GallMasterl						
D	Chapter	Item	PreviousItem	NewLink	NewRelated	StructureAndOrComponent
570	11	C-07		II.A1.C-07	II.A1-8(C-07)	Concrete: foundation; subfoundation
						Concrete: foundation;
571	11	C-07		II.A2.C-07	II.A2-8(C-07)	subfoundation
572	11	C-07		II.B1.2.C- 07	II.B1.2-7(C- 07)	Concrete: foundation; subfoundation
573	11	C-07		II.B2.2.C- 07	II.B2.2-7(C- 07)	Concrete: foundation; subfoundation
574	11	C-07		II.B3.1.C- 07	II.B3.1-7(C- 07)	Concrete: foundation; subfoundation
575	11	C-07		II.B3.2.C- 07	II.B3.2-8(C- 07)	Concrete: foundation; subfoundation

					Dreatrogainer
					Prestressing system:
462		C-10		II.A1-10(C-10)	tendons; anchorage components
402	11	0-10	 II.AT.C-10	II.AT-10(C-10)	Prestressing system:
			II.B2.2.C-	II.B2.2-9(C-	tendons; anchorage
463	п	C-10	10	10)	components
400		0-10	 10	10)	
		0.44			Prestressing system:
464	11	C-11	II.A1.C-11	II.A1-9(C-11)	tendons
			II.B2.2.C-	II.B2.2-8(C-	Prestressing system:
465	II	C-11	11	11)	tendons
					_
		0.40			Penetration sleeves;
468	11	C-13	II.A3.C-13	II.A3-4(C-13)	penetration bellows
					Penetration sleeves;
469	11	C-13	II.B4.C-13	II.B4-4(C-13)	penetration bellows
400		5 10			ponoticulor bollowo
					Personnel airlock,
					equipment hatch, CRD
282	11	C-16	II.A3.C-16	II.A3-6(C-16)	hatch

283	11	C-16	II.B4.C-16	II.B4-6(C-16)	Personnel airlock, equipment hatch, CRD hatch
			II.B1.1.C-	II.B1.1-4(C-	Steel elements: torus; vent line; vent header; vent line
124	II	C-21	21	21)	bellows; downcomers
126	11	C-23	II.B1.1.C- 23	II.B1.1-1(C- 23)	Steel elements: drywell head; downcomers
				II.B1.2-9(C-	Steel elements: drywell
127		C-23	23	23)	head; downcomers
128	11	C-23	II.B2.1.C- 23	II.B2.1-2(C- 23)	Steel elements: drywell head; downcomers
			II.B2.2.C-	II.B2.2-11(C-	Stool alamanta: drawall
129	II	C-23	11.BZ.Z.C- 23	11.B2.2-11(C- 23)	Steel elements: drywell head; downcomers
					Steel elements:
130	II	C-24	II.B3.1.C- 24	II.B3.1-9(C- 24)	suppression chamber shell (interior surface)
100	••	021	- 1	- ')	Steel elements:
131	11	C-24	II.B3.2.C- 24	II.B3.2-10(C- 24)	suppression chamber shell (interior surface)
				II.B2.1-4(C-	Suppression pool shell;
670	11	C-45	45	45)	unbraced downcomers
675		C-48	II.B2.2.C- 48	II.B2.2-14(C- 48)	Steel elements: vent header; downcomers
073		0-10	10	-0)	Steel elements:
					suppression chamber
676	11	C-49	II.B1.2.C- 49	II.B1.2-10(C- 49)	(torus) liner (interior surface)
			-	,	,

677	11	C-49		II.B2.2.C- 49	II.B2.2-12(C- 49)	Steel elements: suppression chamber (torus) liner (interior surface)
1989	11	CP-100	C-03	II.A1.CP- 100	II.A1-4(C-03)	#M#Concrete (inaccessible areas): dome; wall; basemat; ring girders; buttresses#M#
1990		CP-101	C-37	II.A1.CP- 101		Concrete: dome; wall; basemat; ring girders; buttresses
1990	<u>11</u>		0-37		II.A1-5(C-37)	Duttresses
1991	11	CP-102	C-02	II.A1.CP- 102	II.A1-6(C-02)	#M#Concrete (inaccessible areas): dome; wall; basemat; ring girders; buttresses#M#

1993	11	СР-104	C-38	II.A2.CP- 104	II A2-3(C-38)	#M#Concrete (inaccessible
1993	11	CP-104	C-38	104	II.A2-3(C-38)	areas): basemat#M#
1994	11	CP-105	C-06	II.B1.2.CP- 105	II.B1.2-1(C- 06)	Concrete elements, all
1995	11	CP-105	C-06	II.B2.2.CP- 105	II.B2.2-1(C- 06)	Concrete elements, all
1996	11	CP-105	C-06	II.B3.2.CP- 105	II.B3.2-1(C- 06)	Concrete elements, all

				II B1 2 CP-	II.B1.2-5(C-	Concrete: containment;
1997	II	CP-106	C-26	106	26)	wall; basemat
1998	II	CP-106	C-26	II.B2.2.CP- 106	II.B2.2-5(C- 26)	Concrete: containment; wall; basemat
1999	11	CP-107	C-44	II.B2.1.CP- 107	II.B2.1-3(C- 44)	#M#Suppression pool shell#M#
				II B3 2 CP-	II.B3.2-2(C-	Concrete: dome; wall;
2000	11	CP-108	C-33	108	33)	basemat

	2010		CP-109	C-19	II.B1.1.CP- 109	II.B1.1-2(C- 19)	#M#Steel elements: torus ring girders; downcomers;#M#
							#M#Concrete (inaccessible
	2011	<u>11</u>	<u>CP-110</u>	<u>C-31</u>	110	II.B1.2-6(C- 31) II.B2.2-6(C-	areas): containment; wall; basemat#M# #M#Concrete (inaccessible areas): containment; wall;
L	2116	II	CP-110	C-31	110	31)	basemat#M#

		1				
2109		CP-113	C-19	II.B3.1.CP- 113	II.B3.1-8(C- 19)	#M#Steel elements (inaccessible areas): drywell shell; drywell head; and drywell shell#M#
210			New Record	II.B1.2.CP- 114		Steel elements (inaccessible areas): support skirt
2126	5	CP-114	New Record	II.B2.1.CP- 114		Steel elements (inaccessible areas): support skirt
2134	4 11	CP-114	New Record	II.B2.2.CP- 114		Steel elements (inaccessible areas): support skirt
2125	5	CP-117	C-46	II.B1.2.CP- 117	II.B1.2-8(C- 46)	#M#Steel elements: downcomer pipes#M#
2017	7	CP-117	C-46	II.B2.1.CP- 117	II.B2.1-1(C- 46)	#M#Steel elements: downcomer pipes#M#
2018	3	CP-117	C-46	II.B2.2.CP- 117	II.B2.2-10(C- 46)	#M#Steel elements: downcomer pipes#M#
0000			0.40		II.B3.2-4(C-	#M#Concrete (inaccessible areas): dome; wall;
2022	2 11	CP-121	C-40	121	40)	basemat#M#

	CP-122	C-32	II.B3.2.CP-	II.B3.2-6(C-	#M#Concrete (inaccessible areas): dome; wall;
1	CP-122	0-32	122	32)	basemat#M#
	CP-135	C-29	II.B3.2.CP- 135	II.B3.2-3(C- 29)	Concrete (inaccessible areas): dome; wall; basemat
		0.44	II.B2.1.CP-	II.B2.1-3(C-	#M#Unbraced downcomers#M#
	Ι	I CP-135	I CP-122 C-32	I CP-122 C-32 122 I <td< td=""><td>II.B3.2.CP- II.B3.2-6(C- 122 32) II.B3.2-6(C- 32) II.B3.2-6(C-</td></td<>	II.B3.2.CP- II.B3.2-6(C- 122 32) II.B3.2-6(C- 32) II.B3.2-6(C-

						#M#Concrete (inaccessible
2127	11	CP-147	C-01	II.A1.CP- 147	II.A1-2(C-01)	areas): dome; wall; basemat; ring girders; buttresses#M#
2128	11	CP-148	New Record	II.A3.CP- 148		Pressure-retaining bolting
2129	11	CP-148	New Record	II.B4.CP- 148		Pressure-retaining bolting
2130	11	CP-150	New Record	II.A3.CP- 150		Pressure-retaining bolting
2131	11	CP-150	New Record	II.B4.CP- 150		Pressure-retaining bolting
0400			New Decert	II.A3.CP-		
2132	11	CP-152	New Record	152		Service Level I coatings
2133	11	CP-152	New Record	II.B4.CP- 152		Service Level I coatings

2349	11	CP-155	C-30	II.A2.CP- 155	II.A2-6(C-30)	#M#Concrete (accessible areas): basemat#M#
2350	11	CP-156	C-30	II.B3.1.CP- 156	II.B3.1-3(C- 30)	#M#Concrete (accessible areas): basemat#M#
2111	11	CP-158	C-19	II.B3.1.CP- 158	II.B3.1-8(C- 19)	Steel elements: suppression chamber shell (interior surface)
1648		CP-31	C-01	II.A1.CP-31	II.A1-2(C-01)	#M#Concrete (accessible areas): dome; wall; basemat; ring girders; buttresses#M#
1649	11	CP-32	C-02	II.A1.CP-32	II.A1-6(C-02)	#M#Concrete (accessible areas): dome; wall; basemat; ring girders; buttresses#M#
1650	11	CP-33	C-04	II.A1.CP-33	II.A1-3(C-04)	#M#Concrete (accessible areas): dome; wall; basemat; ring girders; buttresses#M#

						Concrete: dome; wall;
1651	11	CP-34	C-08	II.A1.CP-34	II.A1-1(C-08)	basemat; ring girders; buttresses #M#Steel elements
1050		CP-35	C 00			(accessible areas): liner; liner anchors; integral
1652	11	CP-35	C-09	II.AT.CP-35	II.AT-TT(C-09)	attachments#M# #M#Steel elements (accessible areas): liner;
1653		CP-35	C-09	II.A2.CP-35	II.A2-9(C-09)	liner anchors; integral attachments#M#
					II.B3.2-9(C-	#M#Steel elements (accessible areas): liner; liner anchors; integral
1654		CP-35	C-09	35	09)	attachments#M#
1655		CP-36	C-12	II.A3.CP-36	II.A3-1(C-12)	Penetration sleeves
1656		CP-36	C-12	II.B4.CP-36	II.B4-1(C-12)	Penetration sleeves

						penetration sleeves;
1657	II	CP-37	C-14	II.A3.CP-37	II.A3-3(C-14)	penetration bellows
1658	11	CP-37	C-14	II.B4.CP-37	II.B4-3(C-14)	penetration sleeves; penetration bellows
1659	11	CP-38	C-15	II.A3.CP-38	II.A3-2(C-15)	Penetration sleeves; penetration bellows
1660	11	CP-38	C-15	II.B4.CP-38	II.B4-2(C-15)	Penetration sleeves; penetration bellows
1661	11	CP-39	C-17	II.A3.CP-39	II.A3-5(C-17)	Personnel airlock, equipment hatch, CRD hatch: locks, hinges, and closure mechanisms
1662	1	CP-39	C-17	II.B4.CP-39	II.B4-5(C-17)	Personnel airlock, equipment hatch, CRD hatch: locks, hinges, and closure mechanisms
1663	11	CP-40	C-18	II.A3.CP-40	II.A3-7(C-18)	Moisture barriers (caulking, flashing, and other sealants)
1664	11	CP-40	C-18	II.B4.CP-40	II.B4-7(C-18)	Moisture barriers (caulking, flashing, and other sealants)
1665	11	CP-41	C-18	II.A3.CP-41	II.A3-7(C-18)	Seals and gaskets
2108	11	CP-41	C-18		II.B4-7(C-18)	Seals and gaskets
1667		CP-43	C-19		II.B1.1-2(C- 19)	#M#Steel elements (accessible areas): drywell shell; drywell head; drywell shell in sand pocket regions;#M#

						#M#Steel elements
				II.B3.1.CP-	II.B3.1-8(C-	(accessible areas): drywell
1668	11	CP-43	C-19	43	19)	shell; drywell head#M#
1660		CP-44	New Record	II.B1.1.CP- 44		Steel elements: drywell
1669	11	68-44	New Record	44		support skirt #M#Steel elements
						(accessible areas):
						suppression chamber;
						drywell; drywell head;
					II.B1.2-8(C-	embedded shell; region shielded by diaphragm
2013	п	CP-46	C-46	46	46)	floor (as applicable)#M#
						#M#Steel elements
						(accessible areas):
						suppression chamber;
						drywell; drywell head; embedded shell; region
				II.B2.1.CP-	II.B2.1-1(C-	shielded by diaphragm
2124	П	CP-46	C-46	46	46)	floor (as applicable)#M#
						#M#Steel elements
						(accessible areas):
						suppression chamber; drywell; drywell head;
						embedded shell; region
				II.B2.2.CP-	II.B2.2-10(C-	shielded by diaphragm
2123	11	CP-46	C-46	II.B2.2.CP- 46	II.B2.2-10(C- 46)	-
2123	11	CP-46	C-46			shielded by diaphragm
2123	11	CP-46	C-46			shielded by diaphragm
2123	11	CP-46	C-46			shielded by diaphragm
2123	11	CP-46	C-46			shielded by diaphragm
2123	11	CP-46	C-46			shielded by diaphragm
2123	11	CP-46	C-46			shielded by diaphragm
2123	11	CP-46	C-46			shielded by diaphragm
2123	11	CP-46	C-46			shielded by diaphragm
2123	11	CP-46	C-46			shielded by diaphragm
2123	<u>11</u>	CP-46	C-46			shielded by diaphragm
2123	11	CP-46	C-46			shielded by diaphragm
2123	<u>11</u>	CP-46	C-46			shielded by diaphragm
2123	<u> </u>	CP-46	C-46			shielded by diaphragm
2123	<u>11</u>	CP-46	C-46			shielded by diaphragm
2123	<u> </u>	CP-46	C-46			shielded by diaphragm
2123	<u>11</u>	CP-46	C-46	46	46)	shielded by diaphragm floor (as applicable)#M#
				46 II.B1.1.CP-	46) II.B1.1-2(C-	shielded by diaphragm floor (as applicable)#M#
2123		CP-46	C-46 C-19	46	46)	shielded by diaphragm floor (as applicable)#M#
				46 II.B1.1.CP- 48	46) II.B1.1-2(C- 19)	shielded by diaphragm floor (as applicable)#M# #M#Steel elements: torus shell#M# Steel elements: torus; vent
	11			46 II.B1.1.CP- 48	46) II.B1.1-2(C-	shielded by diaphragm floor (as applicable)#M# #M#Steel elements: torus shell#M#

				II.B1.1.CP-	II.B1.1-5(C-	Steel elements: vent line
1675	П	CP-50	C-22	50	22)	bellows
1676	11	CP-51	C-28		II.A2-2(C-28)	#M#Concrete (accessible areas): basemat#M#
 1070	11	06-01	0-20	11.AZ.CF-01	11.AZ-2(C-26)	aleas). Dasemal#ivi#
1677	II	CP-52	C-29	II.B3.2.CP- 52	II.B3.2-3(C- 29)	#M#Concrete (accessible areas): dome; wall; basemat#M#
1678		CP-53	C-30		II.A2-6(C-30)	#M#Concrete (inaccessible areas): basemat#M#
		5			II.B3.1-3(C-	#M#Concrete (inaccessible
1679		CP-53	C-30	53	30)	areas): basemat#M#

