	12 GPM	250	150		Reactor Coolant Co	ont. Bldg. Air	30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return	SS-RCPRET	- 30	Tee - Pipe	2	0.154	SA182 GR.F304	SA312 GR.TP304	Field	160	95	12 GPM	250	150		Reactor Coolant Co	ont. Bldg. Air	39 30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return	SS-RCPRET	- 31	Straight Pipe	2	0.154	SA312 GR.TP304	Not Applicable		160	95	12 GPM	250	150		Reactor Coolant Co	ont. Bldg. Air	30	60		-		
Support Systems (SS)	Filter (RCPRET) Group 40 - CVCS RCP Seals to Return	SS-RCPRET	- 32	Pipe - Elbow	2	0.154	(SMLS) SA312 GR.TP304	SA182 GR.F304	Field	160	95	12 GPM	250	150		Reactor Coolant Co	ont. Bldg. Air	39 30	60				
Support Systems (SS)	Filter (RCPRET) Group 40 - CVCS RCP Seals to Return	SS-RCPRET	- 33	Elbow	2	0.154	(SMLS) SA182 GR.F304	Not Applicable		160	95	12 GPM	250	150		Reactor Coolant Co	ont. Bldg. Air	30	60				
Support Systems (SS)	Filter (RCPRET) Group 40 - CVCS RCP Seals to Return	SS-RCPRET	- 34	Pipe - Valve 1CV236	2	0.154	SA312 GR TP304	SA182 GR E316	Field	160	95	12 GPM	250	150		Reactor Coolant Co	ont Bldg. Air	39 30	60				
Support Systems (SS)	Filter (RCPRET)	SS-PCPPET	35	Valve 1CV236	2	0.154	(SMLS)	Not Applicable		160	95	12 GPM	250	150		Reactor Coolant Co	ont Bida Air	30	60				Critical Control Room R&D drawing Mi64 sheet 2 indicates this
Support Systems (SS)	Filter (RCPRET)		- 35		2	0.154	04102 GR.1 510	Not Applicable		100	35 05	12 01 14	200	150			. BUL AI	30	00				valve number is 1CV101
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET	- 36	Valve 1CV8112	2	0.154	SA182 GR.F316	Not Applicable		160	95	12 GPM	250	150		Reactor Coolant Co	ont. Bidg. Air	30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET	- 37	Pipe - Valve 1CV8100	2	0.154	SA312 GR.TP304 (SMLS)	SA182 GR.F316	Field	160	95	12 GPM	250	150		Reactor Coolant Au	.x. Bldg. Air	39 30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET	- 38	Valve 1CV8100	2	0.154	SA182 GR.F316	Not Applicable		160	95	12 GPM	250	150		Reactor Coolant Au	.x. Bldg. Air	30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET	- 39	Pipe with Bend	2	0.154	SA376 GR.TP304 (SMLS)	Not Applicable		160	95	12 GPM	250	150		Reactor Coolant Au	ux. Bldg. Air	30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return	SS-RCPRET	- 40	Pipe - Elbow	2	0.154	SA312 GR.TP304	SA182 GR.F304	Field	160	95	12 GPM	250	150		Reactor Coolant Au	ux. Bldg. Air	39 30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return	SS-RCPRET	- 41	Elbow	2	0.154	SA182 GR.F316	Not Applicable	<u> </u>	160	95	12 GPM	250	150	<u> </u>	Reactor Coolant Au	ux. Bldg. Air	30	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return	SS-RCPRET	- 42	Pipe - 45 degree Elbow	2	0.154	SA312 GR.TP304	SA182 GR.F304	Field	160	95	12 GPM	250	150	ł	Reactor Coolant Au	ux. Bldg. Air	39 30	60				
Support Systems (SS)	Filter (RCPRET) Group 40 - CVCS RCP Seals to Return	SS-RCPRET	- 43	45 degree Elbow	2	0.154	(SMLS) SA182 GR.F304	Not Applicable	<u> </u>	160	95	12 GPM	250	150	<u> </u>	Reactor Coolant Au	ux. Bldg. Air	30	60		├		
Support Systems (SS)	Filter (RCPRET) Group 40 - CVCS RCP Seals to Return	SS-RCPRET	- 44	Straight Pipe	2	0.154	SA312 GR.TP304	Not Applicable		160	95	12 GPM	250	150		Reactor Coolant Au	ux. Bldg. Air	30	60	+			
Support Systems (SS)	Filter (RCPRET)	SS-POPPET	- 45	Pipe - Coupling	2	0 154	(SMLS)	SA182 CD E204		160	95	12 GPM	250	150		Reactor Coolant	ix Bida Air	30 20	60	<u> </u>			
Puppert Cysterra (00)	Filter (RCPRET)	00-101 AET	46	Coupling 2000 lb	-	0.154	(SMLS)	Ni-4 A11L'		160	05	12 00 14	250	150		Reactor Coolont Au	n Dida *!-	00 00	60				
Support Systems (SS)	Group 40 - CVCS RCP Seals to Return Filter (RCPRET)	SS-RCPRET	- 46	Coupling 3000 lb	2	0.154	SA182 GR.F304	Not Applicable		160	90	12 GPM	250	150		Reactor Coolant Au	лх. ыад. Air	30	60				

System Identification	Group Identification	Part Identification	Part Part Number 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 ks	Normal i Stress in ks	Faulted i Stress in ks	CUF	Stress Comments	Operating Experience	General Comments
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW	SS-CCWHX	- 1 Nozzle - Pipe 4	1	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/
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW	SS-CCWHX	- 2 Pipe - Elbow 4	l .	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				- UFSAR Section 9.2.
Support Systems (SS)	HX (CCWHX) Group 41 - CCW Surge Tank to CCW	SS-CCWHX	- 3 Elbow 4	Ļ	0.237	SA234 GR. WPB		Not Applicable		130	150	Stagnant (no flow)	200	150		Treated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	HX (CCWHX) Group 41 - CCW Surge Tank to CCW	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)	HX (CCWHX) Group 41 - CCW Surge Tank to CCW	SS-CCWHX	- 5 Elbow - Tee 4	ŀ	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)	HX (CCWHX) Group 41 - CCW Surge Tank to CCW	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)	HX (CCWHX) Group 41 - CCW Surge Tank to CCW	SS-CCWHX	- 7 Tee - Pipe 4		0.237	SA234 GR. WPB		SA106 GR. B SMI S		130	150	Stagnant (no flow)	200	150		Treated Water	Aux Bldg. Air	45.5	30	60				
Support Systems (SS)	HX (CCWHX) Group 41 - CCW Surge Tank to CCW	SS-CCWHX	- 8 Pipe - Valve 1CC9456A 4		0.237	SA106 GR, B SMI S		SA105 GR. II	Field	130	150	Stagnant (no flow)	200	150		Treated Water	Aux Bldg Air	45.5	30	60				
Support Systems (SS)	HX (CCWHX) Group 41 - CCW Surge Tank to CCW	SS-CCWHX	9 Valve 10094564 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)	HX (CCWHX) Group 41 - CCW Surge Tank to CCW	SS-CCWHY	10 Embedded Pine 4		0.227	SA106 GR B SMI S		Not Applicable		130	150	Stagnant (no flow)	200	150		Treated Water	Embedded in		30	60				
Support Systems (SS)	HX (CCWHX)	SS-CCWHX	11 Dine - 45 degree Elbow	·	0.237	SA106 CR. B SMLS		SA234 GP WPB	Shop	130	150	Stagnant (no flow)	200	150		Treated Water	Concrete	45.5	30	60				
Support Systems (SS)	HX (CCWHX)	00.000000			0.237	CARDO GR. D GMED		Net Applicable	Gridp	100	150	Otagriant (no now)	200	150		Treated Water	Aux Didg. All	43.5	30	00				
Support Systems (SS)	HX (CCWHX)	SS-CCWHA	12 45 degree Eldow 4		0.237	SA234 GR. WPB		Not Applicable	01	130	150	Stagnant (no now)	200	150		Treated water	Aux. Bidg. Air		30	60				
Support Systems (SS)	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		I reated water	Aux. Blag. 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 1	6	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 1	6	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 1	6	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 1	6	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 1	6	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	SS-CCWHX	- 21 Pipe - 45 degree Elbow 1	6	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	
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW	SS-CCWHX	- 22 45 degree Elbow 1	6	0.375	SA234 GR. WPB		Not Applicable		130	150	12,035 (max)	200	150		Treated Water	Aux. Bldg. Air		30	60			ourission ordening.	