1680	11	CP-54	C-31	II.B1.2.CP- 54	II.B1.2-6(C- 31)	#M#Concrete (accessible areas): containment; wall; basemat#M#
1681	=	CP-54	C-31	II.B2.2.CP- 54	II.B2.2-6(C- 31)	#M#Concrete (accessible areas): containment; wall; basemat#M#
1682	11	CP-55	C-32	II.B3.2.CP- 55	II.B3.2-6(C- 32)	#M#Concrete (accessible areas): dome; wall; basemat#M#

				II B1 2 CP-	II.B1.2-3(C-	Concrete: containment;
1684		CP-57	C-35	57	35)	wall; basemat

16	<u>85 II</u>	CP-57	C-35	II.B2.2.CP- 57	II.B2.2-3(C- 35)	Concrete: containment; wall; basemat
16	86	CP-58	C-38	II.A2.CP-58	II.A2-3(C-38)	#M#Concrete (accessible areas): basemat#M#
16	87	CP-59	C-39	II.B1.2.CP- 59	II.B1.2-4(C- 39)	#M#Concrete (accessible areas): containment; wall; basemat#M#
16	88	CP-59	C-39	II.B2.2.CP- 59	II.B2.2-4(C- 39)	#M#Concrete (accessible areas): containment; wall; basemat#M#
16	89	CP-60	C-40	II.B3.2.CP- 60	II.B3.2-4(C- 40)	#M#Concrete (accessible areas): dome; wall; basemat#M#

						#M#Steel elements (inaccessible areas): suppression chamber;
1692	11	CP-63	C-46	II.B1.2.CP- 63	II.B1.2-8(C- 46)	drywell; drywell head; embedded shell; region shielded by diaphragm floor (as applicable)#M#

						Steel elements (inaccessible areas): suppression chamber; drywell; drywell head; embedded shell; region
1693	11	CP-63	C-46	63	II.B2.1-1(C- 46)	shielded by diaphragm floor (as applicable)

1694	11	CP-63	C-46	II.B2.2.CP- 63	II.B2.2-10(C- 46)	#M#Steel elements (inaccessible areas): suppression chamber; drywell; drywell head; embedded shell; region shielded by diaphragm floor (as applicable)#M#
1695	II	CP-64	C-47	II.B2.2.CP- 64	II.B2.2-13(C- 47)	Steel elements: vent header; downcomers

1696		CP-65	C-50	II.B3.1.CP- 65	II.B3.1-4(C- 50)	Concrete: basemat, concrete fill-in annulus
1090		01-00	0.00			
					II.B3.1-5(C-	#M#Concrete (accessible areas): basemat, concrete
1697	П	CP-66	C-51	66	51)	fill-in annulus#M#

	1895	11	CP-67	C-04	II.A1.CP-67	II.A1-3(C-04)	#M#Concrete (inaccessible areas): dome; wall; basemat; ring girders; buttresses#M# Concrete (accessible
	1896	11	CP-68	C-05	II.A1.CP-68	II.A1-7(C-05)	areas): dome; wall; basemat; ring girders; buttresses; reinforcing steel
	1897	11	CP-69	C-36	II.A2.CP-69	II.A2-5(C-36)	Concrete: basemat
					II.B3.1.CP-	II.B3.1-2(C-	
L	1898	II	CP-69	C-36	69	36)	Concrete: basemat

1899	11	CP-70	C-28	II.A2.CP-70	II.A2-2(C-28)	#M#Concrete (inaccessible areas): basemat#M#
						#M#Concrete (inaccessible
1900		CP-71	C-25	II.A2.CP-71	II.A2-4(C-25)	areas): basemat#M#
					II.B3.1-1(C-	#M#Concrete (inaccessible
1901		CP-71	C-25		25)	areas): basemat#M#
						#M#Concrete (accessible
1902	II	CP-72	C-25	II.A2.CP-72	II.A2-4(C-25)	areas): basemat#M#

2113	11	CP-72	C-25	II.B3.1.CP- 72	II.B3.1-1(C- 25)	#M#Concrete (accessible areas): basemat#M#
1903	11	CP-73	C-27	II.B3.2.CP- 73	II.B3.2-5(C- 27)	#M#Concrete (inaccessible areas): dome; wall; basemat#M#
2120	11	CP-74	C-43	II.A2.CP-74	II.A2-7(C-43)	#M#Concrete (accessible areas): basemat; reinforcing steel#M#
1905	11	CP-74	C-43	II.B3.1.CP- 74	II.B3.1-6(C- 43)	#M#Concrete (accessible areas): basemat; reinforcing steel#M#
1906	11	CP-75	C-43	II.A2.CP-75	II.A2-7(C-43)	#M#Concrete (inaccessible areas): basemat; reinforcing steel#M#
2121	11	CP-75	C-43	II.B3.1.CP- 75	II.B3.1-6(C- 43)	#M#Concrete (inaccessible areas): basemat; reinforcing steel#M#
1910	11	CP-79	C-41	II.B1.2.CP- 79	II.B1.2-2(C- 41)	#M#Concrete (accessible areas): basemat; reinforcing steel#M#
2118	11	CP-79	C-41	II.B2.2.CP- 79	II.B2.2-2(C- 41)	#M#Concrete (accessible areas): basemat; reinforcing steel#M#
2119	11	CP-80	C-41	II.B1.2.CP- 80	II.B1.2(C-41)	#M#Concrete (inaccessible areas): basemat; reinforcing steel#M#

1911	11	CP-80	C-41	II.B2.2.CP- 80	II.B2.2-2(C- 41)	#M#Concrete (inaccessible areas): basemat; reinforcing steel#M#
1914	11	CP-83	C-51	II.B3.1.CP- 83	II.B3.1-5(C- 51)	#M#Concrete (inaccessible areas): basemat, concrete fill-in annulus#M#
1915	11	CP-84	C-27	II.B3.2.CP- 84	II.B3.2-5(C- 27)	#M#Concrete (accessible areas): dome; wall; basemat#M#
1916	=	CP-87	C-03	II.A1.CP-87	II.A1-4(C-03)	#M#Concrete (accessible areas): dome; wall; basemat; ring girders; buttresses#M#
4047		CP-88	C-42	II.B3.2.CP- 88	II.B3.2-7(C-	#M#Concrete (accessible areas): dome; wall; basemat; reinforcing
1917	11	06-00	0-42	00	42)	steel#M# #M#Concrete (inaccessible
1918	11	CP-89	C-42	II.B3.2.CP- 89	II.B3.2-7(C- 42)	areas): dome; wall; basemat; reinforcing steel#M#

						#M#Concrete (inaccessible
						areas): dome; wall;
						basemat; ring girders;
						buttresses; reinforcing
1984	П	CP-97	C-05	II.A1.CP-97	II.A1-7(C-05)	steel#M#
					(/	
						#M#Steel elements
						(inaccessible areas): liner;
						liner anchors; integral
2107	II	CP-98	C-09	II.A1.CP-98	II.A1-11(C-09)	attachments#M#

						#M#Steel elements
						(inaccessible areas): liner; liner anchors; integral
2106	П	CP-98	C-09	II.A2.CP-98	II.A2-9(C-09)	attachments#M#

1987	11	CP-98	C-09	II.B3.2.CP- 98	II.B3.2-9(C- 09)	#M#Steel elements (inaccessible areas): liner; liner anchors; integral attachments#M#

1988	11	CP-99	C-39	II.B1.2.CP- 99	II.B1.2-4(C- 39)	#M#Concrete (inaccessible areas): containment; wall; basemat#M#
					II.B2.2-4(C-	#M#Concrete (inaccessible
2117	11	CP-99	C-39	99	39)	areas): containment; wall; basemat#M#
		T 40				
1150	111	T-12		III.A1.1-12	III.A1-11(T-12)	Masonry walls: all
1151	111	T-12		III.A2.T-12	III.A2-11(T-12)	Masonry walls: all

1152		T-12	III.A3.T-12	III.A3-11(T-12)	Masonry walls: all
1153	111	T-12	III.A5.T-12	III.A5-11(T-12)	Masonry walls: all
1154	111	T-12	Ш <u>А6 Т</u> _12	III Δ6-10(T-12)	Masonry walls: all
1134		1-12	111.70.1-12	III.A0-10(1-12)	Masoni y Walls. ali
					Steel components: fuel
1156		T-14	III.A5.T-14	III.A5-13(T-14)	
					Concrete: exterior above- and below-grade;
1162		T-20	III.A6.T-20	III.A6-7(T-20)	foundation; interior slab
					Earthen water-control
					structures: dams; embankments; reservoirs;
1164		T-22			channels; canals and
1104	111	1-22	III.A0.1-22	III.A6-9(T-22)	ponds
					Steel components: tank
1165	III	T-23	III.A7.T-23	III.A7-11(T-23)	liner
					Stool components: tenk
1166	111	T-23	III.A8.T-23	III.A8-9(T-23)	Steel components: tank liner
					Support members; welds;
			III.B1.1.T-	III.B1.1-13(T-	bolted connections; support anchorage to
1167	III	T-24	24	24)	building structure

1168	3 111	T-24	III.B1.2.T- 24	III.B1.2-10(T- 24)	Support members; welds; bolted connections; support anchorage to building structure
1169	111	T-24	III.B1.3.T- 24	III.B1.3-10(T- 24)	Support members; welds; bolted connections; support anchorage to building structure
1170	111	T-25	III.B1.1.T- 25	III.B1.1-14(T- 25)	Support members; welds; bolted connections; support anchorage to building structure
1171	111	T-25	III.B1.2.T- 25	III.B1.2-11(T- 25)	Support members; welds; bolted connections; support anchorage to building structure
1172	2 111	T-25	III.B2.T-25	III.B2-11(T-25)	Support members; welds; bolted connections; support anchorage to building structure
1173	111	T-25	III.B3.T-25	III.B3-8(T-25)	Support members; welds; bolted connections; support anchorage to building structure
1174	. 111	T-25	III.B4.T-25	III.B4-11(T-25)	Support members; welds; bolted connections; support anchorage to building structure
1175	; 111	T-25	III.B5.T-25	III.B5-8(T-25)	Support members; welds; bolted connections; support anchorage to building structure
1176	; 111	T-26	III.B1.1.T- 26	III.B1.1-12(T- 26)	Support members; welds; bolted connections; support anchorage to building structure

1177	111	T-26	III.B1.2.T- 26	III.B1.2-9(T- 26)	Support members; welds; bolted connections; support anchorage to building structure
1178	111	T-26	III.B1.3.T- 26	III.B1.3-9(T- 26)	Support members; welds; bolted connections; support anchorage to building structure
1180	111	T-28	III.B1.1.T- 28	III.B1.1-2(T- 28)	Constant and variable load spring hangers; guides; stops
1181	111	T-28	III.B1.2.T- 28	III.B1.2-2(T- 28)	Constant and variable load spring hangers; guides; stops
1182	111	T-28	III.B1.3.T- 28	III.B1.3-2(T- 28)	Constant and variable load spring hangers; guides; stops
399	111	T-33	III.B1.1.T- 33	III.B1.1-15(T- 33)	Vibration isolation elements
400	111	T-33	III.B1.2.T- 33	III.B1.2-12(T- 33)	Vibration isolation elements

401	111	T-33		III.B1.3.T- 33	III.B1.3-11(T- 33)	Vibration isolation elements
404	111	TP-10		III.B1.1.TP- 10	III.B1.1-11(TP- 10)	Support members; welds; bolted connections; support anchorage to building structure
1976		TP-104	T-18	III.A6.TP- 104	III.A6-1(T-18)	#M#Concrete (inaccessible areas): all#M#
1979	III	TP-107	T-19	III.A6.TP- 107	III.A6-3(T-19)	#M#Concrete (inaccessible areas): all#M#
1980	111	TP-108	T-01	III.A1.TP- 108	III.A1-6(T-01)	#M#Concrete (inaccessible areas): foundation#M#

				III.A2.TP-		#M#Concrete (inaccessible
2136	Ш	TP-108	T-01	108	III.A2-6(T-01)	areas): foundation#M#

				III.A3.TP-		#M#Concrete (inaccessible
2137	III	TP-108	T-01	108	III.A3-6(T-01)	areas): foundation#M#

2141		TP-108	T-01	III.A5.TP- 108	III.A5-6(T-01)	#M#Concrete (inaccessible areas): foundation#M#

2138	111	TP-108	T-01	III.A7.TP- 108	III.A7-5(T-01)	#M#Concrete (inaccessible areas): foundation#M#

2142	111	TP-108	T-01	III.A8.TP- 108	III.A8-5(T-01)	#M#Concrete (inaccessible areas): foundation#M#

			III.A9.TP-		#M#Concrete (inaccessible
2143 III	TP-108	T-01	108	III.A9-5(T-01)	areas): foundation#M#
					#M#Concrete (inaccessible areas): exterior above- and
1981 III	TP-109	T-16	III.A6.TP- 109	III.A6-6(T-16)	below-grade; foundation; interior slab#M#

1982 III	TP-110 T-15	III.A6.TP- 110 III.A6-5(T-15)	#M#Concrete (inaccessible areas): exterior above- and below-grade; foundation; interior slab#M#
2001	TP-114 T-10	III.A1.TP- 114 III.A1-1(T-10)	Concrete: all

2002	TP-114	T-10	III.A2.TP- 114	III.A2-1(T-10)	Concrete: all
2003	TP-114	T-10	III.A3.TP- 114	III.A3-1(T-10)	Concrete: all

2004	TP-114 T-10	III.A4.TP- 114	III.A4-1(T-10)	Concrete: all
2005	TP-114 T-10	III.A5.TP- 114	III.A5-1(T-10)	Concrete: all

2169	111	TP-204	T-03	III.A1.TP- 204	III.A1-2(T-03)	#M#Concrete (inaccessible areas): all#M#
2170	111	TP-204	Т-03	III.A2.TP- 204	III.A2-2(T-03)	#M#Concrete (inaccessible areas): all#M#

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2171	TP-204 T-03	III.A3.TP- 204	III.A3-2(T-03)	#M#Concrete (inaccessible areas): all#M#
2172	TP-204 T-03	III.A4.TP- 204	III.A4-2(T-03)	#M#Concrete (inaccessible areas): all#M#

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2173	TP-204	III.A5.TP- 204	III.A5-2(T-03)	#M#Concrete (inaccessible areas): all#M#
2174 III	TP-204	III.A7.TP- 204	III.A7-1(T-03)	#M#Concrete (inaccessible areas): all#M#

2175	111	TP-204	<u>T-03</u>	III.A8.TP- 204	III.A8-1(T-03)	#M#Concrete (inaccessible areas): all#M#
2176	111	TP-204	Т-03	III.A9.TP- 204		#M#Concrete (inaccessible areas): all#M#
2177	111	TP-212	T-05	III.A1.TP- 212		#M#Concrete (inaccessible areas): below-grade exterior; foundation#M#

2178	111	TP-212	T-05	III.A2.TP- 212	III.A2-4(T-05)	#M#Concrete (inaccessible areas): below-grade exterior; foundation#M#
2179		TP-212	T-05	III.A3.TP- 212	III.A3-4(T-05)	#M#Concrete (inaccessible areas): below-grade exterior; foundation#M#
2180	111	TP-212	T-05	III.A5.TP- 212	III.A5-4(T-05)	#M#Concrete (inaccessible areas): below-grade exterior; foundation#M#
2181		TP-212	T-05	III.A7.TP- 212	III.A7-3(T-05)	#M#Concrete (inaccessible areas): below-grade exterior; foundation#M#
2182	111	TP-212	T-05	III.A8.TP- 212	III.A8-3(T-05)	#M#Concrete (inaccessible areas): below-grade exterior; foundation#M#
2183		TP-212	T-05	III.A9.TP- 212	III.A9-3(T-05)	#M#Concrete (inaccessible areas): below-grade exterior; foundation#M#
2184		TP-219	New Record	III.A3.TP- 219		Steel components: piles

2185	111	TP-220	T-17	III.A6.TP- 220	III.A6-2(T-17)	#M#Concrete (inaccessible areas): all#M#
2186	111	TP-221	New Record	III.A6.TP- 221		Structural bolting
2188	111	TP-223	New Record	III.A6.TP- 223		Group 6: Wooden Piles; sheeting
2195	111	TP-226	New Record	III.B1.1.TP- 226		Structural Bolting
2196	111	TP-226	New Record	III.B1.2.TP- 226		Structural Bolting
2197	111	TP-226	New Record	III.B1.3.TP- 226		Structural bolting
2198	111	TP-229	New Record	III.B1.1.TP- 229		Structural bolting

				III.B1.2.TP-		
2199	Ш	TP-229	New Record	229		Structural bolting
				III.B1.3.TP-		
2200	=	TP-229	New Record	229		Structural bolting
1698	111	TP-23	T-01	III.A1.TP- 23	III.A1-6(T-01)	#M#Concrete (accessible areas): exterior above- and below-grade; foundation#M#
1699		TP-23	T-01	III.A2.TP- 23	III.A2-6(T-01)	#M#Concrete (accessible areas): exterior above- and below-grade; foundation#M#
1700	111	TP-23	T-01	III.A3.TP- 23	III.A3-6(T-01)	#M#Concrete (accessible areas): exterior above- and below-grade; foundation#M#
1701	111	TP-23	T-01	III.A5.TP- 23	III.A5-6(T-01)	#M#Concrete (accessible areas): exterior above- and below-grade; foundation#M#
1702		TP-23	T-01	III.A7.TP- 23	III.A7-5(T-01)	#M#Concrete (accessible areas): exterior above- and below-grade; foundation#M#
1703	111	TP-23	T-01	III.A8.TP- 23	III.A8-5(T-01)	#M#Concrete (accessible areas): exterior above- and below-grade; foundation#M#
1704	111	TP-23	T-01	III.A9.TP- 23	III.A9-5(T-01)	#M#Concrete (accessible areas): exterior above- and below-grade; foundation#M#
2201	111	TP-232	New Record	III.B1.1.TP- 232		Structural bolting
2202	111	TP-232	New Record	III.B1.2.TP- 232		Structural bolting
2203	111	TP-232	New Record	III.B1.3.TP- 232		Structural bolting

				III.B1.1.TP-		
2204		TP-235	New Record	235		Structural bolting
				III.B1.2.TP-		
2205	111	TP-235	New Record	235		Structural bolting
2206		TP-235	New Record	III.B1.3.TP- 235		Structural bolting
2200		11-200	New Record	200		
1705		TP-24	T-02	III.A1.TP- 24	III.A1-7(T-02)	#M#Concrete (accessible areas): exterior above- and below-grade; foundation#M#
1706	111	TP-24	T-02	III.A2.TP- 24	III.A2-7(T-02)	#M#Concrete (accessible areas): exterior above- and below-grade; foundation#M#
1707	111	TP-24	T-02	III.A3.TP- 24	III.A3-7(T-02)	#M#Concrete (accessible areas): exterior above- and below-grade; foundation#M#
1708	111	TP-24	T-02	III.A5.TP- 24	III.A5-7(T-02)	#M#Concrete (accessible areas): exterior above- and below-grade; foundation#M#
1709	111	TP-24	T-02	III.A7.TP- 24	III.A7-6(T-02)	#M#Concrete (accessible areas): exterior above- and below-grade; foundation#M#
1710	111	TP-24	T-02	III.A8.TP- 24	III.A8-6(T-02)	#M#Concrete (accessible areas): exterior above- and below-grade; foundation#M#
1711	111	TP-24	T-02	III.A9.TP- 24	III.A9-6(T-02)	#M#Concrete (accessible areas): exterior above- and below-grade; foundation#M#

2207	ш	TP-248	New Record	III.A1.TP- 248	Structural bolting
2208	ш	TP-248	New Record	III.A2.TP- 248	Structural bolting
				III.A3.TP-	
2209	111	TP-248	New Record	111.A3.TP- 248	Structural bolting
				III.A4.TP-	
2210	ш	TP-248	New Record	111.A4.TF- 248	Structural bolting
				III.A5.TP-	
2211	ш	TP-248	New Record	248	Structural bolting
				III.A6.TP-	
2212	III	TP-248	New Record	248	Structural bolting
				III.A7.TP-	
2213	III	TP-248	New Record	248	Structural bolting
				III.A8.TP-	
2214	III	TP-248	New Record	248	Structural bolting
				III.A9.TP-	
2215	Ш	TP-248	New Record	248	Structural bolting
				III.B2.TP-	
2216	Ш	TP-248	New Record	248	Structural bolting
				III.B3.TP-	
2217		TP-248	New Record	248	Structural bolting
				III.B4.TP-	
2218	III	TP-248	New Record	248	Structural bolting
				III.B5.TP-	
2219	III	TP-248	New Record	248	Structural bolting

1712	ш	TP-25	T-03	III.A1.TP- 25	III.A1-2(T-03)	#M#Concrete (accessible areas): all#M#
1713	111	TP-25	T-03	III.A2.TP- 25	III.A2-2(T-03)	#M#Concrete (accessible areas): all#M#
1714		TP-25	T-03	III.A3.TP- 25	III.A3-2(T-03)	#M#Concrete (accessible areas): all#M#
1715	111	TP-25	T-03	III.A4.TP- 25	III.A4-2(T-03)	#M#Concrete (accessible areas): all#M#
				-		
1716		TP-25	T-03	III.A5.TP- 25	III.A5-2(T-03)	#M#Concrete (accessible areas): all#M#
1717		TP-25	T-03	III.A7.TP- 25	III.A7-1(T-03)	#M#Concrete (accessible areas): all#M#
1717		11-23	1-00	20	III.A/-1(1-03)	
1718		TP-25	Т-03	III.A8.TP- 25	III.A8-1(T-03)	#M#Concrete (accessible areas): all#M#
1710		11-20	1-00	20	11.70-1(1-00)	
1719		TP-25	Т-03	III.A9.TP- 25	III.A9-1(T-03)	#M#Concrete (accessible areas): all#M#
1719		17-23	1-03	25	III.A9-1(1-03)	
						#M#Concrete (accessible
1720	ш	TP-26	T-04	III.A1.TP- 26	III.A1-9(T-04)	areas): interior and above- grade exterior#M#
						40.440 an anala (a a a a i i i
1701			T 04	III.A2.TP-		#M#Concrete (accessible areas): interior and above-
1721		TP-26	T-04	26	III.A2-9(T-04)	grade exterior#M#
						#M#Concrete (accessible
1722		TP-26	T-04	III.A3.TP- 26	III.A3-9(T-04)	areas): interior and above- grade exterior#M#
				III.A4.TP-		#M#Concrete (accessible areas): interior and above-
1723		TP-26	T-04	26	III.A4-3(T-04)	grade exterior#M#

1724	111	TP-26	T-04	III.A5.TP- 26	III.A5-9(T-04)	#M#Concrete (accessible areas): interior and above- grade exterior#M#
1725	111	TP-26	T-04	III.A7.TP- 26	III.A7-8(T-04)	#M#Concrete (accessible areas): interior and above- grade exterior#M#
1726	111	TP-26	Т-04	III.A9.TP- 26	III.A9-8(T-04)	#M#Concrete (accessible areas): interior and above- grade exterior#M#
2220	111	TP-261	New Record	III.A1.TP- 261		Structural bolting
2221	111	TP-261	New Record	III.A2.TP- 261		Structural bolting
2222	111	TP-261	New Record	III.A3.TP- 261		Structural bolting
2223	111	TP-261	New Record	III.A4.TP- 261		Structural bolting
2224	111	TP-261	New Record	III.A5.TP- 261		Structural bolting
2225	111	TP-261	New Record	III.A6.TP- 261		Structural bolting
2226	111	TP-261	New Record	III.A7.TP- 261		Structural bolting
2227		TP-261	New Record	III.A8.TP- 261		Structural bolting
2228	111	TP-261	New Record	III.A9.TP- 261		Structural bolting
2229	111	TP-261	New Record	III.B2.TP- 261		Structural bolting
2230		TP-261	New Record	III.B3.TP- 261		Structural bolting
2231	111	TP-261	New Record	III.B4.TP- 261		Structural bolting

				III.B5.TP-		
2232	ш	TP-261	New Record	261		Structural bolting
						#M#Concrete (accessible
				III.A1.TP-		areas): below-grade
1727	III	TP-27	T-05	27	III.A1-4(T-05)	exterior; foundation#M#
						#M#Concrete (accessible
				III.A2.TP-		areas): below-grade
1728	ш	TP-27	T-05	27	III.A2-4(T-05)	exterior; foundation#M#
			1 00	2.		
						#M#Concrete (accessible
				III.A3.TP-		areas): below-grade
1729	III	TP-27	T-05	27	III.A3-4(T-05)	exterior; foundation#M#
						#M#Concrete (accessible
4700			T 05	III.A5.TP-		areas): below-grade
1730		TP-27	T-05	27	III.A5-4(T-05)	exterior; foundation#M#
						#M#Concrete (accessible
				III.A7.TP-		areas): below-grade
1731	ш	TP-27	T-05	27	III.A7-3(T-05)	exterior; foundation#M#
					/	
						#M#Concrete (accessible
				III.A8.TP-		areas): below-grade
1732	III	TP-27	T-05	27	III.A8-3(T-05)	exterior; foundation#M#
						#M#Concrata (accasible
				III.A9.TP-		#M#Concrete (accessible areas): below-grade
1733	ш	TP-27	T-05	27	III.A9-3(T-05)	exterior; foundation#M#
1700						exterior, rearration//wir
				III.A1.TP-		
2233	III	TP-274	New Record	274		Structural bolting
				III.A2.TP-		
2234	111	TP-274	New Record	274		Structural bolting
				III.A3.TP-		
2235	ш	TP-274	New Record	274		Structural bolting
2230	111	16-214	New Record	2/4		Structural boiling

				III.A4.TP-		
2236	111	TP-274	New Record	274		Structural bolting
2237		TP-274	New Record	III.A5.TP- 274		Structural bolting
2231		16-274	New Record	274		Structural boiling
				III.A7.TP-		
2239	ш	TP-274	New Record	111.A7.TP- 274		Structural bolting
				III.A8.TP-		
2240	Ш	TP-274	New Record	274		Structural bolting
				III.A9.TP-		
2241		TP-274	New Record	274		Structural bolting
00.40				III.B2.TP-		
2242	111	TP-274	New Record	274		Structural bolting
2243	ш	TP-274	New Record	III.B3.TP- 274		Structural bolting
						g
				III.B4.TP-		
2244	111	TP-274	New Record	274		Structural bolting
				III.B5.TP-		
2245	Ш	TP-274	New Record	274		Structural bolting
			T 00	III.A1.TP-		Concrete: interior; above-
1734	111	TP-28	T-06	28	III.A1-10(T-06)	grade exterior
4705			T 06	III.A2.TP-		Concrete: interior; above-
1735	111	TP-28	T-06	28	III.A2-10(T-06)	grade exterior

ſ							
	1736		TP-28	T-06	III.A3.TP- 28	III.A3-10(T-06)	Concrete: interior; above- grade exterior
	1737	111	TP-28	T-06	III.A4.TP- 28	III.A4-4(T-06)	Concrete: interior; above- grade exterior
	1738		TP-28	T-06	III.A5.TP- 28	III.A5-10(T-06)	Concrete: interior; above- grade exterior
	1739		TP-28	T-06	III.A7.TP- 28	III.A7-9(T-06)	Concrete: interior; above- grade exterior
	1740	111	TP-28	T-06	III.A9.TP- 28	III.A9-9(T-06)	Concrete: interior; above- grade exterior
	1741		TP-29	T-07	III.A1.TP- 29	III.A1-5(T-07)	#M#Concrete (inaccessible areas): below-grade exterior; foundation#M#
	1742		TP-29	T-07	III.A2.TP- 29	III.A2-5(T-07)	#M#Concrete (inaccessible areas): below-grade exterior; foundation#M#

1743		TP-29	<u>T-07</u>	III.A3.TP- 29	III.A3-5(T-07)	#M#Concrete (inaccessible areas): below-grade exterior; foundation#M#
1744	=	TP-29	T-07	III.A5.TP- 29	III.A5-5(T-07)	#M#Concrete (inaccessible areas): below-grade exterior; foundation#M#
1745	=	TP-29	T-07	III.A7.TP- 29	III.A7-4(T-07)	#M#Concrete (inaccessible areas): below-grade exterior; foundation#M#
1746		TP-29	T-07	III.A8.TP- 29	III.A8-4(T-07)	#M#Concrete (inaccessible areas): below-grade exterior; foundation#M#
1747		TP-29	T-07	III.A9.TP- 29	III.A9-4(T-07)	#M#Concrete (inaccessible areas): below-grade exterior; foundation#M#
515	111	TP-3		III.B1.1.TP- 3	III.B1.1-8(TP- 3)	Support members; welds; bolted connections; support anchorage to building structure
517	111	TP-3		III.B1.3.TP- 3	III.B1.3-6(TP- 3)	Support members; welds; bolted connections; support anchorage to building structure
516		TP-3		III.B1-2.TP- 3	III.B1.2-6(TP- 3)	Support members; welds; bolted connections; support anchorage to building structure

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518		TP-3		III.B2.TP-3	III.B2-6(TP-3)	Support members; welds; bolted connections; support anchorage to building structure
519		TP-3		III.B3.TP-3	III.B3-4(TP-3)	Support members; welds; bolted connections; support anchorage to building structure
327		TP-3		III.B4.TP-3	III.B4-6(TP-3)	Support members; welds; bolted connections; support anchorage to building structure
328	111	TP-3		III.B5.TP-3	III.B5-4(TP-3)	Support members; welds; bolted connections; support anchorage to building structure
1748	=	TP-30	T-08	III.A1.TP- 30	III.A1-3(T-08)	Concrete: all
1749	111	TP-30	T-08	III.A2.TP- 30	III.A2-3(T-08)	Concrete: all
1750	111	TP-30	T-08	III.A3.TP- 30	III.A3-3(T-08)	Concrete: all
1751		TP-30	T-08	III.A5.TP- 30		Concrete: all

1752	111	TP-30	T-08	III.A6.TP- 30	III.A6-4(T-08)	Concrete: all
4750		TD 00	T 00	III.A7.TP-		Oseranda all
1753	111	TP-30	T-08	30	III.A7-2(T-08)	Concrete: all
1754		TP-30	T-08	III.A8.TP- 30	III.A8-2(T-08)	Concrete: all
1755	111	TP-30	T-08	III.A9.TP- 30	III.A9-2(T-08)	Concrete: all
2259	111	TP-300	New Record	III.A1.TP- 300		High-strength structural bolting
2260	111	TP-300	New Record	III.A2.TP- 300		High-strength structural bolting
2261	111	TP-300	New Record	III.A3.TP- 300		High-strength structural bolting