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW	SS-CCWHX	- 23 Pipe Lug - Pipe 1	6	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		
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW	SS-CCWHX	- 24 90 degree Elbow - 45 degree Elbow 1	6	0.375	SA234 GR. WPB		SA234 GR. WPB		130	150	12,035 (max)	200	150		Treated Water	Aux. Bldg. Air	45.5	30	60		SMLS		
Support Systems (SS)	HX (CCWHX) Group 41 - CCW Surge Tank to CCW	SS-CCWHX	- 25 Pipe - Tee 1	6	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)	HX (CCWHX) Group 41 - CCW Surge Tank to CCW	SS-CCWHX	- 26 Tee 1	6	0.375	SA234 GR. WPB		Not Applicable		130	150	12,035 (max)	200	150		Treated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	HX (CCWHX) Group 41 - CCW Surge Tank to CCW	SS-CCWHX	- 27 Tee - Elbow 1	6	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)	HX (CCWHX) Group 41 - CCW Surge Tank to CCW	SS-CCWHX	- 28 Tee - Valve 1	6	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)	HX (CCWHX) Group 41 - CCW Surge Tank to CCW	SS-CCWHX	- 29 Valve 1CC9459A 1	6	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)	HX (CCWHX) Group 41 - CCW Surge Tank to CCW	SS-CCWHX	- 30 Reducing Tee (16 x 16 x 12) 1	6 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)	HX (CCWHX) Group 41 - CCW Surge Tank to CCW	SS-CCWHX	- 31 Straight Pipe 1	2	0.375	SA106 GR. B SMLS		Not Applicable		130	150		200	150	4800 GPM	Treated Water	Aux, Bldg, Air		30	60				
Support Systems (SS)	HX (CCWHX) Group 41 - CCW Surge Tank to CCW	SS-CCWHX	- 32 Pipe - Elbow 1	2	0.375	SA106 GR, B SMI S		SA234 GR. WPB		130	150		200	150	4800 GPM	Treated Water	Aux Bldg. Air	45.5	30	60				
Support Systems (SS)	HX (CCWHX) Group 41 - CCW Surge Tank to CCW	SS-CCWHX		2	0.375	SA234 GR WPB		Not Applicable		130	150		200	150	4800 GPM	Treated Water	Aux Bldg Air		30	60				
Support Systems (SS)	HX (CCWHX) Group 41 - CCW Surge Tank to CCW	SS-CCWHY	- 24 Pine - Value 1000460B 1	2	0.375	SA106 GR B SMIS		SA105 GP II	Field	130	150		200	150	4800 GPM	Treated Water	Aux Bidg Air	45.5	30	60				
Support Systems (SS)	HX (CCWHX)	SS-CCWHX	- 25 Valve 1009460B	2	0.375	SA105 GR II		Not Applicable	T IBIG	130	150		200	150	4800 GPM	Treated Water	Aux Bida Air	43.5	32.85	65 7				
Support Systems (SS)	HX (CCWHX)	SS-COWHY	26 Dine Reducer	2	0.375	CA105 CR. II			Field	130	150		200	150	4800 CDM	Treated Water	Aux Bida Air	15 F	32.03	60				
Support Systems (SS)	HX (CCWHX)	00.000000		044	0.075	CARDO GR. D GMED		Net Applicable	1 IOIG	100	150		200	150	4000 CDM	Treated Water	Aux Didg. All	43.5	30	00				
Support Systems (SS)	HX (CCWHX)	SS-CCWHX	- 37 12 X 14 Eccentric Reducer 1	2 X 14	0.375	SA234 GR. WPB		Not Applicable		130	150		200	150	4800 GPM	Treated Water	Aux. Bidg. Air		30	60				
Support Systems (SS)	HX (CCWHX)	SS-CCWHX	- 38 Reducer - Flange 1	4	0.375	SA234 GR. WPB		Not Applicable		130	150		200	150	4800 GPM	I reated water	Aux. Blag. Air		30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	- 39 Flange 1	4	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 Flexitallic Gasket
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	- 40 Straight Pipe 1	4	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 1	2	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 Flexitallic Gasket
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	- 42 Flange - Elbow 1	2	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 1	2	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 1	2	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 1	2	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 1	2	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 1	2	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 1	2	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 1	6	0.375	SA234 GR. WPB		SA106 GR. B SMLS		130	150		200	150	3.07 x 10^6	Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW	SS-CCWHX	- 50 Valve 1CC9470B 1	6	0.375	SA105 GR. II		Not Applicable		130	150		200	150	3.07 x 10^6	Treated Water	Aux. Bldg. Air		32.85	65.7				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW	SS-CCWHX	- 51 Elbow - Elbow 1	6	0.375	SA234 GR. WPB		SA234 GR. WPB		130	150		200	150	3.07 x 10^6	Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW	SS-CCWHX	- 52 Pipe - Weldolet 1	6	0.375	SA106 GR. B SMLS		SA234 GR. WPB	Shop	130	150	Normally Stagnant	200	150	High point ven	t Treated Water	Aux. Bldg. Air	45.5	30	60			LER 305-2003-006: Possible through the wall crack	
					A 48-	0.000.0				100	180	(HO HOW)											weid flaw.	
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	- 53 16 x 3/4 Weldolet 3	\$/4"	0.375	SA234 GR. WPB		Not Applicable		130	150	Normally Stagnant (no flow)	200	150	High point ven	t Treated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	- 54 Weldolet - Valve 1CC157 3	3/4"	0.375	SA234 GR. WPB		SA105 GR. II		130	150	Normally Stagnant (no flow)	200	150	High point ven	t Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	- 55 Valve 1CC157 3	3/4"	0.375	SA105 GR. II		Not Applicable		130	150	Normally Stagnant (no flow)	200	150	High point ven	t Treated Water	Aux. Bldg. Air		32.85	65.7				
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX	- 56 Valve 1CC157 - Pipe 3	\$/4"	0.375	SA105 GR. II		SA106 GR. B SMLS		130	150	Normally Stagnant (no flow)	200	150	High point ven	t 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	- 57 Straight Pipe 3	3/4"	0.375	SA106 GR. B SMLS		Not Applicable		130	150	Normally Stagnant (no flow)	200	150	High point ven	t Treated Water	Aux. Bldg. Air		30	60				

System Identification	Group Identification	Part Identification N	Part umber	Part Description	Part Size in	Part Thickness in	Material n A	Material W	Material B	Weld Type	Operating Temperature in	Operating Pressure in	Operating Flow in gpm	Design Temperature in	Design Pressure in	Design Flow	Inside Environment	Outside Environment	Residual Stress in k	Normal si Stress in F	Faulted si Stress in k	CUF	Stress Comments	Operating Experience	General Comments
Support Systems (SS)	Group 41 - CCW Surge Tank to CCW HX (CCWHX)	SS-CCWHX- 58	Thread	ded Cap	3/4*	0.375	SA234 GR. WPB		Not Applicable		130	150	Normally Stagnant (no flow)	200	150	High point ver	nt 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	8 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	Reduc	cer - 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 F	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	CCM F	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 CUF Stress Oper Stress in ksi Comments Exper	ating General ience Comments
Support Systems (SS)	Group 42 - CCW HX to RHR HX (CCWRHR)	SS-CCWRHR-	1	Nozzle - Elbow	18	0.375	Carbon Steel ?	5	SA234 GR.WPB	Field	105	150	0.	200	150	3.07 x 10^6	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	1	Not Applicable		105	150		200	150	3.07 x 10^6	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	5	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	1	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	5	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	1	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	5	SA105 GR. II F	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	1	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	S	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	1	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	S	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	S	SA234 GR.WPB F	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	1	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	1	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	S	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	1	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	1	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	5	SA234 GR.WPB F	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	1	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	5	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	1	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	0,00	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	5	SA234 GR.WPB F	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	1	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 ?	07.07	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	07.07	SA106 Gr.B F 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	S	SA105 GR. II F	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	1	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-	29	Elbow - Reducer	12	0.375	SA234 GR.WPB	S	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	1	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	F	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	1	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-	33	Valve 1CC9502A	16	0.375	SA105 GR. II	1	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	1	Not Applicable F	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 - Sockolet	3/4"	0.154	SA106 Gr.B SMLS	0 0	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 Sockolet	3/4"	0.154	SA105 3000 lb S.W.	r	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	Sockolet - Pipe	3/4"	0.154	SA105 3000 lb S.W.	0,00	SA106 Gr.B F 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	1	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	1	Not Applicable		105	150	10	200	150		I reated Water	Aux. Bldg. Air	1.5.5	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	0,00	SA105 3000 lb F S.W.	-ield	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	0 03	SA105 3000 lb F 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.	1	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	0 00	SA105 3000 lb F S.W.	Field	105	150	10	200	150		Treated Water	Aux. Bldg. Air	45.5	30	60	

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

System	Group	Part	Part Part Number Description	Part Size in	Part Thicknoss in	Material Material	Material	Weld	Operating Temperature in	Operating Operating Prossure in Elow in gpg	Design	Design Procesure in	Design	Inside	Outside	Residual Strong in	Normal Stross in	Faulted Strong in	CUF	Stress	Operating	General
Identification	identification	Identification	Number Description	inches	inches	· · ·	в	туре	oF	psi Piow In gpi	oF	psi	I FIOW	Environment	Environment	ksi	ksi	ksi		Comments	Experience	Comments
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLD:	S-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-CCWLD:	S-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-CCWLD:	S- 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	SS-CCWLD	S- 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	SS-CCWLD	S-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)	Outside Containment (CCWLDS) Group 43 - CCW to Other Loads	SS-CCWLD	S- 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)	Outside Containment (CCWLDS) Group 43 - CCW to Other Loads	SS-CCWLD	S-17 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, Blda, Air	45.5	30	60				
Support Systems (SS)	Outside Containment (CCWLDS) Group 43 - CCW to Other Loads	SS-CCWLD	S-18 Fibow	8	0 322	SA234 GR WPB	Not Applicable		105	150 204 675 lb/br	200	150	498 000 lb/br	Treated Water	Aux Bldg Air		30	60				
Support Systems (SS)	Outside Containment (CCWLDS)	SE COMED		0	0.022	CALOR CD D CALLS	SA224 CB WDB		105	150 204,675 lb/hr	200	150	408,000 lb/hr	Treated Water	Aux Bidg Air	45.5	20	60				
Support Systems (SS)	Outside Containment (CCWLDS)	33-CCWLD.		0	0.322	SATUD GR.D SMES	SA234 GR.WFB		105	204,675 10/11	200	150	496,000 10/11	Treated Water	Aux. Blug. All	40.0	30	60				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLD	S-10 8 x 8 x6 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-CCWLD:	S- 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-CCWLD:	S- 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-CCWLD	S- 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	SS-CCWLD	S- 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	SS-CCWLD	S- 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	SS-CCWLD	S- 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)	Outside Containment (CCWLDS) Group 43 - CCW to Other Loads	SS-CCWLD:	S- 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)	Outside Containment (CCWLDS) Group 43 - CCW to Other Loads	SS-CCWI D	S-18 Pipe - Reducer	6	0.28	SA106 GR B SMLS	SA234 GR WPB		105	150 204 675 lb/br	200	150	498 000 lb/hr	Treated Water	Aux Bldg Air	45.5	30	60				
0	Outside Containment (CCWLDS)	00.00000		- -	0.000		Not Applicable		405	450 004 075 h h-	000	450	400.000 lb./h.e	T	Ave: Dide Ale							
Support Systems (SS)	Outside Containment (CCWLDS)	SS-CCWLD:	5-19 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/nr	Treated water	Aux. Bidg. Air		30	60				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLD	S- 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-CCWLD:	S- 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-CCWLD:	S- 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-CCWLD:	S- 23 Pipe - Sockolet	6 x 1	0.133	SA106 GR.B SMLS	SA105/SA181 GR.II		130	150 Stagnant (no flow)	200	150	Plugged	Treated Water	Aux. Bldg. Air	45.5	30	60			INPO - 159: Pin hole leak in 3/4* line due to stress corrosio cracking	n
Support Systems (SS)	Group 43 - CCW to Other Loads	SS-CCWLD:	S- 24 1* 3000lb Sockolet	1	0.133	SA105/SA181 GR.II	Not Applicable		130	150 Stagnant (no	200	150	Plugged	Treated Water	Aux. Bldg. Air		32.85	65.7			ordoning.	
Support Systems (SS)	Group 43 - CCW to Other Loads	SS-CCWLD	S- 25 Sockolet - Plug	1	0.133	SA105/SA181 GR.II	SA105/SA181 GR.II		130	150 Stagnant (no	200	150	Plugged	Treated Water	Aux. Bldg. Air	46.8	32.85	65.7			LER 301-1996-002: Low load/high cycle vibration fatigue a	1
Support Systems (SS)	Outside Containment (CCWLDS) Group 43 - CCW to Other Loads	SS-CCWLD	S- 26 Plug	1	0.133	SA105/SA181 GR.II	Not Applicable		130	flow) 150 Stagnant (no	200	150	sockolet Plugged	Treated Water	Aux. Bldg. Air		32.85	65.7			heat affected zone of a 1 inch inlet pipe.	
Support Systems (SS)	Outside Containment (CCWLDS) Group 43 - CCW to Other Loads	SS-CCWLD:	S-27 Pipe - Flange	6	0.28	SA106 GR.B SMLS	SA105 300 lb RFWN		130	flow) 150 204,675 lb/hr	200	150	sockolet 498,000 lb/hr	Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Outside Containment (CCWLDS)	SS-CCWLD	S- 28 Flance	6	0.28	\$4105 300 lb REWN	Not Applicable		130	150 204.675 lb/br	200	150	498 000 lb/br	Treated Water	Aux Bldg Air		32.85	65.7				300 # REWN Flance Bolts - S&193 GR B7 Nuts - S&194
Support Systems (SS)	Outside Containment (CCWLDS)	SE COMED	5 20 Vetro 100120B	6	0.20	CA105 CD II	Not Applicable		120	150 204,675 lb/hr	200	150	408,000 lb/hr	Treated Water	Aux Bidg Air	_	22.00	00.1 0E 7				GR.2H; Gasket - 1/8"gap, Flexitallic, Style CG
Support Systems (SS)	Outside Containment (CCWLDS)	33-CCWLD		0	0.20	3A105 GR.II	Not Applicable		130	130 204,675 10/11	200	150	498,000 10/11	Treated Water	Aux. Blug. All		32.05	65.7				
Support Systems (SS)	Outside Containment (CCWLDS)	SS-CCWLD:	S-30 Valve 1009452D	ь	0.28	SATUS GR.II	Not Applicable		130	150 204,675 lb/hr	200	150	498,000 lb/hr	Treated water	Aux. Bidg. Air		32.85	65.7				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLD:	S- 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-CCWLD:	S- 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-CCWLD	S- 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	
Support Sustama (SS)	Crown 42 COW to Other Loade	SS COMI D	S 24 Dine Dine	10	0.265	CALOR OD D CALLS	CA106 CD D CMI C		120	150 204 675 lb/br	200	150	408.000 lb/br	Tracted Water	Aux Bldg Air	45.5	20	60			corrosion mechanical process.	