2262	111	TP-300	New Record	III.A4.TP- 300	High-strength structural bolting
2263	111	TP-300	New Record	III.A5.TP- 300	High-strength structural bolting
2265	111	TP-300	New Record	III.A7.TP- 300	High-strength structural bolting
2266			New Record	III.A8.TP- 300	High-strength structural bolting
2267		TP-300	New Record	III.A9.TP- 300	High-strength structural bolting
2268		TP-300	New Record	III.B2.TP- 300	High-strength structural bolting
2269		TP-300	New Record	III.B3.TP- 300	High-strength structural bolting

2270		TP-300	New Record	III.B4.TP- 300		High-strength structural bolting
2271	III	TP-300	New Record	III.B5.TP- 300		High-strength structural bolting
2272	111	TP-301	New Record	III.A4.TP- 301		Service Level I coatings
2294		TP-302	T-11	III.A1.TP- 302	III.A1-12(T-11)	Steel components: all structural steel
2295	=	TP-302	T-11	III.A2.TP- 302	III.A2-12(T-11)	Steel components: all structural steel
2296		TP-302	T-11	III.A3.TP- 302	III.A3-12(T-11)	Steel components: all structural steel
2297		TP-302	T-11	III.A4.TP- 302	III.A4-5(T-11)	Steel components: all structural steel

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2298	111	TP-302	T-11	III.A5.TP- 302	III.A5-12(T-11)	Steel components: all structural steel
2299	111	TP-302	T-11	III.A7.TP- 302	III.A7-10(T-11)	Steel components: all structural steel
2300		TP-302	T-11	III.A8.TP- 302	III.A8-8(T-11)	Steel components: all structural steel
2729		TP-304	New Record	III.A4.TP- 304		Concrete: all
2730	111	TP-305	New Record	III.A4.TP- 305		Concrete (inaccessible areas): exterior above- and below-grade; foundation

1756	111	TP-31	<u>T-09</u>	III.A1.TP- 31	III.A1-8(T-09)	Concrete: foundation; subfoundation
1757	111	TP-31	T-09	III.A2.TP- 31	III.A2-8(T-09)	Concrete: foundation; subfoundation
1758	11	TP-31	T-09	III.A3.TP- 31	III.A3-8(T-09)	Concrete: foundation; subfoundation
1759		TP-31	T-09	III.A5.TP- 31	III.A5-8(T-09)	Concrete: foundation; subfoundation
1760		TP-31	T-09	III.A6.TP- 31	III.A6-8(T-09)	Concrete: foundation; subfoundation
1761		TP-31	T-09	III.A7.TP- 31	III.A7-7(T-09)	Concrete: foundation; subfoundation
1762		TP-31	T-09	III.A8.TP- 31	III.A8-7(T-09)	Concrete: foundation; subfoundation

1763	ш	TP-31	T-09	III.A9.TP- 31	III.A9-7(T-09)	Concrete: foundation; subfoundation
1772			New Record	III.A5.TP- 34		Masonry walls: all
1773		TP-35	T-13	III.A4.TP- 35	III.A4-6(T-13)	#M#Sliding surfaces: radial beam seats in BWR drywell#M#
1774	Ξ	TP-36	T-15	III.A6.TP- 36	III.A6-5(T-15)	#M#Concrete (accessible areas): exterior above- and below-grade; foundation#M#
1775		TP-37	T-16	III.A6.TP- 37	III.A6-6(T-16)	#M#Concrete (accessible areas): exterior above- and below-grade; foundation; interior slab#M#
1776		TP-38	T-18	III.A6.TP- 38	III.A6-1(T-18)	#M#Concrete (accessible areas): all#M#
329	111	TP-4		III.B1.1.TP- 4	III.B1.1-10(TP- 4)	Support members; welds; bolted connections; support anchorage to building structure
330		TP-4		III.B1.2.TP- 4	III.B1.2-8(TP- 4)	Support members; welds; bolted connections; support anchorage to building structure
331	111	TP-4		III.B1.3.TP- 4	III.B1.3-8(TP- 4)	Support members; welds; bolted connections; support anchorage to building structure

332	111	TP-4		III.B2.TP-4	III.B2-9(TP-4)	Support members; welds; bolted connections; support anchorage to building structure
333	111	TP-4		III.B3.TP-4	III.B3-6(TP-4)	Support members; welds; bolted connections; support anchorage to building structure
334		TP-4		III.B4.TP-4	III.B4-9(TP-4)	Support members; welds; bolted connections; support anchorage to building structure
335		TP-4		III.B5.TP-4	III.B5-6(TP-4)	Support members; welds; bolted connections; support anchorage to building structure
1779	111	TP-41	T-27	III.B1.1.TP- 41	III.B1.1-3(T- 27)	#M#High-strength structural bolting#M#
2191	111	TP-41		III.B2.TP- 41		High-strength structural bolting
2192	111	TP-41		III.B3.TP- 41		High-strength structural bolting
1780	111	TP-42	T-29	III.B1.1.TP- 42	III.B1.1-1(T- 29)	Building concrete at locations of expansion and grouted anchors; grout pads for support base plates

1781	111	TP-42	T-29	III.B1.2.TP- 42	III.B1.2-1(T- 29)	Building concrete at locations of expansion and grouted anchors; grout pads for support base plates
1782	111	TP-42	T-29	III.B1.3.TP- 42	III.B1.3-1(T- 29)	Building concrete at locations of expansion and grouted anchors; grout pads for support base plates
1783	111	TP-42	T-29	III.B2.TP- 42	III.B2-1(T-29)	Building concrete at locations of expansion and grouted anchors; grout pads for support base plates
1784	111	TP-42	T-29	III.B3.TP- 42	III.B3-1(T-29)	Building concrete at locations of expansion and grouted anchors; grout pads for support base plates
1785	111	TP-42	T-29	III.B4.TP- 42	III.B4-1(T-29)	Building concrete at locations of expansion and grouted anchors; grout pads for support base plates
1786	111	TP-42	T-29	III.B5.TP- 42	III.B5-1(T-29)	Building concrete at locations of expansion and grouted anchors; grout pads for support base plates

1787	111	TP-43	T-30	III.B2.TP- 43	III.B2-10(T-30)	Support members; welds; bolted connections; support anchorage to building structure
1788		TP-43	T-30	III.B3.TP- 43	III.B3-7(T-30)	Support members; welds; bolted connections; support anchorage to building structure
1789		TP-43	T-30	III.B4.TP- 43	III.B4-10(T-30)	Support members; welds; bolted connections; support anchorage to building structure
1790		TP-43	T-30	III.B5.TP- 43	III.B5-7(T-30)	Support members; welds; bolted connections; support anchorage to building structure
1791		TP-44	T-31	III.B4.TP- 44	III.B4-12(T-31)	Vibration isolation elements
1792		TP-45	T-32	III.B1.1.TP- 45	III.B1.1-5(T- 32)	Sliding surfaces
1793	111	TP-45	T-32	III.B1.2.TP- 45	III.B1.2-3(T- 32)	Sliding surfaces
1794		TP-45	T-32		III.B1.3-3(T- 32)	Sliding surfaces
1795		TP-46	TP-1	III.B2.TP- 46	III.B2-2(TP-1)	Sliding support bearings; sliding support surfaces
1796	111	TP-46	TP-1	III.B4.TP- 46	III.B4-2(TP-1)	Sliding support bearings; sliding support surfaces

1797	111	TP-47	TP-2	III.B2.TP- 47	III.B2-3(TP-2)	Sliding support bearings; sliding support surfaces
1798		TP-47	TP-2	III.B4.TP- 47	III.B4-3(TP-2)	Sliding support bearings; sliding support surfaces
343	111	TP-6		III.B2.TP-6	III.B2-7(TP-6)	Support members; welds; bolted connections; support anchorage to building structure
344	111	TP-6		III.B4.TP-6	III.B4-7(TP-6)	Support members; welds; bolted connections; support anchorage to building structure
						#M#Concrete (inaccessible
2144	111	TP-67	T-02	III.A1.TP- 67	III.A1-7(T-02)	areas): exterior above- and below-grade; foundation#M#

1933	111	TP-67	T-02	III.A2.TP- 67	III.A2-7(T-02)	#M#Concrete (inaccessible areas): exterior above- and below-grade; foundation#M#
2145	111	TP-67	T-02	III.A3.TP- 67	III.A3-7(T-02)	#M#Concrete (inaccessible areas): exterior above- and below-grade; foundation#M#

2146	111	TP-67	<u>T-02</u>	III.A5.TP- 67	III.A5-7(T-02)	#M#Concrete (inaccessible areas): exterior above- and below-grade; foundation#M#
2147		TP-67	T-02	III.A7.TP- 67	III.A7-6(T-02)	#M#Concrete (inaccessible areas): exterior above- and below-grade; foundation#M#

						#M#Concrete (inaccessible areas): exterior above- and
2148	111	TP-67	T-02	III.A8.TP- 67	III.A8-6(T-02)	below-grade; foundation#M#
2149	111	TP-67	<u>T-02</u>	III.A9.TP- 67	III.A9-6(T-02)	#M#Concrete (inaccessible areas): exterior above- and below-grade; foundation#M#
345	111	TP-7		III.A6.TP-7	III.A6-12(TP- 7)	Seals; gasket; moisture barriers (caulking, flashing, and other sealants)
346		TP-8		III.B1.1.TP- 8	III.B1.1-6(TP- 8) III.B1.1-7(TP- 11)	Support members; welds; bolted connections; support anchorage to building structure
347	111	TP-8		III.B1.2.TP- 8	III.B1.2-4(TP- 8) III.B1.2-5(TP- 11)	Support members; welds; bolted connections; support anchorage to building structure

348	<u>III</u>	TP-8	III.B1-3.TP- 8	III.B1.3-4(TP- 8) III.B1.3-5(TP- 11)	Support members; welds; bolted connections; support anchorage to building structure
349		TP-8	III.B2.TP-8	III.B2-4(TP-8) III.B2-8(TP-5)	Support members; welds; bolted connections; support anchorage to building structure
350	111	TP-8	III.B3.TP-8	III.B3-2(TP-8) III.B3-5(TP-5)	Support members; welds; bolted connections; support anchorage to building structure
351	111	TP-8	III.B4.TP-8	III.B4-4(TP-8) III.B4-8(TP-5)	Support members; welds; bolted connections; support anchorage to building structure
352	111	TP-8	III.B5.TP-8	III.B5-2(TP-8) III.B5-5(TP-5)	Support members; welds; bolted connections; support anchorage to building structure
880	IV	R-04	IV.A1.R-04	IV.A1-7(R-04)	Reactor vessel components: flanges; nozzles; penetrations; safe ends; thermal sleeves; vessel shells, heads and welds
530	IV	R-05	IV.C2.R-05	IV.C2-3(R-05)	Class 1 piping, piping components, and piping elements

534	IV	R-08	IV.C1.R-08	IV.C1-3(R-08)	Class 1 pump casings; valve bodies and bonnets
535	IV	R-08	IV.C2.R-08	IV.C2-6(R-08)	Class 1 pump casings; valve bodies and bonnets
536	IV	R-09	IV.C2.R-09	IV.C2-5(R-09)	Class 1 pump casings; valve bodies
537	IV	R-10	IV D1 R-10	IV D1-2(R-10)	Closure bolting
	10	11-10	17.01.10	11.01-2(1(-10)	Jet pump assemblies:
					thermal sleeve; inlet header; riser brace arm;
538	IV	R-100	IV.B1.R- 100	IV.B1-13(R- 100)	holddown beams; inlet elbow; mixing assembly; diffuser castings
542	IV	R-104	IV.B1.R- 104	IV.B1-8(R- 104)	Fuel supports and control rod drive assemblies: control rod drive housing
					Instrumentation:
					Intermediate range monitor (IRM) dry tubes; source range monitor (SRM) dry
543	IV	R-105	IV.B1.R- 105	IV.B1-10(R- 105)	tubes; incore neutron flux monitor guide tubes

881	IV/	R-11			Closure bolting
1 88	IV	K-11	IV.62.R-11	IV.C2-7(R-11)	Closure boiling
892	IV	R-12	IV C2 R-12	IV C2-8(R-12)	Closure bolting
					clocal o bolling
905	IV	R-13	IV.C2.R-13	IV.C2-23(R- 13)	Pressurizer relief tank: tank shell and heads; flanges; nozzles
					Isolation condenser
910	IV	R-15		IV.C1-4(R-15)	components
914	IV	R-17	IV.A2.R-17	IV.A2-13(R- 17)	External surfaces
		_ /_			
472	IV	R-17	IV.C2.R-17	IV.C2-9(R-17)	External surfaces
473	IV	R-17	IV.D1.R-17	IV.D1-3(R-17)	External surfaces
577	11/	R-17			External surfaces
577	IV	11-17	IV.DZ.R-17	IV.DZ-1(R-17)	
					Diping and components
588	IV	R-18	IV.C2.R-18	IV.C2-10(R- 18)	Piping and components (External surfaces); bolting

				IV.C2-16(R-	Pressurizer: integral
919	IV	R-19	IV.C2.R-19		support
950	IV	R-20	IV.C1.R-20	IV.C1-9(R-20)	Piping, piping components, and piping elements greater than or equal to 4 NPS
960	IV	R-21	IV.C1.R-21	IV.C1-8(R-21)	Piping, piping components, and piping elements greater than or equal to 4 NPS
968	IV	R-217	IV.C2.R- 217	IV.C2-20(R- 217)	Pressurizer heater sheaths and sleeves; heater bundle diaphragm plate
969	IV	R-219	IV.A2.R- 219	IV.A2-21(R- 219)	Reactor vessel components: flanges; nozzles; penetrations; pressure housings; safe ends; thermal sleeves; vessel shells, heads and welds
970	IV	R-220	IV.C1.R- 220	IV.C1-15(R- 220)	Reactor coolant pressure boundary components: piping, piping components, and piping elements
971	IV	R-221	IV.D1.R- 221	IV.D1-8(R- 221)	Recirculating steam generator components: flanges; penetrations; nozzles; safe ends; lower heads and welds
972	IV	R-222	IV.D2.R- 222	IV.D2-3(R- 222)	Once-through steam generator components: primary side nozzles, safe ends, and welds

973	IV	R-223	IV.C2.R- 223	IV.C2-25(R- 223)	Reactor coolant pressure boundary components: piping, piping components, and piping elements; flanges; nozzles and safe ends; pressurizer vessel shell heads and welds; heater sheaths and sleeves; penetrations; thermal sleeves
975	IV	R-225	IV.C1.R- 225	IV.C1-5(R- 225)	Isolation condenser components
976	IV	R-226	IV.D2.R- 226	IV.D2-13(R- 226)	Tubes
					Dining nining components
977	IV	R-23	IV.C1.R-23	IV.C1-7(R-23)	Piping, piping components, and piping elements
979		R-25		IV.C2-19(R-	Pressurizer components
984	IV	R-30	IV.C2.R-30	IV.C2-27(R- 30)	Reactor coolant system piping and fittings: cold leg; hot leg; surge line; spray line
					Secondary manway
985	IV	R-31	IV.D2.R-31	IV.D2-5(R-31)	covers; handhole covers