Support Systems (SS)	Outside Containment (CCWLDS)	33-CCWLD.		10	0.305	SATUD GR.B SMES	SATUS GR.B SINES		130	204,675 10/11	200	150	496,000 10/11	Treated Water	Aux. Blug. All	40.0	30	60				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLD	S- 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-CCWLD:	S- 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-CCWLD:	S- 37 Flange	18	0.375	SA105 150 lb RFWN	Not Applicable		130	150 5000	200	150		Treated Water	Aux. Bldg. Air		32.85	65.7			INPO - 16: CCW HX outlet leak due to fatigue.	150 # RFWN Flange; Bolts - SA193 GR. B7; Nuts - SA194 GR.2H: Gasket - 1/8"gap, Flexitallic, Style CG
Support Systems (SS)	Group 43 - CCW to Other Loads	SS-CCWLD	S- 38 Flange - Reducer	18	0.375	SA105 150 lb RFWN	SA234 GR.WPB		130	150 5000	200	150		Treated Water	Aux. Bldg. Air	46.8	32.85	65.7				
Support Systems (SS)	Group 43 - CCW to Other Loads	SS-CCWLD:	S- 39 18 x 12 Reducer	18 x 12	0.375	SA234 GR.WPB	Not Applicable		130	150 5000	200	150		Treated Water	Aux. Bldg. Air		30	60				
Support Systems (SS)	Group 43 - CCW to Other Loads	SS-CCWLD	S- 40 Reducer - Pipe	12	0.375	SA234 GR.WPB	SA106 GR.B SMLS		130	150 5000	200	150		Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Group 43 - CCW to Other Loads	SS-CCWLD	S- 41 Elbow - Elbow	12	0.375	SA234 GR.WPB	SA234 GR.WPB		130	150 5000	200	150		Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Outside Containment (CCWLDS) Group 43 - CCW to Other Loads	SS-CCWLD:	S- 42 Lug - pipe	12	0.375	Carbon Steel ?	SA106 GR.B SMLS		130	150 5000	200	150		Not Applicable	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Outside Containment (CCWLDS) Group 43 - CCW to Other Loads	SS-CCWLD	S-43 Elbow - Flance	12	0.375	SA234 GR.WPB	SA105 150 lb RFWN		130	150 5000	200	150		Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Outside Containment (CCWLDS)	SS-CCWI D	S-144 Elonge	12	0.375	\$4105 150 lb REWN	Not Applicable		120	150 5000	200	150		Treated Water	Aux Bida Air		22.95	65.7				150 # DEW/N Elango-Rolte - SA102 CD R7- Nute - SA104
Outport Oystems (OO)	Outside Containment (CCWLDS)	00.00000		12	0.075	04405 OD II	Not Applicable		130	150 5000	200	150		Treated Water	Aux. Didg. All		32.03	05.7				GR.2H; Gasket - 1/8*gap, Flexitallic, Style CG
Support Systems (SS)	Outside Containment (CCWLDS)	SS-CCWLD:	S-45 Valve 1CC9507B	12	0.375	SA105 GR.II	Not Applicable		130	150 5000	200	150		Treated Water	Aux. Bldg. Air		32.85	65.7				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLD:	S- 46 Flange - Valve 1CC9412B	12	0.375	SA105 150 lb RFWN	SA105 GR.II		130	150 5000	200	150		Treated Water	Aux. Bldg. Air	46.8	32.85	65.7				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLD:	S- 47 Valve 1CC9412B	12	0.375	SA105 GR.II	Not Applicable		130	150 5000	200	150		Treated Water	Aux. Bldg. Air		32.85	65.7				
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLD:	S- 48 Flange	12	0.375	SA105 300 lb RFWN	Not Applicable		130	150 5000	200	150		Treated Water	Aux. Bldg. Air		32.85	65.7				300 # RFWN Flange;Bolts - SA193 GR. B7; Nuts - SA194 GR.2H; Gasket - 1/8*gap, Flexitallic, Style CG
Support Systems (SS)	Group 43 - CCW to Other Loads	SS-CCWLD:	S- 49 Flange - Pipe	12	0.375	SA105 300 lb RFWN	SA106 GR.B SMLS	İ	130	150 5000	200	150		Treated Water	Aux. Bldg. Air	46.8	32.85	65.7	1			
Support Systems (SS)	Group 43 - CCW to Other Loads	SS-CCWLD	S- 50 Pipe - 45 degree Elbow	12	0.375	SA106 GR.B SMLS	SA234 GR.WPB	1	130	150 5000	200	150	1	Treated Water	Aux. Bldg. Air	45.5	30	60	1	1		
Support Systems (SS)	Group 43 - CCW to Other Loads	SS-CCWLD	S- 51 45 degree Elbow	12	0.375	SA234 GR.WPB	Not Applicable	1	130	150 5000	200	150	1	Treated Water	Aux. Bldg. Air	+	30	60	<u> </u>		1	
Support Systems (SS)	Outside Containment (CCWLDS) Group 43 - CCW to Other Loads	SS-CCWLD	S- 52 Elbow - 45 degree Elbow	12	0.375	SA234 GR.WPB	SA234 GR.WPB		130	150 5000	200	150	+	Treated Water	Aux. Bldg. Air	45.5	30	60	+			
Support Systems (SS)	Outside Containment (CCWLDS) Group 43 - CCW to Other Loads	SS-CCWLD:	S-53 Pipe - Reducer	12	0.375	SA106 GR.B SMLS	SA234 GR.WPB		130	150 5000	200	150		Treated Water	Aux. Bldg. Air	45.5	30	60				
Support Systems (SS)	Outside Containment (CCWLDS) Group 43 - CCW to Other Loads	SS-CCWLD	S-54 12 x 16 Reducer	12 x 16	0.375	SA234 GR.WPB	Not Applicable		130	150 5000	200	150	+	Treated Water	Aux. Blda. Air		30	60	+			
Support Systems (SS)	Outside Containment (CCWLDS) Group 43 - CCW to Other Loade	SS-COM D	S-55 Reducer - Tee	16	0.375	SA234 GR WPB	SA234 GR WPP		130	150 5000	200	150		Treated Water	Aux Bide Air	45.5	30	60				
Oursest Ourses (00)	Outside Containment (CCWLDS)	00.00000			0.075		Not April 11	ļ	100		200	450		Transfer Mater	Aux Did. All	-0.0			L			
Support Systems (SS)	Group 43 - CCW to Other Loads Outside Containment (CCWLDS)	SS-CCWLD:	5-56 16 x 16 x 12 Reducing Tee	16	0.375	SA234 GR.WPB	Not Applicable	1	130	150 5000	200	150		Treated Water	Aux. Bldg. Air		30	60				

System Identification	Group Identification	Part Part Identification Number	Part Description	Part Size in inches	Part Thickness in inches	n A W	Material B	Weld Type	Operating Temperature in oF	Operating Pressure in psi	Operating Flow in gpm	Design Temperature i oF	Desig in Pressure i	n Design in psi Flow	Inside Environment	Outside Environment	Residual Stress in ksi	Normal Stress in ksi	Faulted Stress in ksi	i 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 B/B 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	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		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	Not Applicable		105	150	704	200	150		Treated Water	Aux. Bldg. Air		30	60			
Support Systems (SS)	Group 44 - CCW to RCP Inside	SS-CCWRCP- 7	Elbow - Pipe	6	0.28	SA234 GR.WPB	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	SS-CCWRCP- 8	Pipe - Pipe	6	0.28	SA106 GR.B SMLS	SA106 GR.B SMLS		105	150	704	200	150		Treated Water	Cont. Bldg. Air	45.5	30	60			
Support Systems (SS)	Group 44 - CCW to RCP Inside	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	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	SS-CCWRCP- 11	Check Valve 1CC9486 - Elbow	6	0.28	SA105 GR. II	SA234 GR.WPB		105	150	704	200	150		Treated Water	Cont. Bldg. Air	46.8	32.85	65.7			
Support Systems (SS)	Containment (CCWRCP) Group 44 - CCW to RCP Inside	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)	Containment (CCWRCP) Group 44 - CCW to RCP Inside	SS-CCWRCP- 13	Pipe - Elbow	6	0.28	SMLS SA106 GR.B SMLS	SA234 GR.WPB		105	150	704	200	150		Treated Water	Cont. Bldg. Air	45.5	30	60			
Support Systems (SS)	Containment (CCWRCP) Group 44 - CCW to RCP Inside	SS-CCWRCP- 14	Straight Pipe	6	0.28	SA106 GR.B SMLS	SMLS Not Applicable		105	150	704	200	150		Treated Water	Cont. Bldg. Air		30	60			
Support Systems (SS)	Containment (CCWRCP) Group 44 - CCW to RCP Inside	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)	Containment (CCWRCP) Group 44 - CCW to RCP Inside	SS-CCWRCP- 16	Pipe - Tee	6	0.28	SA106 GR B SMLS	SA234 GR WPB		105	150	704	200	150		Treated Water	Cont Bldg Air	45.5	30	60			
Support Systems (SS)	Containment (CCWRCP) Group 44 - CCW to BCP Inside	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)	Containment (CCWRCP)	SS-COWRCP- 18	Pine - Weldolet	6	0.28	SMLS SA106 GR B SMLS	SA234 GR WPB		105	150	Stamant (no	200	150	High point yent	Treated Water	Cont Bldg. Air	45.5	30	60			
Support Systems (SS)	Containment (CCWRCP)	SS-COWPOR 19	6 x 3/4 Woldolot	6 × 2/4	0.20	SA105 2000 Ib S W	SMLS		105	150	flow)	200	150	High point yout	Treated Water	Cont Bldg. Air	40.0	22.95	65 7			
Support Systems (SS)	Containment (CCWRCP)	SS-COWROP - 13	Weldelet Velue 100151	2/4	0.20	SA105 3000 Ib S.W.			105	150	flow)	200	150	High point vent	Treated Water	Cont. Didg. Air	46.9	32.05	65.7			
Support Systems (SS)	Containment (CCWRCP)	SS-CCWRCP- 20	weidolet - valve 1CC151	3/4	0.113	SA105 3000 IB S.W.	SA105 GR. II		105	150	flow)	200	150	High point vent	Treated water	Cont. Bidg. 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	I reated 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	SA234 GR.WPB		105	150	176	200	150		Treated Water	Cont. Bldg. Air	45.5	30	60			
Support Systems (SS)	Group 44 - CCW to RCP Inside	SS-CCWRCP- 33	Elbow	3	0.216	SA234 GR.WPB	Not Applicable		105	150	176	200	150		Treated Water	Cont. Bldg. Air		30	60			
Support Systems (SS)	Group 44 - CCW to RCP Inside	SS-CCWRCP- 34	Elbow - Pipe	3	0.216	SA234 GR.WPB	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	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	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)	Containment (CCWRCP) Group 44 - CCW to RCP Inside	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)	Containment (CCWRCP) Group 44 - CCW to RCP Inside	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)	Containment (CCWRCP) Group 44 - CCW to RCP Inside	SS-CCWRCP- 39	45 degree Elbow	3	0.216	SA234 GR.WPB	Not Applicable		105	150	176	200	150		Treated Water	Cont. Bldg. Air		30	60			
Support Systems (SS)	Containment (CCWRCP) Group 44 - CCW to RCP Inside	SS-CCWRCP- 40	45 degree Elbow - Pipe	3	0.216	SMLS SA234 GR.WPB	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	
	Containment (CCWRCP)					SMLS															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 RESW		105	150	40	200	150		Treated Water	Cont. Bldg. Air	45.5	30	60			
Support Systems (SS)	Group 44 - CCW to RCP Inside	SS-CCWRCP- 48	Flange	2	0.218	SA105 1500LB	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.
Support Systems (SS)	Group 44 - CCW to RCP Inside	SS-CCWRCP- 49	Pipe - Elbow	2	0.218	SA106 GR.B SMLS	SA105 3000 lb		105	150	40	200	150		Treated Water	Cont. Bldg. Air	45.5	30	60			
Support Systems (SS)	Group 44 - CCW to RCP Inside	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	SS-CCWRCP- 51	Pipe - Check Valve 1CC9495B	2	0.218	SA106 GR.B SMLS	SA105 GR. II		105	150	40	200	150		Treated Water	Cont. Bldg. Air	45.5	30	60			
Support Systems (SS)	Group 44 - CCW to RCP Inside	SS-CCWRCP- 52	Check Valve 1CC9495B	2	0.343	SA105 GR. II	Not Applicable		105	2485	40	200	2485		Treated Water	Cont. Bldg. Air	-	32.85	65.7			
Support Systems (SS)	Group 44 - CCW to RCP Inside	SS-CCWRCP- 53	Check Valve 1CC9495B - Pipe	2	0.343	SA105 GR. II	SA106 GR.B SMLS		105	2485	40	200	2485	-	Treated Water	Cont. Bldg. Air	46.8	32.85	65.7			
Support Systems (SS)	Group 44 - CCW to RCP Inside	SS-CCWRCP- 54	Straight Pipe	2	0.343	SA106 GR.B SMLS	Not Applicable		105	2485	40	200	2485		Treated Water	Cont. Bldg. Air		30	60			
Support Systems (SS)	Containment (CCWRCP) Group 44 - CCW to RCP Inside	SS-CCWRCP- 55	Pipe - Flange	2	0.343	SA106 GR.B SMLS	SA105 1500LB		105	2485	40	200	2485		Treated Water	Cont. Bldg. Air	45.5	30	60			
Support Systems (SS)	Containment (CCWRCP) Group 44 - CCW to RCP Inside	SS-CCWRCP- 56	Flange	2	0.343	SA105 1500LB	RFSW Not Applicable		105	2485	40	200	2485		Treated Water	Cont. Bldg. Air		32.85	65.7			1500 lb RFSW Flange; Bolts - SA193 GR. B7; Nuts - SA194 GR.