550	IV	R-33	IV.D1.R-33	IV.D1-11(R- 33)	Steam generator components: top head; steam nozzle and safe end; upper and lower shell; feedwater (FW) and auxiliary FW nozzle and safe end; FW impingement plate and support
551	IV	R-33	IV.D2.R-33	IV.D2-10(R- 33)	Steam generator components: top head; steam nozzle and safe end; upper and lower shell; feedwater (FW) and auxiliary FW nozzle and safe end; FW impingement plate and support
554	IV	R-36	IV.D2.R-36	IV.D2-9(R-36)	Steam generator components: secondary side nozzles (vent, drain, and instrumentation)
555	IV	R-37		IV.D1-5(R-37)	Pressure boundary and structural: steam nozzle and safe end; feedwater nozzle and safe end
556	IV	R-38	IV.D2.R-38	IV.D2-7(R-38)	Steam generator components: feedwater (FW) and auxiliary FW nozzles and safe ends; steam nozzles and safe ends
557		R-39	IV.D1.R-39	IV.D1-13(R-	Steam generator feedwater impingement plate and support
558	IV	R-40	IV.D1.R-40	IV.D1-18(R- 40)	Tube plugs
559	IV	R-40	IV.D2.R-40	IV.D2-12(R- 40)	Tube plugs
561	IV	R-42	IV.D1.R-42	IV.D1-17(R- 42)	Steam generator structural: tube support plates
562	IV	R-42	IV.D2.R-42	IV.D2-11(R- 42)	Steam generator structural: tube support plates

563	IV	R-43	IV.D1.R-43	IV.D1-19(R- 43)	Tubes
				IV.D1-20(R-	
564	IV	R-44	IV.D1.R-44		Tubes and sleeves
565	IV	R-44	IV.D2.R-44	IV.D2-14(R- 44)	Tubes and sleeves
				IV.D1-21(R-	
566	IV	R-46	IV.D1.R-46		Tubes and sleeves
				IV.D2-15(R-	
567	IV	R-46	IV.D2.R-46	46)	Tubes and sleeves
986	IV	R-47	IV.D1.R-47	IV.D1-23(R- 47)	Tubes and sleeves
				IV.D2-17(R-	
987	IV	R-47		47)	Tubes and sleeves
988	IV/	R-48		IV.D1-22(R- 48)	Tubes and sleeves
300					
989	IV	R-48	IV.D2.R-48	IV.D2-16(R- 48)	Tubes and sleeves
				IV.D1-25(R-	Tubes and sleeves (exposed to phosphate
992	IV	R-50	IV.D1.R-50	50)	chemistry)
					Class 1 piping, piping components, and piping
474	IV	R-52	IV.C1.R-52	IV.C1-2(R-52)	elements
					Class 1 piping, piping
475	IV	R-52	IV.C2.R-52	IV.C2-4(R-52)	components, and piping elements

476	IV	R-53	IV.B1.R-53	IV.B1-14(R- 53)	Reactor vessel internal components
479	IV	R-53	IV.B4.R-53	IV.B4-37(R- 53)	Reactor vessel internal components
480		R-56		IV.C2-26(R-	Reactor coolant system piping and fittings: cold leg; hot leg; surge line; spray line
481	IV	R-58	IV.C2.R-58	IV.C2-18(R- 58)	Pressurizer components
484	IV	R-61	IV.A1.R-61	IV.A1-10(R- 61)	Top head enclosure: vessel flange leak detection line

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					IV.A1-13(R-	Vessel shell: intermediate
	485	IV	R-62	 IV.A1.R-62	62)	beltline shell; beltline welds
	487	IV	R-64	IV.A1.R-64	IV.A1-12(R- 64)	Vessel shell: attachment welds
ŀ	-07				<i>(()</i>	
	488	IV	R-65	IV.A1.R-65	IV.A1-3(R-65)	Nozzles: feedwater
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						Nozzles: control rod drive
	489	IV	R-66	IV.A1.R-66	IV.A1-2(R-66)	

	490	IV	R-67	IV.A1.R-67	IV.A1-4(R-67)	Nozzles: low-pressure coolant injection or RHR injection mode
						Nozzle safe ends and welds: high-pressure core spray; low pressure core
						spray; control rod drive return line; recirculating water; low pressure coolant injection or RHR injection
	491	IV	R-68	IV.A1.R-68	IV.A1-1(R-68)	mode
	684	IV	R-70	IV.A1.R-70	IV.A1-6(R-70)	Pressure vessel support skirt and attachment welds
		N (D 70		IV.A2-20(R-	Pressure vessel support
ĺ	685	IV	R-70	IV.A2.R-70	70)	skirt and attachment welds

689	IV	R-74	IV.A2.R-74	IV.A2-5(R-74)	Closure head: vessel flange leak detection line
692	1)/	R-77		IV.A2-10(R-	Control rod drive head penetration: pressure
692	IV	R-//	IV.A2.R-77	77)	housing
693	IV	R-78	IV.A2.R-78	IV.A2-6(R-78)	Control rod drive head penetration: flange bolting
694	IV	R-79	IV.A2.R-79	IV.A2-7(R-79)	Control rod drive head penetration: flange bolting
					Control rod drive head
695	IV	R-80	IV.A2.R-80	IV.A2-8(R-80)	penetration: Flange bolting
				IV.A2-16(R-	Nozzles: inlet; outlet; safety
696	IV	R-81		81)	injection

					Vessel shell: upper shell;
				IV.A2-23(R-	intermediate shell; lower
699	IV	R-84	IV.A2.R-84		shell (including beltline welds)
					Vessel shell: upper shell;
700	1) /	D 95		IV.A2-22(R-	intermediate shell; lower shell (including beltline
700	IV	R-85	IV.A2.R-85	85)	welds)
				IV.A2-25(R-	
923	IV	R-87	IV.A2.R-87	87)	Vessel shell: vessel flange

926	IV	R-90		IV.A2-18(R- 90)	Penetrations: head vent pipe (top head); instrument tubes (top head)
927	IV	R-92	IV.B1.R-92	IV.B1-1(R-92)	Core shroud (including repairs) and core plate: core shroud (upper, central, lower)
928	IV	R-93	IV.B1.R-93	IV.B1-6(R-93)	Core shroud and core plate: core plate and plate bolts (used in early BWRs)
020	11/	P 04		IV P1 5(P 04)	Core shroud and core plate: access hole cover
929		R-94 R-95		IV.B1-5(R-94) IV.B1-4(R-95)	(welded) Core shroud and core plate: access hole cover (mechanical)
931	IV	R-96		IV.B1-2(R-96)	Core shroud (including repairs) and core plate: shroud support structure (shroud support cylinder, shroud support plate, shroud support legs)

932	IV	R-97		IV.B1.R-97	IV.B1-3(R-97)	Core shroud and core plate: LPCI coupling
933	IV	R-98		IV.B1.R-98	IV.B1-17(R- 98)	Top guide
934	IV	R-99		IV.B1.R-99	IV.B1-7(R-99)	Core spray lines and spargers: core spray lines (headers); spray rings; spray nozzles; thermal sleeves
936	IV	RP-03		IV.E.RP-03	IV.E-1(RP-03)	Piping, piping components, and piping elements
937	IV	RP-04		IV.E.RP-04	IV.E-2(RP-04)	Piping, piping components, and piping elements
938	IV	RP-05		IV.E.RP-05	IV.E-3(RP-05)	Piping, piping components, and piping elements
939	IV	RP-06		IV.E.RP-06	IV.E-4(RP-06)	Piping, piping components, and piping elements
940	IV	RP-07		IV.E.RP-07	IV.E-5(RP-07)	Piping, piping components, and piping elements
994	IV	RP-12		IV.C2.RP- 12	IV.C2-12(RP- 12)	Piping, piping components, and piping elements
1401	IV	RP-153	R-224	IV.D2.RP- 153	IV.D2-8(R- 224)	Steam generator components: shell assembly
1402	IV	RP-154	RP-13	IV.A2.RP- 154	IV.A2-1(RP- 13)	#M#Bottom-mounted instrument guide tube (external to bottom head)#M#
1403		RP-155	RP-18	IV.B1.RP- 155	IV.B1-16(RP- 18)	ý Steam dryers

1404	IV	RP-156	RP-22	IV.C2.RP- 156	IV.C2-24(RP- 22)	Pressurizer surge and steam space nozzles; welds
1405	IV	RP-157	RP-25	IV.A1.RP- 157	IV.A1-8(RP- 25)	Reactor Vessel: flanges; nozzles; penetrations; safe ends; vessel shells, heads and welds
1406	IV	RP-158	RP-27	IV.C1.RP- 158	IV.C1-14(RP- 27)	Reactor coolant pressure boundary components
1407	IV	RP-159	RP-31	IV.C2.RP- 159	IV.C2-13(RP- 31)	Piping, piping components, and piping elements
1408	IV	RP-161	RP-16	IV.D1.RP- 161	IV.D1-9(RP- 16)	#M#Steam generator: Tube bundle wrapper and associated supports and mounting hardware#M#
1409	IV	RP-162	New Record	IV.D2.RP- 162		Steam generator: tube bundle wrapper and associated supports and mounting hardware
1412	IV	RP-165	New Record	IV.A1.RP- 165		Top head enclosure: closure studs and nuts
1413	IV	RP-166	New Record	IV.C2.RP- 166		Closure bolting
1414	IV	RP-167	New Record	IV.C2.RP- 167		Closure bolting

999	IV	RP-17		IV.D1.RP- 17	IV.D1-7(RP- 17)	Primary side components: divider plate
1870	IV	RP-182	New Record	IV.B1.RP- 182		Reactor vessel internals components
1891	IV	RP-186	R-75	IV.A2.RP- 186	IV.A2-9(R-75)	Control rod drive head penetration: nozzle welds
1001				100		
2167	IV	RP-200	New Record	IV.B1.RP- 200		Reactor vessel internals components
2168	IV	RP-201	New Record	IV.A1.RP- 201		Top head enclosure: closure studs and nuts
2290	IV	RP-219	R-101	IV.B1.RP- 219	IV.B1-11(R- 101)	Jet pump assemblies: castings
2291	IV	RP-220	R-103	IV.B1.RP- 220	IV.B1-9(R- 103)	Fuel supports and control rod drive assemblies: orificed fuel support
2292	IV	RP-221	RP-10	IV.C2.RP- 221	IV.C2-14(RP- 10)	Piping, piping components, and piping elements
2293	IV	RP-222	RP-11	IV.C2.RP- 222	IV.C2-11(RP- 11)	Piping, piping components, and piping elements

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2336	IV	RP-225	RP-15	IV.D1.RP- 225	IV.D1-15(RP- 15)	Steam generator structural: U-bend supports including anti-vibration bars
2337	IV	RP-226	RP-15	IV.D1.RP- 226	IV.D1-15(RP- 15)	Steam generator structural: U-bend supports including anti-vibration bars
2338	IV	RP-227	R-63	IV.A1.RP- 227	IV.A1-14(R- 63)	#M#Vessel shell (including applicable beltline) components: shell; shell plates or forgings; shell welds; nozzle plates or forgings; nozzle welds #M#
2339	IV	RP-228	R-82	IV.A2.RP- 228	IV.A2-17(R- 82)	Nozzles: inlet; outlet; safety injection
2340	IV	RP-229	R-86	IV.A2.RP- 229	IV.A2-24(R- 86)	Vessel shell: upper shell; intermediate shell; lower shell (including beltline welds)
1003	IV	RP-23		IV.C2.RP- 23	IV.C2-15(RP- 23)	Piping, piping components, and piping elements; flanges; heater sheaths and sleeves; penetrations; thermal sleeves; vessel shell heads and welds
				IV.C1.RP-		Class 1 piping, fittings and branch connections < NPS
2341	IV	RP-230	R-03	230	IV.C1-1(R-03)	4
2342	IV	RP-231	R-14	IV.C2.RP- 231	IV.C2-22(R- 14)	Pressurizer relief tank: tank shell and heads; flanges; nozzles
2344	IV	RP-232	R-07	IV.D1.RP- 232	IV.D1-1(R-07)	#M#Steam generator: primary nozzles; nozzle to safe end welds; manways; flanges#M#

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				IV.D1.RP-	IV.D1-24(R-	
2345	5 IV	RP-233	R-49	233	49)	Tubes and sleeves
2346	6 IV	RP-233	R-49	IV.D2.RP- 233	IV.D2-18(R- 49)	Tubes and sleeves
2347	7 IV	RP-234	R-83	IV.A2.RP- 234	IV.A2-15(R- 83)	Nozzle safe ends and welds: inlet; outlet; safety injection
2348	3 IV	RP-235	R-02	IV.C2.RP- 235	IV.C2-1(R-02)	Class 1 piping, fittings and branch connections < NPS 4
235	I IV	RP-236	New Record	IV.B4.RP- 236		Reactor vessel internal components with no additional measures
2352	2 IV	RP-237	New Record	IV.B4.RP- 237		Reactor vessel internal components with no additional measures

2353	IV	RP-238	New Record	IV.B4.RP- 238		Reactor vessel internal components (inaccessible locations)
2354	IV	RP-239	New Record	IV.B4.RP- 239		Reactor vessel internal components (inaccessible locations)
2706	IV	RP-24		IV.B2.RP- 24	IV.B2-32(RP- 24)	Reactor vessel internal components
2707	IV	RP-24		IV.B3.RP- 24	IV.B3-25(RP- 24)	Reactor vessel internal components
1006	IV	RP-24		IV.B4.RP- 24	IV.B4-38(RP- 24)	Reactor vessel internal components
2355	IV	RP-240	R-128	IV.B4.RP- 240	IV.B4-1(R- 128) IV.B4-8(R- 199)	Core barrel assembly: baffle/former assembly: (a) accessible baffle-to-former bolts and screws; (b) accessible locking devices (including welds) of baffle- to-former bolts
2356	IV	RP-241	R-125	IV.B4.RP- 241	IV.B4-7(R- 125)	Core barrel assembly: baffle/former assembly: (a) accessible baffle-to-former bolts and screws; (b) accessible locking devices (including welds) of baffle- to-former bolts

2357	IV	RP-242	R-183	IV.B4.RP- 242	IV.B4-4(R- 183)	Control rod guide tube (CRGT) assembly: accessible surfaces at four screw locations (every 90 degrees) for CRGT spacer castings
2358	IV	RP-243	R-128	IV.B4.RP- 243	IV.B4-1(R- 128) IV.B4-8(R- 199)	Core barrel assembly; (a) external baffle-to-baffle bolts; (b) core barrel-to- former bolts; (c) locking devices (including welds) of external baffle-to-baffle bolts and core barrel-to- former bolts; (d) internal baffle-to-baffle bolts
2359	IV	RP-244	R-125	IV.B4.RP- 244	IV.B4-7(R- 125)	Core barrel assembly; (a) external baffle-to-baffle bolts; (b) core barrel-to- former bolts; (c) locking devices (including welds) of external baffle-to-baffle bolts and core barrel-to- former bolts
2360	IV	RP-245	R-194	IV.B4.RP- 245	IV.B4-13(R- 194)	Core barrel assembly: (a) upper thermal shield bolts; (b) surveillance specimen holder tube bolts (Davis- Besse, only); (c) surveillance specimen tube holder studs, and nuts (Crystal River Unit 3, only)
2361	IV	RP-246	R-196	IV.B4.RP- 246	IV.B4-12(R- 196)	Lower grid assembly: #*#lower thermal shield (LTS) bolts
2362	IV	RP-247	R-194	IV.B4.RP- 247	IV.B4-13(R- 194)	Core barrel assembly: accessible lower core barrel (LCB) bolts and locking devices

						Core support shield (CSS) assembly: #*#accessible
2363	IV	RP-248	R-196	IV.B4.RP- 248	IV.B4-12(R- 196)	upper core barrel (UCB) bolts and locking devices
2364	IV	RP-249	R-196	IV.B4.RP- 249	IV.B4-12(R- 196)	Core barrel assembly: baffle plate accessible surfaces within one inch around each baffle plate flow and bolt hole
2365	IV	RP-250	R-196	IV.B4.RP- 250	IV.B4-12(R- 196)	Core barrel assembly: core barrel cylinder (including vertical and circumferential seam welds); former plates
2366	IV	RP-251	R-190	IV.B4.RP- 251	IV.B4-15(R- 190)	Core support shield (CSS) assembly: CSS top flange; plenum cover assembly: plenum cover weldment rib pads and plenum cover support flange
2367	IV	RP-252	R-188	IV.B4.RP- 252	IV.B4-16(R- 188)	Core support shield (CSS) assembly: (a) CSS vent valve disc shaft or hinge pin (b) CSS vent valve top retaining ring (c) CSS vent valve bottom retaining ring
2368	IV	RP-253	R-191	IV.B4.RP- 253	IV.B4-21(R- 191)	Core support shield (CSS) assembly: (a) CSS cast outlet nozzles (Oconee Unit 3 and Davis-Besse, only); (b) CSS vent valve discs
2369	IV	RP-254	R-210	IV.B4.RP- 254	IV.B4-25(R- 210)	Lower grid assembly: #*#alloy X-750 lower grid shock pad bolts and locking devices (TMI-1, only)

2371	IV	RP-256	R-210	IV.B4.RP- 256	IV.B4-25(R- 210)	Flow distributor assembly: flow distributor bolts and locking devices
2373	IV	RP-258	R-183	IV.B4.RP- 258	IV.B4-4(R- 183)	Incore Monitoring Instrumentation (IMI) guide tube assembly: accessible top surfaces of IMI Incore guide tube spider castings
2374	IV	RP-259	R-205	IV.B4.RP- 259	IV.B4-31(R- 205)	Incore Monitoring Instrumentation (IMI) guide tube assembly: accessible top surfaces of IMI guide tube spider-to-lower grid rib sections welds
1008	IV	RP-26		IV.B1.RP- 26	IV.B1-15(RP- 26)	Reactor vessel internals components
2375	IV	RP-260	R-205	IV.B4.RP- 260	IV.B4-31(R- 205)	Lower grid assembly: (a) accessible pads; (b) accessible pad-to-rib section welds; (c) accessible alloy X-750 dowels, cap screws and locking devices
2376	IV	RP-261	R-203	IV.B4.RP- 261	IV.B4-32(R- 203)	Lower grid assembly: alloy X-750 dowel-to-guide block welds
2377		RP-262	R-203	IV.B4.RP- 262	IV.B4-32(R- 203)	Lower grid assembly: accessible alloy X-750 dowel-to-lower fuel assembly support pad welds

						Reactor vessel internal
				IV.B2.RP-		components with no
2451	IV	RP-265	New Record	265		additional measures
						Reactor vessel internal
2453	IV	RP-267	New Record	IV.B2.RP- 267		components with no additional measures
				IV.B2.RP-		Reactor vessel internal components (inaccessible
2454	IV	RP-268	New Record	268		locations)
						Reactor vessel internal
				IV.B2.RP-		components (inaccessible
2455	IV	RP-269	New Record	269		locations)
				IV.B2.RP-	IV.B2-1(R-	Baffle-to-former assembly:
2456	IV	RP-270	R-124	17.62.RF- 270	124)	baffle and former plates

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2457	IV	RP-271	R-125	IV.B2.RP- 271	IV.B2-10(R- 125)	Baffle-to-former assembly: accessible baffle-to-former bolts
2458	11/	RP-272	R-128	IV.B2.RP- 272	IV.B2-6(R- 128)	Baffle-to-former assembly: accessible baffle-to-former bolts
2459			R-125	IV.B2.RP- 273	IV.B2-10(R- 125)	Baffle-to-former assembly: barrel-to-former bolts
				IV.B2.RP-	IV.B2-6(R-	Baffle-to-former assembly:
2460 2461		RP-274 RP-275	R-128 R-128	274 IV.B2.RP- 275	128) IV.B2-6(R- 128)	barrel-to-former bolts Baffle-to-former assembly: baffle-edge bolts (all plants with baffle-edge bolts)
2462	IV	RP-276	R-120	IV.B2.RP- 276	IV.B2-8(R- 120)	Core barrel assembly: upper core barrel flange weld

2464	IV	RP-278	R-120	IV.B2.RP- 278	IV.B2-8(R- 120)	Core barrel assembly: core barrel outlet nozzle welds
1010	IV	RP-28		IV.A2.RP- 28	IV.A2-14(RP- 28)	Flanges; nozzles; penetrations; pressure housings; safe ends; vessel shells, heads welds
2466	IV	RP-280	R-120	IV.B2.RP- 280	IV.B2-8(R- 120)	Core barrel assembly: lower core barrel flange weld
2467	IV	RP-281	R-122	IV.B2.RP- 281	IV.B2-9(R- 122)	Core barrel assembly: lower core barrel flange weld
2468	IV	RP-282	R-120	IV.B2.RP- 282	IV.B2-8(R- 120)	Core barrel assembly: core barrel flange
2470	IV	RP-284	R-143	IV.B2.RP- 284	IV.B2-12(R- 143) IV.B2- 13(R-145)	Bottom mounted instrument system: flux thimble tubes
2471	IV	RP-285	R-137	IV.B2.RP- 285	IV.B2-14(R- 137)	Lower internals assembly: clevis insert bolts
2472	IV	RP-286	R-133	IV.B2.RP- 286	IV.B2-16(R- 133)	Lower support assembly: lower support column bolts

2473	IV	RP-287	R-135	IV.B2.RP- 287	IV.B2-17(R- 135)	Lower support assembly: lower support column bolts
2474		RP-288	R-132	IV.B2.RP- 288	IV.B2-18(R- 132)	Lower internals assembly: lower core plate and extra- long (XL) lower core plate
				IV.B2.RP-	IV.B2-20(R-	Lower internals assembly: lower core plate and extra-
2475		RP-289 RP-290	<u>R-130</u> R-140	289 IV.B2.RP- 290	130) IV.B2-21(R- 140)	long (XL) lower core plate Lower support assembly: lower support column bodies (cast)
2477		RP-291	R-138	IV.B2.RP- 291	IV.B2-24(R- 138)	Lower support assembly: lower support column bodies (cast)
2477		RP-292	R-140	IV.B2.RP- 292	IV.B2-21(R- 140)	Bottom-mounted instrumentation system: bottom-mounted instrumentation (BMI) column bodies
2479	IV	RP-293	R-138	IV.B2.RP- 293	IV.B2-24(R- 138)	Bottom-mounted instrumentation system: bottom-mounted instrumentation (BMI) column bodies
2480	IV	RP-294	R-138	IV.B2.RP- 294	IV.B2-24(R- 138)	Lower support assembly: lower support column bodies (non-cast)

				IV.B2.RP-		Lower support assembly: lower support column
2481	IV	RP-295	R-141	295	IV.B2-22(R- 141)	bodies (non-cast)
2482	IV	RP-296	New Record	IV.B2.RP- 296		Control rod guide tube (CRGT) assemblies: CRGT guide plates (cards)
2483	IV	RP-297	New Record	IV.B2.RP- 297		Control rod guide tube (CRGT) assemblies: CRGT lower flange welds (accessible)
2484	IV	RP-298	R-118	IV.B2.RP- 298	IV.B2-28(R- 118)	Control rod guide tube (CRGT) assemblies: CRGT lower flange welds (accessible)
2485	IV	RP-299	R-115	IV.B2.RP- 299	IV.B2-34(R- 115)	Alignment and interfacing components: upper core plate alignment pins
2486	IV	RP-300	R-108	IV.B2.RP- 300	IV.B2-33(R- 108)	Alignment and interfacing components: internals hold down spring
2487	IV	RP-301	R-112	IV.B2.RP- 301	IV.B2-40(R- 112)	Alignment and interfacing components: upper core plate alignment pins
2488	IV	RP-302	New Record	IV.B2.RP- 302		Thermal shield assembly: thermal shield flexures

2489	IV	RP-303	R-53	IV.B2.RP- 303	IV.B2-31(R- 53)	Reactor vessel internal components
						Reactor vessel internal
2492	IV	RP-306	New Record	IV.B3.RP- 306		components with no additional measures
						Reactor vessel internal
2493	IV	RP-307	New Record	IV.B3.RP- 307		components with no additional measures
2495	IV	RP-309	New Record	IV.B3.RP- 309		Reactor vessel internal components (inaccessible locations)
2497	IV	RP-311	New Record	IV.B3.RP- 311		Reactor vessel internal components (inaccessible locations)

2498	IV	RP-312	R-149	IV.B3.RP- 312	IV.B3-2(R- 149)	Control Element Assembly (CEA): shroud assemblies: instrument guide tubes in peripheral CEA assemblies
2499	IV	RP-313	New Record	IV.B3.RP- 313		Control Element Assembly (CEA): shroud assemblies: remaining instrument guide tubes in CEA assemblies
2500	IV	RP-314	R-162	IV.B3.RP- 314	IV.B3-9(R- 162)	Core shroud assemblies (for bolted core shroud assemblies): core shroud bolts (accessible)
				IV.B3.RP-	IV.B3-7(R-	Core shroud assemblies (for bolted core shroud assemblies): core shroud
2501		RP-315 RP-316	R-165 R-162	315 IV.B3.RP- 316	165) IV.B3-9(R- 162)	bolts (accessible) Core shroud assemblies (for bolted core shroud assemblies): barrel-shroud bolts with neutron exposures greater than 3 dpa
2503	IV	RP-317	R-165	IV.B3.RP- 317	IV.B3-7(R- 165)	Core shroud assemblies (for bolted core shroud assemblies): barrel-shroud bolts with neutron exposures greater than 3 dpa

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	2504	IV	RP-318	R-163	IV.B3.RP- 318	IV.B4-8(R- 163)	Core shroud assemblies (for bolted core shroud assemblies): (a) shroud plates and (b) former plates
	2505	IV	RP-319	R-162	IV.B3.RP- 319	IV.B3-9(R- 162)	Core shroud assemblies (all plants): guide lugs and guide lug insert bolts
	2506	IV	RP-320	R-162	IV.B3.RP- 320	IV.B3-9(R- 162)	Core shroud assemblies (all plants): guide lugs and guide lug insert bolts
	2508		RP-322	New Record	IV.B3.RP- 322		Core shroud assembly (for welded core shrouds in two vertical sections): Core shroud plate-former plate weld (a) The axial and horizontal weld seams at the core shroud re-entrant corners as visible from the core side of the shroud, within six inches of the central flange and horizontal stiffeners, and (b) the horizontal stiffeners in shroud plate-to-former plate weld
	2509	IV	RP-323	New Record	IV.B3.RP- 323		Core shroud assembly (for welded core shrouds in two vertical sections): remaining axial welds in shroud plate-to-former plate

2510	IV	RP-324	New Record	IV.B3.RP- 324		Core shroud assembly (for welded core shrouds with full-height shroud plates): axial weld seams at the core shroud re-entrant corners, at the core mid- plane (+3 feet in height) as visible from the core side of the shroud
2511	IV	RP-325	New Record	IV.B3.RP- 325		Core shroud assembly (for welded core shrouds with full-height shroud plates): remaining axial welds, ribs, and rings
2512	IV	RP-326	New Record	IV.B3.RP- 326		Core shroud assembly (for welded core shrouds in two vertical sections): gap between the upper and lower plates
2513	IV	RP-327	R-155	IV.B3.RP- 327	IV.B3-15(R- 155)	Core support barrel assembly: upper core support barrel flange weld (accessible surfaces)
2514	IV	RP-328	R-155	IV.B3.RP- 328	IV.B3-15(R- 155)	Core support barrel assembly: surfaces of the lower core barrel flange weld (accessible surfaces)
2515	IV	RP-329	R-155	IV.B3.RP- 329	IV.B3-15(R- 155)	Core support barrel assembly: lower cylinder welds and remaining core barrel assembly welds
2516	IV	RP-330	R-167	IV.B3.RP- 330	IV.B3-23(R- 167)	Lower support structure: core support column bolts

2517	IV	RP-331	New Record	IV.B3.RP- 331		Lower support structure: core support column bolts
2518	IV	RP-332	R-156	IV.B3.RP- 332	IV.B3-17(R- 156)	Core support barrel assembly: upper core barrel flange
2519	IV	RP-333	New Record	IV.B3.RP- 333		Core support barrel assembly: lower flange weld, if fatigue life cannot be demonstrated by TLAA
2520	IV	RP-334	R-167	IV.B3.RP- 334	IV.B3-23(R- 167)	Lower support structure: A286 fuel alignment pins (all plants with core shroud assembled with full-height shroud plates)
2521	IV	RP-335	R-167	IV.B3.RP- 335	IV.B3-23(R- 167)	Lower support structure: core support column welds, applicable to all plants except those assembled with full-height shroud plates
2522		RP-336	R-170	IV.B3.RP- 336	IV.B3-22(R- 170)	Lower support structure: A286 fuel alignment pins (all plants with core shroud assembled in two vertical sections)
2522		RP-338	New Record	IV.B3.RP- 338		Upper internals assembly: fuel alignment plate (applicable to plants with core shrouds assembled with full height shroud plates), if fatigue life cannot be demonstrated by TLAA

				IV.B3.RP-	IV.B3-24(R-	Reactor vessel internal
2525	IV	RP-339	R-53	339	53)	components
2528		RP-342	New Record	IV.B3.RP- 342		Lower support structure: deep beams (applicable assemblies with full height shroud plates)
2531		RP-343	New Record	IV.B3.RP- 343		Lower support structure: core support plate (applicable to plants with a core support plate), if fatigue life cannot be demonstrated by TLAA
2343	IV	RP-344	R-07	IV.C2.RP- 344	IV.C2-2(R-07)	#M#Class 1 piping, piping components, and piping elements#M#
2585	IV	RP-345	New Record	IV.B2.RP- 345		Core barrel assembly: core barrel flange
2586	IV	RP-346	New Record	IV.B2.RP- 346		Upper internals assembly: upper support ring or skirt
2592	IV	RP-352	New Record	IV.B4.RP- 352		Upper grid assembly: alloy X-750 dowel-to-upper fuel assembly support pad welds (all plants except Davis-Besse)
2594	IV	RP-353	RP-01	IV.E.RP- 353	IV.E-6(RP-01)	Piping, piping components, and piping elements