Support Systems (SS)	Containment (CCWRCP) Group 44 - CCW to RCP Inside	SS-CCWRCP- 57	Flange - Flexible Hose	2		RFSW SA105 1500LB	Carbon Steel ?		105	2485	40	200	2485		Treated Water	Cont. Bldg. Air	46.8	32.85	65.7			2H; 1500lb Flexitallic Gasket
Support Systems (SS)	Containment (CCWRCP) Group 44 - CCW to RCP Inside	SS-CCWRCP- 58	Flexible Hose	2		RFSW Carbon Steel ?	Not Applicable		105	2485	40	200	2485		Treated Water	Cont. Bldg. Air		30	60			Flex. Hose No.1CC10MB per dwg. PG-2537C-44
	Containment (CCWRCP)									<u> </u>												

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	Resid t Stress i	ial Norn h ksi Stress i	nal Faulte n ksi Stress ir	CUF Stress Comments	Operating Experience	General Comments
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SEPCLC)	SS-SFPCL0	G-1	Nozzle - Pipe 1	12	0.375	Stainless Steel?		A312 GR.TP304		70 - 110	65		200	150	4350	Borated Water	Fuel Handling		30	60			System operating/design data taken from plant drawings and B/
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling	SS-SFPCL0	G-2	Pipe - Elbow 1	12	0.375	A312 GR.TP304		A403 GR.WP304		70 - 110	65		200	150	4350	Borated Water	Fuel Handling		30	60			
Support Systems (SS)	(SFPCLG) Group 45 - Spent Fuel Pool Cooling	SS-SFPCL0	G- 3	Straight Pipe 1	12	0.375	A312 GR.TP304		Not Applicable		70 - 110	65		200	150	4350	Borated Water	Fuel Handling		30	60			
Support Systems (SS)	(SFPCLG) Group 45 - Spent Fuel Pool Cooling	SS-SFPCL0	G-4	Elbow 1	12	0.375	SMLS A403 GR.WP304		Not Applicable		70 - 110	65		200	150	4350	Borated Water	Bldg. Air Fuel Handling		30	60			
Support Systems (SS)	(SFPCLG) Group 45 - Spent Fuel Pool Cooling	SS-SFPCL0	G-5	Pipe - Weldolet 1	12	0.375	A312 GR.TP304		A403 GR.WP304		70 - 110	65	Stagnant (no	200	150	Capped line	Borated Water	Bldg. Air Fuel Handling		30	60			
Support Systems (SS)	(SFPCLG) Group 45 - Spent Fuel Pool Cooling	SS-SFPCL0	G-6	12 x 3 Weldolet 1	12 x 3	0.375	SMLS A403 GR.WP304		Not Applicable		70 - 110	65	flow) Stagnant (no	200	150	Capped line	Borated Water	Bldg. Air Fuel Handling		30	60			
Support Systems (SS)	(SFPCLG) Group 45 - Spent Fuel Pool Cooling	SS-SEPCI (G- 7	Weldolet - Pipe 3	3	0.216	A403 GR WP304		A312 GR TP304		70 - 110	65	flow) Stagnant (no	200	150	Capped line	Borated Water	Bldg. Air Euel Handling		30	60			
Support Systems (SS)	(SFPCLG) Group 45 - Spent Euel Pool Cooling	SS-SEPCI (G- 8	Straight Pipe 3	3	0.216	4312 GR TP304		SMLS Not Applicable		70 - 110	65	flow) Stagnant (no	200	150	Capped line	Borated Water	Bldg. Air		30	60			
Eupport Systems (SS)	(SFPCLG)	SE SEDCI		Dina, Can	2	0.216	SMLS				70 110	65	flow)	200	150	Copped line	Borated Water	Bldg. Air	20	20	60			
Support Systems (SS)	(SFPCLG)	33-3FFCLC	3-9	ripe - Cap 3		0.210	SMLS		A403 GR.WF304		70-110	00	flow)	200	150	Capped line	Bolated Water	Bldg. Air	39	30	60			
Support Systems (SS)	(SFPCLG)	55-SFPUL	6-10	сар 3	3	0.216	A403 GR.WP304		Not Applicable		70 - 110	60	flow)	200	150	Capped line	Borated water	Bldg. Air		30	60			
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCLG)	SS-SFPCL0	G-11	Pipe - Valve 1FC8756 1	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 (SFPCLG)	SS-SFPCL0	G- 12	Valve 1FC8756 1	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 (SFPCLG)	SS-SFPCL0	G-13	Valve 1FC8756 - Elbow 1	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 (SFPCLG)	SS-SFPCL0	G- 14	Pipe - Flange 1	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 (SEPCI G)	SS-SFPCL0	G- 15	Flange 1	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: 150b Elevitallic Gasket
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling	SS-SFPCL0	G- 16	Flange - Reducer 1	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	SS-SFPCL0	G- 17	12 x 14 Reducer 1	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	SS-SFPCL0	G- 18	Reducer - Elbow 1	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)	(SFPCLG) Group 45 - Spent Fuel Pool Cooling	SS-SFPCL0	G-19	Elbow 1	14	0.375	A403 GR.WP304		Not Applicable		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air		30	60			
Support Systems (SS)	(SFPCLG) Group 45 - Spent Fuel Pool Cooling	SS-SFPCL0	G-20	Elbow - Flange 1	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)	(SFPCLG) Group 45 - Spent Fuel Pool Cooling	SS-SEPCI (G- 21	Flange 1	14	0.375	A182 GR E304		Not Applicable		70 - 110	65		200	150	4350	Borated Water	Aux Bldg Air		30	60			150 lb REWN Flance: Bolts - SA193 GR B7: Nuts - SA194 GR
Europert Systems (SS)	(SFPCLG)	SE SEDCI	0.00	Elange 1	10	0.275	A192 CR E204		Not Applicable		70 110	65		200	150	4250	Porotod Wotor	Aux Bldg Air		20	60			2H; 150lb Flexitallic Gasket
Support Systems (SS)	(SFPCLG)	33-3FFCLC	0.22		12	0.375	A102 GR.F304				70-110	65		200	150	4330	Bolated Water	Aux. Blug. All		30	60			2H; 150lb Flexitallic Gasket
Support Systems (SS)	(SFPCLG)	SS-SFPCLO	6-23	Flange - Reducer 1	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 (SFPCLG)	SS-SFPCL0	G-24	12 x 10 Reducer 1	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 (SFPCLG)	SS-SFPCL0	G-25	Reducer - Pipe 1	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 (SFPCLG)	SS-SFPCL0	G-26	Pipe - Elbow 1	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 (SFPCLG)	SS-SFPCL0	G- 27	Elbow 1	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 (SFPCLG)	SS-SFPCL0	G- 28	Elbow - Valve 1FC8793 1	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 (SEPCLG)	SS-SFPCL0	G- 29	Valve 1FC8793 1	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	SS-SFPCL0	G- 30	Valve 1FC8793 - Pipe 1	10	0.365	A182 GR.F304		A312 GR.TP304		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air	39	30	60			
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling	SS-SFPCL0	G- 31	Straight Pipe 1	10	0.365	A312 GR.TP304		Not Applicable		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air	39	30	60			
Support Systems (SS)	(SFPCLG) Group 45 - Spent Fuel Pool Cooling	SS-SFPCL0	G- 32	Lug - pipe 1	10	0.365	Carbon Steel ?		A312 GR.TP304		70 - 110	65		200	150	4350	Not Applicable	Aux. Bldg. Air	39	30	60			
Support Systems (SS)	(SFPCLG) Group 45 - Spent Fuel Pool Cooling	SS-SFPCL0	G- 33	Valve 1FC8762A 1	10	0.365	A182 GR.F304		SMLS Not Applicable		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air	39	30	60			
Support Systems (SS)	(SFPCLG) Group 45 - Spent Fuel Pool Cooling	SS-SFPCL0	G- 34	Valve 1FC8762A - Elbow 1	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)	(SFPCLG) Group 45 - Spent Fuel Pool Cooling	SS-SFPCL0	G- 35	10 x 16 Reducer 1	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		
Support Systems (SS)	(SFPCLG) Group 45 - Spent Fuel Pool Cooling	SS-SFPCL0	G- 36	Reducer - Elbow 1	16	0.375	A403 GR.WP304		A403 GR.WP304		70 - 110	65		200	150	4350	Borated Water	Aux, Bldg, Air	39	30	60	GR.F304		
Support Systems (SS)	(SFPCLG)	SS-SEDCI (G- 97	45 degree Elbow	16	0.375	A403 GP WP304		Not Applicable		70 - 110	65		200	150	4350	Borated Water	Aux Bldg Air	30	30	60			
Support Systems (SS)	(SFPCLG)	00.05001	0.00	45 degree Elbow	10	0.075	A400 OD W/D004				70 440	00		200	150	4050	Dorated Water	Aux. Didg. All	33	30	00	Assumed A100		
Support Systems (SS)	(SFPCLG)	SS-SFPUL	0-38	45 degree Elbow - Elbow 1	10	0.375	A403 GR.WP304		A403 GR.WP304		70 - 110	60		200	150	4350	Borated Water	Aux. Bidg. Air		30	60	GR.F304		
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCLG)	SS-SFPCL0	G- 39	Elbow - Flange 1	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 (SFPCLG)	SS-SFPCL0	G- 40	Flange 1	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 (SFPCLG)	SS-SFPCL0	G- 41	Valve 1FC8762B 1	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 (SFPCLG)	SS-SFPCL0	G- 42	Pipe - 45 degree Elbow 1	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 (SFPCLG)	SS-SFPCL0	G- 43	45 degree Elbow 1	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 (SEPCI G)	SS-SFPCL0	G- 44	Pipe - Reducer 1	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	SS-SFPCL0	G- 45	10 x 14 Reducer 1	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	SS-SFPCL0	G-46	Reducer - Tee 1	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	SS-SFPCL0	G- 47	Tee 1	14	0.375	A403 GR.WP304		Not Applicable		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air		30	60			
Support Systems (SS)	(SFPCLG) Group 45 - Spent Fuel Pool Cooling	SS-SFPCL0	G- 48	Tee - Pipe 1	14	0.375	A403 GR.WP304		A312 GR.TP304		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air		30	60			
Support Systems (SS)	(SFPCLG) Group 45 - Spent Fuel Pool Cooling	SS-SFPCL0	G- 49	Tee - Flange 1	14	0.375	A403 GR.WP304	+	SMLS A182 GR.F304	<u> </u>	70 - 110	65	<u> </u>	200	150	4350	Borated Water	Aux. Bldg. Air		30	60	Assumed A182		
Support Systems (SS)	(SFPCLG) Group 45 - Spent Fuel Pool Coolina	SS-SFPCL0	G- 50	Flange 1	14	0.375	A182 GR.F304		Not Applicable		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air	_	30	60	GR.F304 Assumed A182		150 lb RFWN Flange; Bolts - SA193 GR. B7; Nuts - SA194 GR.