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	2599	IV	RP-354	New Record	IV.B2.RP- 354		Baffle-to-former assembly: baffle-edge bolts (all plants with baffle-edge bolts)
	2600	IV	RP-355	New Record	IV.B2.RP- 355		Control rod guide tube assemblies: guide tube support pins
	2601		RP-356	New Record	IV.B2.RP- 356		Control rod guide tube assemblies: guide tube support pins
	2602	IV	RP-357	New Record	IV.B3.RP- 357		Incore instrumentation (ICI): ICI thimble tubes - lower
	2603	IV	RP-358	New Record	IV.B3.RP- 358		Core shroud assemblies (for bolted core shroud assemblies): (a) shroud plates and (b) former plates
	2604	IV	RP-359	New Record	IV.B3.RP- 359		Core shroud assemblies (welded): (shroud plates and (b) former plates
	1280	IV	RP-36	R-01	IV.D1.RP- 36	IV.D1-4(R-01)	Instrument penetrations and primary side nozzles; safe ends; welds
					IV.D2.RP-		Instrument penetrations and primary side nozzles;
Ĺ	1281	1 V	RP-36	R-01	36	IV.D2-2(R-01)	safe ends; welds

2605	IV	RP-360	New Record	IV.B3.RP- 360		Core shroud assembly (for welded core shrouds with full-height shroud plates): axial weld seams at the core shroud re-entrant corners, at the core mid- plane (+3 feet in height) as visible from the core side of the shroud
2606	IV	RP-361	New Record	IV.B3.RP- 361		Core shroud assembly (for welded core shrouds with full-height shroud plates): remaining axial welds, ribs, and rings
2607	IV	RP-362	New Record	IV.B3.RP- 362		Core support barrel assembly: lower cylinder welds
2608	IV	RP-363	New Record	IV.B3.RP- 363		Lower support structure: core support column
2609	IV	RP-364	New Record	IV.B3.RP- 364		Lower support structure: core support column
2610	IV	RP-365	New Record	IV.B3.RP- 365		Lower support structure: core support plate
2611	IV	RP-366	New Record	IV.B3.RP- 366		Lower support structure: deep beams (applicable assemblies with full height shroud plates)
00/0	N (IV.D1-6(RP-	Primary side components:
2612	IV	RP-367	RP-21	367	21)	divider plate

2613	IV	RP-368	R-34	IV.D1.RP- 368	IV.D1-12(R- 34)	#M#Steam generator components: upper and lower shell; transition cone; new transition cone closure weld#M#
2614	IV	RP-369	R-69	IV.A1.RP- 369	IV.A1-5(R-69)	#M#Penetrations: control rod drive stub tubes; in core monitor housings; jet pump instrument; standby liquid control; flux monitor#M#
1282	IV	RP-37	R-06	IV.C2.RP- 37	IV.C2-21(R- 06)	Pressurizer instrumentation penetrations; heater sheaths and sleeves; heater bundle diaphram plate; manways and flanges
2616	IV	RP-371	R-69	IV.A1.RP- 371	IV.A1-5(R-69)	#M#Penetrations: drain line#M#
2617	IV	RP-372	New Record	IV.D1.RP- 372		Steam generator components: shell assembly

2645	IV	RP-375	New Record	IV.B4.RP- 375		Core barrel assembly: internal baffle-to-baffle bolts
2010						
2646	IV	RP-376	New Record	IV.B4.RP- 376		Reactor vessel internal components
2647	IV	RP-377	New Record	IV.B1.RP- 377		Reactor vessel internals components: Jet pump wedge surface
2663	IV	RP-378	New Record	IV.E.RP- 378		Piping, piping components, and piping elements
2704	IV	RP-379	R-17	IV.A2.RP- 379	IV.A2-13(R- 17)	#M#External surfaces: reactor vessel top head and bottom head#M#
2705	IV	RP-380	R-17	IV.C2.RP- 380	IV.C2-9(R-17)	#M#External surfaces: reactor coolant pressure boundary piping or components adjacent to dissimilar metal (Alloy 82/182) welds#M#
2708	IV	RP-381	New Record	IV.B1.RP- 381		Reactor vessel internals components
2709	IV	RP-382	R-142	IV.B2.RP- 382	IV.B2-26(R- 142)	#M#Reactor vessel internals: core support structure#M#
2710	IV	RP-382	R-170	IV.B3.RP- 382	IV.B3-22(R- 170)	#M#Reactor vessel internals: core support structure#M#

2711	IV	RP-382	R-179	IV.B4.RP- 382	IV.B4-42(R- 179)	#M#Reactor vessel internals: core support structure#M#
2712	11.7	RP-383	New Record	IV.C2.RP- 383		Pressurizer relief tank: tank shell and heads; flanges; nozzles (non-ASME
2712	IV	RP-303	New Record	303		Section XI components)
2713	IV	RP-384	RP-14	IV.D1.RP- 384	IV.D1-14(RP- 14)	Steam generator structural: U-bend supports including anti-vibration bars
0744	N /			IV.D1.RP-		T. h., (a, (, h., a, h., a), a, (, a,), d.
2714	IV	RP-385	New Record	385		Tube-to-tube sheet welds
2725	IV	<u>RP-386</u>	New Record	IV.B2.RP- 386		Control rod guide tube (CRGT) assemblies: C- tubes and sheaths
2726	IV	RP-387	New Record	IV.B2.RP- 387		Core barrel assembly: core barrel axial welds
2727		RP-388	New Record	IV.B2.RP- 388		Core barrel assembly: core barrel axial welds
2121	I V	IXE-200	New Record	300		
1284	IV	RP-39	R-16	IV.C1.RP- 39	IV.C1-6(R-16)	Isolation condenser components

1285	IV	RP-40	R-24	IV.C2.RP- 40	IV.C2-17(R- 24)	Pressurizer: spray head
1200	10				<u> </u>	
4000	N /		D 04	IV.C2.RP-	IV.C2-17(R-	Description
1286	IV	RP-41	R-24	41	24)	Pressurizer: spray head
				IV.C1.RP-	IV.C1-12(R-	
1287	IV	RP-42	R-26	42	26)	#M#Closure bolting#M#
				IV.C1.RP-	IV.C1-10(R-	
1288	IV	RP-43	R-27	43	27)	#M#Closure bolting#M#
				IV.C1.RP-	IV.C1-11(R-	Pump and valve closure
1289	IV	RP-44	R-28	44	28)	bolting
				IV.D1.RP-	IV.D1-10(R-	
1291	IV	RP-46	R-32	46	32)	Closure bolting
				IV.D2.RP-		
1292	IV	RP-46	R-32	46	IV.D2-6(R-32)	Closure bolting
						#M#Primary side components: upper and
						lower heads, and tube
1293	IV/	RP-47	R-35	IV.D2.RP- 47	IV.D2-4(R-35)	sheet welds exposed to reactor coolant#M#
1293		111-47	1.00	7	IV.DZ-+(IX-33)	
				IV.D1.RP-	IV.D1-16(R-	Steam generator structural:
1294	IV	RP-48	R-41	48	41)	tube support lattice bars
						Upper assembly and
				IV.D1.RP-	IV.D1-26(R-	separators including: feedwater inlet ring and
1295	IV	RP-49	R-51	49	51)	support
						Top head enclosure (without cladding): top
						head; nozzles (vent, top
				IV.A1.RP-	IV.A1-11(R-	head spray or RCIC, and
1296	IV	RP-50	R-59	50	59)	spare)

1297	IV	RP-51	R-60	IV.A1.RP- 51	IV.A1-9(R-60)	Top head enclosure: closure studs and nuts
1298	IV	RP-52	R-71	IV.A2.RP- 52	IV.A2-2(R-71)	Closure head: stud assembly
1299	IV	RP-53	R-72	IV.A2.RP- 53	IV.A2-3(R-72)	Closure head: stud assembly
1300	IV	RP-54	R-73	IV.A2.RP- 54	IV.A2-4(R-73)	Closure head: stud assembly
1301	IV	RP-55	R-76	IV.A2.RP- 55	IV.A2-11(R- 76)	Control rod drive head penetration: pressure housing
1303	IV	RP-57	R-88	IV.A2.RP- 57	IV.A2-12(R- 88)	Core support pads; core guide lugs
1305	IV	RP-59	R-89	IV.A2.RP- 59	IV.A2-19(R- 89)	Penetrations: instrument tubes (bottom head)
680	V	E-01		V.D1.E-01	V.D1-15(E-01)	Partially-encased tanks with breached moisture barrier

681	V	E-02	V.E.E-02	V.E-6(E-02)	Closure bolting
682	V	E-03	V.E.E-03	V.E-3(E-03)	Closure bolting
761	V	E-07	V.D2.E-07	V.D2-31(E-07)	Piping, piping components, and piping elements
763	V	E-09	V.D2.E-09	V.D2-34(E-09)	Piping, piping components, and piping elements
764		E-10			Piping, piping components, and piping elements
765	V	E-11	V.D2.E-11	V.D2-20(E-11)	Piping, piping components, and piping elements
766	V	E-12	V.A.E-12	V.A-28(E-12)	Piping, piping components, and piping elements; tanks
767	V	E-12	V.D1.E-12	V.D1-31(E-12)	Piping, piping components, and piping elements; tanks
768	V	E-13	V.D1.E-13	V.D1-27(E-13)	Piping, piping components, and piping elements
700		5.04			
782	V	E-21	V.A.E-21	V.A-15(E-21)	Heat exchanger tubes
783	V	E-21	V.D1.E-21	V.D1-11(E-21)	Heat exchanger tubes
784	V	E-21	V.D2.E-21	V.D2-12(E-21)	Heat exchanger tubes
785	V	E-22	V.C.E-22	V.C-5(E-22)	Containment isolation piping and components (Internal surfaces)

786	V	E-23	V.D2.E-23	V.D2-15(E-23)	Heat exchanger tubes
787	V	E-24	V D1 E 24	V.D1-14(E-24)	Orifice (miniflow
101	V	⊏-24	V.D1.E-24	V.D1-14(⊏-24)	
788	V	E-25	V.B.E-25	V.B-1(E-25)	Ducting and components (Internal surfaces)
789	V	E-26	V.A.E-26	V.A-1(E-26)	Ducting, piping, and components (External surfaces)
790	V	E-26	V.B.E-26	V.B-3(E-26)	Ducting, piping, and components (External surfaces)
791	V	E-26	V.D2.E-26	V.D2-2(E-26)	Ducting, piping, and components (External surfaces)
792	V	E-27	V.D2.E-27	V.D2-17(E-27)	Piping and components (Internal surfaces)
793	V	E-28	V.A.E-28	V.A-4(E-28)	External surfaces
794	V	E-28	V.D1.E-28	V.D1-1(E-28)	External surfaces
795	V	E-28	V.E.E-28	V.E-9(E-28)	External surfaces
796	V	E-29	V.A.E-29	V.A-19(E-29)	Piping and components (Internal surfaces)
797	V	E-29	V.D2.E-29	V.D2-16(E-29)	Piping and components (Internal surfaces)
798	V	E-30	V.C.E-30	V.C-2(E-30)	Containment isolation piping and components (External surfaces)
801	V	E-34	V.C.E-34	V.C-3(E-34)	Containment isolation piping and components (Internal surfaces)

						Containment isolation
						piping and components
802	V	E-35		V.C.E-35	V.C-1(E-35)	(External surfaces)
002	•	2 00		V.O.L 00	V.O I(L 00)	
						Piping, piping components,
803	V	E-37		V.D2.E-37	V.D2-29(E-37)	and piping elements
						Safaty injection tank
804	V	E-38		V.D1.E-38	V.D1-33(E-38)	Safety injection tank
004	v			V.DT.L 00	V.D 1 00(E 00)	
805	V	E-40		V.B.E-40	V.B-2(E-40)	Ducting, closure bolting
806	V	E-41		V.E.E-41	V.E-2(E-41)	Bolting
808	V	E-43		V.A.E-43	V.A-18(E-43)	Motor cooler
000	V	L-40		V.A.L-43	V.A-10(L-43)	
809	V	E-43		V.D1.E-43	V.D1-13(E-43)	Motor cooler
810	V	E-44		V.E.E-44	V.E-7(E-44)	External surfaces
811	V	E-45		V.E.E-45	V.E-8(E-45)	External surfaces
011	v	L-40		V.L.L-7J	V.L-0(L-43)	
812	V	E-46		V.E.E-46	V.E-10(E-46)	External surfaces
0.40		E (7				Piping, piping components,
813	V	E-47		V.D1.E-47	V.D1-16(E-47)	and piping elements
						Piping, piping components,
815	V	EP-10		V.F.EP-10	V.F-3(EP-10)	and piping elements
010	-					
				V.A.EP-		
2330	V	EP-100	EP-39	100	V.A-11(EP-39)	Heat exchanger tubes
				V.D1.EP-	V.D2-18(EP-	Piping, piping components,
2379	V	EP-101	EP-2	101	2)	and piping elements
				V.B.EP-		Piping, piping components,
2533	V	EP-103	New Record	103		and piping elements; tanks
2000		00				and piping didnionito, tunito

				V.C.EP-		Piping, piping components,
2534	V	EP-103	New Record	103		and piping elements; tanks
0505		ED 400		V.D1.EP-		Piping, piping components,
2535	V	EP-103	New Record	103		and piping elements; tanks
				V.D2.EP-		Piping, piping components,
2536	V	EP-103	New Record	103		and piping elements; tanks
0550	N7			V.B.EP-		Piping, piping components,
2558	V	EP-107	New Record	107		and piping elements; tanks
				V.C.EP-		Piping, piping components,
2559	V	EP-107	New Record	107		and piping elements; tanks
0500	N7			V.D1.EP-		Piping, piping components,
2560	V	EP-107	New Record	107		and piping elements; tanks
				V.D2.EP-		Piping, piping components,
2561	V	EP-107	New Record	107		and piping elements; tanks
2583	V	EP-111	E-42	V.B.EP- 111	V.B-9(E-42)	Piping, piping components, and piping elements
2003	V		⊏-4∠	111	V.D-9(C-42)	and pipilig elements
0505	V					Piping, piping components,
2595	V	EP-112	EP-5	V.F.EP-112	V.F-17(EP-5)	and piping elements Drywell and suppression
						chamber spray system
				V.D2.EP-		(internal surfaces): flow
2621	V	EP-113	E-04	113	V.D2-1(E-04)	orifice; spray nozzles
				V.E.EP-		Piping, piping components,
2657	V	EP-114	New Record	114		and piping elements
						Piping, piping components,
2664	V	EP-115	New Record	V.F.EP-115		and piping elements
2004	•			V.I. LI - 110		and piping cicilicitis

2667	V	EP-116	New Record	V.E.EP- 116		Bolting
2007	v		New Record	110		Bolling
2670	v	EP-117	New Record	V.E.EP- 117		Bolting
				V.E.EP-		
2673	V	EP-118	New Record	118		Bolting
				V.E.EP-		
2676	V	EP-119	New Record	119		Bolting
						Piping, piping components,
816	V	EP-12		V.F.EP-12	V.F-5(EP-12)	and piping elements
0070	. <i>.</i>			V.E.EP-		D ///
2678	V	EP-120	New Record	120		Bolting
2680	V	EP-121	New Record	V.E.EP- 121		Bolting
				V.E.EP-		
2682	V	EP-122	New Record	122		Bolting
						Ducting, piping, and
745	V	EP-14		V.F.EP-14	V.F-1(EP-14)	components
746	V	EP-15		V.F.EP-15	V.F-6(EP-15)	Piping elements
747	V					Dining elemente
747	V	EP-16		V.F.EP-16	V.F-7(EP-16)	Piping elements
						Piping, piping components,
748	V	EP-17		V.F.EP-17	V.F-11(EP-17)	and piping elements
						Piping, piping components,
635	V	EP-18		V.F.EP-18	V.F-12(EP-18)	and piping elements
						Piping, piping components,
636	V	EP-19		V.F.EP-19	V.F-13(EP-19)	and piping elements
						Piping, piping components,
638	V	EP-20		V.F.EP-20	V.F-14(EP-20)	and piping elements