Support Systems (SS)	(SFPCLG) Group 45 - Spent Fuel Pool Conling	SS-SFPCI 0	G- 51	Valve 0FC8754 1	14	0.375	A182 GR.F304	+	Not Applicable		70 - 110	65	<u> </u>	200	150	4350	Borated Water	Aux. Blda. Air		30	60	GR.F304 Assumed A182		2H; 150lb Flexitallic Gasket
Support Systems (SS)	(SFPCLG) Group 45 - Spent Fuel Pool Cooling	SS-SEPCI	G-52	Straight Pipe	14	0.375	A312 GR TP204		Not Applicable		70 - 110	65		200	150	4350	Borated Water	Aux Bide Air		30	60	GR.F304		
Support Systems (SS)	(SFPCLG)		2-53	Dine - Elhow		0.375	SMLS		AA03 CP MD204		70 - 110	65		200	150	4350	Borated Water	Aux Plda At-	30	20	60	<u> </u>		
Support Systems (SS)	(SFPCLG)	00 OFFICE	0.54	Disa (Colores Elle		0.010	SMLS	ļ	A 400 OD W200	ļ	70 440		ļ	230	150	4050	Dente d Mate	Aux Didy. Alf	29	30	00			
Support Systems (SS)	(SFPCLG)	SS-SFPCLO	u- 54	Pipe - 45 degree Elbow 1	14	0.375	A312 GK.TP304 SMLS		A403 GR.WP304		70 - 110	60		200	150	4350	Borated Water	Aux. Bldg. Air	39	30	60			
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCLG)	SS-SFPCL0	-55	45 degree Elbow 1	14	U.375	A403 GR.WP304		Not Applicable		/0 - 110	6 5		200	150	4350	Borated Water	Aux. Bldg. Air		30	60	Assumed A182 GR.F304		
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCLG)	SS-SFPCL0	G- 56	Embedded Pipe 1	14	0.375	A312 GR.TP304 SMLS		Not Applicable		70 - 110	65		200	150	4350	Borated Water	Embedded in Concrete		30	60	Assumed A182 GR.F304		
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SEPCI G)	SS-SFPCL0	G- 57	SFP HX Tubeside Nozzles 1	16	1	Stainless Steel?		Not Applicable		70 - 110	65		200	150	4350	Borated Water	Aux. Bldg. Air		30	60	Assumed A182 GR E304		

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 ks	Normal si Stress in k	Faulted si Stress in ks	CUF	Stress Comments	Operating Experience	General Comments
Support Systems (SS)	Group 45 - Spent Fuel Pool Cooling (SFPCLG)	SS-SFPCLG-	58 SI	FP HX Tubesheet		0	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 SI	FP 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 SI	FP HX Shell		0	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 SI	FP HX Shellside Nozzles	18	C.	Carbon Steel ?		Not Applicable		70 - 110	65		200	150	4350	Treated Water	Aux. Bldg. Air		30	60			LER 213-1996-026: 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 SI	FP Pump Casing		0	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 Pi	ipe - 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 SI	FP 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 SI	FP 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 SI	FP 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 N	Part lumber	Part Part Description Size in inches	Part Thickness inches	Material in A	Material Material W B	Weld C Type Ten	Operating mperature in oF	Operating Pressure in psi	Operating Flow in gpm	Design Temperature in oF	Design Pressure in psi	Design Flow	Inside Environment	Outside Residual Normal Environment Stress in ksi Stress in ksi	Faulted CUF Stress in ksi	Stress Comments	Operating Experience	General Comments
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN 1	Pi	pe - 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 B/ - UFSAR Section 9.1.
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN 2	10	0 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 (Deminerlizer 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	W	eldolet - 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 (SEPCI N)	SS-SFPCLN 4	St	traight 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 (SEPCI N)	SS-SFPCLN 5	Pi	pe - 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 (SEPCL N)	SS-SFPCLN 6	Va	alve 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 (SEPCI N)	SS-SFPCLN 7	Pi	pe - 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 (SEPCI N)	SS-SFPCLN 8	EI	bow 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	Pi	pe - 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	Pi	pe - 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	5 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	Pi	pe - 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	Τe	ee 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 (SEPCI N)	SS-SFPCLN 14	Τe	ee - 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	Va	alve 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	Va	alve 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	EI	bow - 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 (SEPCI N)	SS-SFPCLN 18	Va	alve 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	Pi	pe - 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	No	ozzle - 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	Va	alve 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	EI	bow - 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	No	ozzle - 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 (SEPCI N)	SS-SFPCLN 24	Pi	pe - Reducer 3	0.216	A312 GR.TP304/316 SMLS or Welded	A403 GR.WP304/316 SMI S 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	Re	educer - 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	Co	oupling 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	Co	oupling - 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	St	traight 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	Pi	pe - 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	EI	bow 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	Pij	pe - 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	Τe	99 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	Va	alve 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	Τe	ee - 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	Pi	pe - 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	FI	ange 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 Flexitallic Gasket
Support Systems (SS)	Group 46 - Spent Fuel Pool Cleaning (SFPCLN)	SS-SFPCLN 38	Va	alve 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	SF	FP Mixed Bed Inlet Nozzle - Head 3	0.216 - 0.46	5 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	SF	FP Mixed Bed Head - Shell 32	0.465 - 0.27	8 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	SF	FP Mixed Bed Shell - Head 32	0.278 - 0.46	5 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	SF	FP Mixed Bed Head - Outlet Nozzle 3	0.465 - 0.21	6 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	SF	FP 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	SF	FP 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	SF	FP 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	SF	FP Filter Shell - Outlet Nozzle 3	0.165 - 0.21	6 SA312 GR.TP304	SA312 GR.TP304	70 -	110	65	80	200	150	100	Borated Water	Aux. Bldg. Air 39 30	60			

System	Group	Part	Part	Part	Size in	Thickness i	n Material	Material	Material	Reference	Operating	Operating Pipe Material	Design	Design	Design	Cooling	Outside	Residual	Normal	Faulted	CUF Stress	Operating	General
Identification	Identification	Identification	Number	Description	inches	inches	А	w	в	Drawing	Temperature in	Pressure in	Temperature in	Pressure in	Flow	Environment	Environment	Stress in	Stress in	Stress in	Comments	Experience	Comments
				-						Sheets	oF	psi	oF	psi				ksi	ksi	ksi			
Auxiliary System (AS)	Group 47 - Spent Fuel Pool and Racks (SFPRACK)	AS-SFPRACK	- 1	Spent Fuel Pool	744"x397"		Reinforced concrete wall/floor with SS liner			Sheet 1 and 2													
Auxiliary System (AS)	Group 47 - Spent Fuel Pool and Racks (SFPRACK)	AS-SFPRACK	- 2	Spent fuel pool liner			Stainless steel			Sheet 3 and 4												LER 247-1993-001: Several tears from TGSCC from choride interaction with the refueling cavity liner/304 statiless steel. LER 312 1986-025: Leakage at a corner or weld attachment of the spent fuel pool liner through the portus concrete walls of the fuel	
Auxiliary System (AS)	Group 47 - Spent Fuel Pool and Racks (SFPRACK)	AS-SFPRACK	- 3	Storage Rack in Region 1			Stainless steel			Sheet 5, 9, 10													
Auxiliary System (AS)	Group 47 - Spent Fuel Pool and Racks (SFPRACK)	AS-SFPRACK	- 4	Typical cell in Region 1			Stainless steel			Sheet 6													
Auxiliary System (AS)	Group 47 - Spent Fuel Pool and Racks (SFPRACK)	AS-SFPRACK	- 5	Storage Rack in Region 2			Stainless steel			Sheet 7, 9, 10													
Auxiliary System (AS)	Group 47 - Spent Fuel Pool and Racks (SFPRACK)	AS-SFPRACK	- 6	Typical cell in Region 2			Stainless steel			Sheet 8													
Auxiliary System (AS)	Group 47 - Spent Fuel Pool and Racks (SFPRACK)	AS-SFPRACK	. 7	Boral panels			Aluminum			Sheet 6, 8													
Auxiliary System (AS)	Group 47 - Spent Fuel Pool and Racks (SFPRACK)	AS-SFPRACK	- 8	Fuel Assembly			Fuel rods/cladding matls.			Sheet 6, 8													
Auxiliary System (AS)	Group 47 - Spent Fuel Pool and Racks (SFPRACK)	AS-SFPRACK	- 9	Storage Rack Supports			Stainless steel			Sheet 10													

System	Group	Part	Part Part	Sleeve	Sleeve	Material	Material	Material	Reference Drawing	Operating	Operating	Pipe Material	Design	Design	Design	Cooling	Outside	Residual	Normal	Faulted	CUF	Stress	Operating	General
Identification	Identification	Identification	Number Description	Size in	Thickness in	Liner	Sleeve	Fluid Head	Sheets	Temperature in o	F Pressure in	psi	Temperature in	Pressure in	Flow	Environment	Environment	Stress in	Stress in	Stress in		Comments	Experience	Comments
				inches	inches								oF	psi				ksi	ksi	ksi				
Engineered Safety Features (ESF) Systems	Group 48 - Containment Penetrations for Process Piping (CONTPEN)	ESF-CONTPEN	Main Steam Line Penetration 77/78 (Detail 24) see Sheet 9	P-34" (30.25 Pipe)	5"	TP 304 SS (0.25" thick)	SA-316, Gr. 60	SA-350 GR LF-1	Sheet 2 - No. 5 Sheet 3 - No. 1 Sheet 9 - Detail 24 Sheet 10	t 557	1092	SA155 GR. NCGS				Cooling 13,276 btu/hr with 65" cooling coil								
	·····																							
Engineered Safety Features (ESF) Systems	Group 48 - Containment Penetrations for Process Piping (CONTPEN)	ESF-CONTPEN	Feedwater Line Penetration F 2 76 (Detail 24) see Sheet 9	P- 34" (16" Pipe)	0.687"	TP 304 SS	SA-335, Gr.6	SA-350 GR LF-1	Sheet 1 - No. 3 Sheet 3 - No. 1 Sheet 9 - Detail 24 Sheet 10	t 567	1185	SA106, GR.B				Cooling 5102 btu/hr with 62" cooling coil								
Engineered Safety Features (ESF) Systems	Group 48 - Containment Penetrations for Process Piping (CONTPEN)	ESF-CONTPEN	RHR Line Penetration F 3 68/75 (Detail 23) see Sheet 9	P- 24" (12" pipe)	0.687"	TP 304 SS	SA-335, Gr.6	SA-350 GR LF-1	Sheet 1 - No. 3 Sheet 3 - No. 2 Sheet 9 - Detail 23	t 350	450	SA312 TP304				Cooling 2428 btu/hr with 55" cooling coil								
Engineered Safety Features (ESF) Systems	Group 48 - Containment Penetrations for Process Piping (CONTPEN)	ESF-CONTPEN	Safety Injection Lines Penetration P26 (Detail 22) see Sheet 9	5 12.75" (3" pipe)	0.406"	TP 304 SS	SA-335, Gr.6	SA-240, GR.304 & SA-350 GR LF-1	Sheet 1 - No. 3 Sheet 4 - No. 3 Sheet 9 - Detail 22	t 300	2735	SA312 TP304				Cooling 675 btu/hr with 54* cooling coil								
Engineered Safety Features (ESF) Systems	Group 48 - Containment Penetrations for Process Piping (CONTPEN)	ESF-CONTPEN	Safety Injection Lines Penetrations 5 P50/51 (Detail 22) see Sheet 9	24" (8" Pipes)	0.687"	TP 304 SS	SA-335, Gr.6	SA-240, GR.304 & SA-350 GR LF-1	Sheet 1 - No. 3 Sheet 4 - No. 3 Sheet 9 - Detail 22	t 200	2485	SA376 TP304				Cooling 491 btu/hr with 54* cooling coil								
Engineered Safety Features (ESF) Systems	Group 48 - Containment Penetrations for Process Piping (CONTPEN)	ESF-CONTPEN	Safety Injection Lines Penetration P66 (Detail 23) see Sheet 9	5 24" (12" Pipe)	0.687"	TP 304 SS	SA-335, Gr.6	SA-240, GR.304 & SA-350 GR LF-1	Sheet 1 - No. 3 Sheet 3 - No. 2 Sheet 9 - Detail 23	t 350	450	SA376 TP304				Cooling 2370 btu/hr with 59" cooling coil								
Engineered Safety Features (ESF) Systems	Group 48 - Containment Penetrations for Process Piping (CONTPEN)	ESF-CONTPEN	CVCS Lines Penetration P4 (Detail 22) see Sheet 9	1 12.75" (3" pipe)	0.375"	TP 304 SS	SA-335, Gr.6	SA-240, GR.304 & SA-350 GR LF-1	Sheet 1 - No. 3 Sheet 4 - No. 3 Sheet 9 - Detail 22/23	t 290	285	SA312 TP316L				Cooling 543 btu/hr with 54* cooling coil								
Engineered Safety Features (ESF) Systems	Group 48 - Containment Penetrations for Process Piping (CONTPEN)	ESF-CONTPEN	CS Line Penetration 16 (Detail 23) see Sheet 9	P- 24" (10" pipe)	0.687"	TP 304 SS	SA-335, Gr.6	SA-350 GR LF-1	Sheet 1 - No. 3 Sheet 3 - No. 2 Sheet 9 - Detail 23	t 165	250	SA312 TP304				Cooling 1638 btu/hr with 58" cooling coil								
Engineered Safety Features (ESF) Systems	Group 48 - Containment Penetrations for Process Piping (CONTPEN)	ESF-CONTPEN	Service Water Line Penetration P-14/15 (Detail 23) see Sheet 9	30" (16" pipe)	1.00"	TP 304 SS	SA-335, Gr.6	SA-350 GR LF-2/1	Sheet 1 - No. 3 Sheet 3 - No. 2 Sheet 9 - Detail 23	t 189/98	75/100	SA106, GR.B				No cooling							LER 247-2001-006: 1/8 to 3/16 diameter hole in service water pipe upstream of containment penetration. Due to excessive wear/erosion due to high, localized fluid rate. It is attributed to localized eddy currents caused by the root pass weld extending into	
Engineered Safety Features (ESF) Systems	Group 48 - Containment Penetrations for Process Piping (CONTPEN)	ESF-CONTPEN	Component Cooling Water Line Penetration F 10 22 (Detail 22) see Sheet 9	P- 10.75" (3" pipe)	0.365"	TP 304 SS	SA-335, Gr.6	SA516 GR. 60	Sheet 1 - No. 3 Sheet 4 - No. 3 Sheet 9 - Detail 22	t 100	150	SA106, GR.B				No cooling								