639	V	EP-22	V.F.EP-22	V.F-15(EP-22)	Piping, piping components, and piping elements
643	V	EP-27	V.A.EP-27	V.A-22(EP-27)	Piping, piping components, and piping elements
644	V	EP-27	V.B.EP-27	V.B-7(EP-27)	Piping, piping components, and piping elements
645		EP-27	V.D1.EP- 27	V.D1-19(EP- 27)	Piping, piping components, and piping elements
646		EP-27	 V.D2.EP- 27	V.D2-23(EP- 27)	Piping, piping components, and piping elements
647		EP-28	V.F.EP-28	V.F-8(EP-28)	Piping elements
648	V	EP-29	V.F.EP-29	V.F-10(EP-29)	Piping elements
649	V	EP-3	V.F.EP-3	V.F-2(EP-3)	Piping, piping components, and piping elements
650	V	EP-30	V.F.EP-30	V.F-9(EP-30)	Piping elements
435	V	EP-37	V.A.EP-37	V.A-6(EP-37)	Heat exchanger components
436	V	EP-37	V.B.EP-37	V.B-5(EP-37)	Heat exchanger components
437	V	EP-37	V.D1.EP- 37	V.D1-3(EP- 37)	Heat exchanger components
438	V	EP-37	V.D2.EP- 37	V.D2-4(EP- 37)	Heat exchanger components
439	v	EP-38	V.E.EP-38		Piping, piping components, and piping elements
839		EP-4	V.F.EP-4	V.F-16(EP-4)	Piping, piping components, and piping elements
843		EP-41	V.A.EP-41		Piping, piping components, and piping elements; tanks
844		EP-41	V.D1.EP- 41	V.D1-30(EP- 41)	Piping, piping components, and piping elements; tanks

845	V	EP-42		V.A.EP-42	V.A-2(EP-42)	Encapsulation components
846	v	EP-43		V.A.EP-43	V.A-3(EP-43)	Encapsulation components
	·	1. 10				
370	V	EP-49		V.D1.EP- 49	V.D1-32(EP- 49)	Pump casings
850	V	EP-52		V.D1.EP- 52	V.D1-20(EP- 52)	Piping, piping components, and piping elements
853	V	EP-54		V.B.EP-54	V.B-8(EP-54)	Piping, piping components, and piping elements
854	V	EP-54		V.D1.EP- 54	V.D1-21(EP- 54)	Piping, piping components, and piping elements
855	V	EP-54		V.D2.EP- 54	V.D2-24(EP- 54)	Piping, piping components, and piping elements
856	V	EP-55		V.D1.EP- 55	V.D1-25(EP- 55)	Piping, piping components, and piping elements
1423	V	EP-58	E-06	V.B.EP-58	V.B-4(E-06)	Elastomer seals and components
1424	V	EP-59	E-06	V.B.EP-59	V.B-4(E-06)	Elastomer seals and components
1425	V	EP-60	E-08	V.D2.EP- 60	V.D2-33(E-08)	Piping, piping components, and piping elements
1426	V	EP-61	E-14	V.D2.EP- 61	V.D2-35(E-14)	Piping, piping components, and piping elements (Internal surfaces)
1427		EP-62	E-31		V.C-6(E-31)	Containment isolation piping and components (Internal surfaces)

						Containment isolation
						piping and components
1428	V	EP-63	E-33	V.C.EP-63	V.C-4(E-33)	(Internal surfaces)
1429	v	EP-64	EP-1	V.E.EP-64	V.E-1(EP-1)	Bolting
1430	V	EP-65	New Record	V.F.EP-65		Piping elements
1433	V	EP-66	New Record	V.F.EP-66		Piping elements
1436	V	EP-67	New Record	V.F.EP-67		Piping elements
1439	V	EP-68	New Record	V.F.EP-68		Piping elements
1400	v			V.I .LI -00		
1441	V	EP-69	EP-24	V.E.EP-69	V.E-5(EP-24)	Closure bolting
						Piping, piping components,
857	V	EP-7		V.F.EP-7	V.F-18(EP-7)	and piping elements
1442	V	EP-70	EP-25	V.E.EP-70	V.E-4(EP-25)	Closure bolting
						elecane celang
				V.D2.EP-	V.D2-19(EP-	Piping, piping components,
1443	V	EP-71	EP-26	71	26)	and piping elements
				V.D1.EP-	V.D1-26(EP-	Piping, piping components,
1444	V	EP-72	EP-31	72	31)	and piping elements
1445	V				V.D2-27(EP-	Piping, piping components,
1445	V	EP-72	EP-31	72	31)	and piping elements
				V.D2.EP-	V.D2-28(EP-	Piping, piping components,
1446	V	EP-73	EP-32	73	32)	and piping elements
1447	V	EP-74	EP-34	V.A.EP-74	V.A-16(FP-34)	Heat exchanger tubes
1-7-77	•					rieut oxonunger tubeo
				V.D2.EP-	V.D2-13(EP-	
1448	V	EP-74	EP-34	74	34)	Heat exchanger tubes
1449	V	EP-75	EP-40	V.A.EP-75	V.A-17(EP-40)	Heat exchanger tubes
						, j
4450	\ /		FD 40	V.D1.EP-	V.D1-12(EP-	
1450	V	EP-75	EP-40	75	40)	Heat exchanger tubes

1451	V	EP-75	EP-40	V.D2.EP- 75	V.D2-14(EP- 40)	Heat exchanger tubes
1452	v	EP-76	EP-45	V.A.EP-76	V.A-21(EP-45)	Piping, piping components, and piping elements
1453	v	EP-76	EP-45	V.D1.EP- 76	V.D1-19(EP- 45)	Piping, piping components, and piping elements
1454		EP-76	EP-45	V.D2.EP- 76	V.D2-22(EP- 45)	Piping, piping components, and piping elements
						Piping, piping components,
1455	V	EP-77	EP-46	V.A.EP-77	V.A-25(EP-46)	and piping elements
1456	V	EP-77	EP-46	V.D1.EP- 77	V.D1-28(EP- 46)	Piping, piping components, and piping elements
1457	V	EP-77	EP-46	V.D2.EP- 77	V.D2-30(EP- 46)	Piping, piping components, and piping elements
1458	V	EP-78	EP-47	V.A.EP-78	V.A-12(EP-47)	Heat exchanger tubes
1459	V	EP-78	EP-47	V.D1.EP- 78	V.D1-8(EP- 47)	Heat exchanger tubes
1460	V	EP-78	EP-47	V.D2.EP- 78	V.D2-9(EP- 47)	Heat exchanger tubes
1461	V	EP-79	EP-50	V.A.EP-79	V.A-14(EP-50)	Heat exchanger tubes
1462	V	EP-79	EP-50	V.D1.EP- 79	V.D1-10(EP- 50)	Heat exchanger tubes
1463	V	EP-79	EP-50	V.D2.EP- 79	V.D2-11(EP- 50)	Heat exchanger tubes
1464	V	EP-80	EP-51	V.D1.EP- 80	V.D1-24(EP- 51)	Piping, piping components, and piping elements
1465	V	EP-81	EP-53	V.A.EP-81		Piping, piping components, and piping elements (Internal surfaces); tanks

1466	V	EP-81	EP-53	V.D1.EP- 81	V.D1-29(EP- 53)	Piping, piping components, and piping elements (Internal surfaces); tanks
1510	V	EP-82	New Record	V.F.EP-82		Piping, piping components, and piping elements
1818	V	EP-87	New Record	V.F.EP-87		Piping elements
858	V	EP-9		V.F.EP-9	V.F-4(EP-9)	Piping, piping components, and piping elements
1873	V	EP-90	E-18	V.A.EP-90	V.A-10(E-18)	Heat exchanger components
1874	V	EP-90	E-18	V.D1.EP- 90	V.D1-7(E-18)	Heat exchanger components
1875	V	EP-90	E-18	V.D2.EP- 90	V.D2-8(E-18)	Heat exchanger components
1876	V	EP-91	E-20	V.A.EP-91	V.A-8(E-20)	Heat exchanger components
1877	V	EP-91	E-20	V.D1.EP- 91	V.D1-5(E-20)	Heat exchanger components

1878	V	EP-91	E-20	V.D2.EP- 91	V.D2-6(E-20)	Heat exchanger components
2305	V	EP-92	E-17	V.A.EP-92	V.A-9(E-17)	Heat exchanger components
2306	V	EP-92	E-17	V.D1.EP- 92	V.D1-6(E-17)	Heat exchanger components
2307	V	EP-92	E-17	V.D2.EP- 92	V.D2-7(E-17)	Heat exchanger components
2308	V	EP-93	E-19	V.A.EP-93	V.A-7(E-19)	Heat exchanger components
2309	V	EP-93	E-19	V.D1.EP- 93	V.D1-4(E-19)	Heat exchanger components
2310	V	EP-93	E-19	V.D2.EP- 93	V.D2-5(E-19)	Heat exchanger components
2311	V	EP-94	EP-13	V.A.EP-94	V.A-5(EP-13)	Heat exchanger components
2312	V	EP-94	EP-13	V.D1.EP- 94	V.D1-2(EP- 13)	Heat exchanger components
2313	V	EP-94	EP-13	V.D2.EP- 94	V.D2-3(EP- 13)	Heat exchanger components
2314	V	EP-95	EP-33	V.A.EP-95	V.A-23(EP-33)	Piping, piping components, and piping elements
2315	V	EP-95	EP-33	V.C.EP-95	V.C-7(EP-33)	Piping, piping components, and piping elements
2316	V	EP-95	EP-33	V.D1.EP- 95	V.D1-22(EP- 33)	Piping, piping components, and piping elements
2317	V	EP-95	EP-33	V.D2.EP- 95	V.D2-25(EP- 33)	Piping, piping components, and piping elements

2318	V	EP-96	EP-35	V.A.EP-96	V.A-13(EP-35)	Heat exchanger tubes
2319		EP-96	EP-35	V.D1.EP- 96	V.D1-19(EP- 35)	Heat exchanger tubes
2320		EP-96	EP-35	V.D2.EP- 96	V.D2-10(EP- 35)	Heat exchanger tubes
	•					Piping, piping components,
2321	V	EP-97	EP-36	V.A.EP-97	V.A-20(EP-36)	and piping elements
2322	V	EP-97	EP-36	V.B.EP-97	V.B-6(EP-36)	Piping, piping components, and piping elements
2323	V	EP-97	EP-36	V.D1.EP- 97	V.D1-17(EP- 36)	Piping, piping components, and piping elements
2324	V	EP-97	EP-36	V.D2.EP- 97	V.D2-21(EP- 36)	Piping, piping components, and piping elements
2325	V	EP-98	EP-44	V.A.EP-98	V.A-24(EP-44)	Piping, piping components, and piping elements
2326	V	EP-98	EP-44	V.C.EP-98	V.C-8(EP-44)	Piping, piping components, and piping elements
2327	V	EP-98	EP-44	V.D1.EP- 98	V.D1-23(EP- 44)	Piping, piping components, and piping elements
2328	V	EP-98	EP-44	V.D2.EP- 98	V.D2-26(EP- 44)	Piping, piping components, and piping elements
2329	V	EP-99	EP-48	V.C.EP-99	V.C-9(EP-48)	Piping, piping components, and piping elements

863	VI	L-05		VI.B.L-05	VI.B-1(L-05)	Electrical equipment subject to 10 CFR 50.49 EQ requirements
						#M#Fuse holders (not part
1271	VI	LP-23	LP-01	VI.A.LP-23	VI.A-8(LP-01)	of active equipment): metallic clamps#M#
1272	VI	<u>LP-24</u>	<u>LP-02</u>	VI.A.LP-24	VI.A-7(LP-02)	#M#Fuse holders (not part of active equipment): insulation material#M#
1273	VI	LP-25	LP-04	VI.A.LP-25	VI.A-11(LP- 04)	Metal enclosed bus: bus/connections

					VI.A-14(LP-	Metal enclosed bus:
1274	VI	LP-26	LP-05	VI.A.LP-26	05)	insulation; insulators
1276	VI	LP-28	LP-07	VI.A.LP-28	VI.A-9(LP-07)	High-voltage insulators
					VI.A-12(LP-	Metal enclosed bus:
1277	VI	LP-29	LP-10	VI.A.LP-29	10)	enclosure assemblies
						Cable connections
1278	VI	LP-30	LP-12	VI.A.LP-30	VI.A-1(LP-12)	(metallic parts)
						Fuse holders (not part of
1279	VI	LP-31	LP-01	VI.A.LP-31	VI.A-8(LP-01)	active equipment): metallic clamps

1879	VI	LP-32	LP-11	VI.A.LP-32	VI.A-10(LP- 11)	High-voltage insulators
1880	VI	LP-33	L-01	VI A I P-33	VI.A-2(L-01)	#M#Insulation material for electrical cables and connections (including terminal blocks, fuse holders, etc.)#M#
1000				V1.7 (.E) 00		
						#M#Insulation material for electrical cables and connections used in instrumentation circuits that are sensitive to
1881	VI	LP-34	L-02		VI.A-3(L-02)	reduction in conductor insulation resistance (IR)#M#
						#M#Conductor insulation for inaccessible power cables greater than or equal to 480 volts (e.g., installed in conduit or
1882	VI	LP-35	L-03	VI.A.LP-35	VI.A-4(L-03)	direct buried)#M#
1883	VI	LP-36	L-04	VI.A.LP-36	VI.A-5(L-04)	Connector contacts for electrical connectors exposed to borated water leakage
1885	VI	LP-38	LP-08	VI.A.LP-38	VI.A-16(LP- 08)	#M#Transmission conductors#M#

					VI.A-15(LP-	Switchyard bus and
1886	VI	LP-39	LP-09	VI.A.LP-39	09)	connections
						Metal enclosed bus:
2302	M	LP-41	LP-06	VI.A.LP-41	VI.A-13(LP- 06)	external surface of enclosure assemblies
2302	VI			VI.A.LF -41	00)	Metal enclosed bus:
					VI.A-13(LP-	external surface of
2303	VI	LP-42	LP-06	VI.A.LP-42		enclosure assemblies
					,	
						Metal enclosed bus:
					VI.A-13(LP-	external surface of
2304	VI	LP-43	LP-06	VI.A.LP-43	06)	enclosure assemblies
						Metal enclosed bus:
2520	M				VI.A-13(LP-	external surface of
2530	VI	LP-44	LP-06	VI.A.LP-44	06)	enclosure assemblies
					VI.A-16(LP-	
2622	VI	LP-46	LP-08	VI.A.LP-46	08)	Transmission conductors
					VI.A-16(LP-	
2623	VI	LP-47	LP-08	VI.A.LP-47	08)	Transmission conductors
					VI.A-16(LP-	
2702	VI	LP-48	LP-08	VI.A.LP-48	08)	Transmission connectors
2102	VI			V1.7 (. El 40	00)	
					VII.C1-12(A-	Piping, piping components,
162	VII	A-02		VII.C1.A-02		and piping elements
						Piping, piping components,
163	VII	A-02		VII.C3.A-02	VII.C3-5(A-02)	and piping elements
						Piping, piping components,
164	VII	A-02		VII.G.A-02	VII G-15(A-02)	and piping elements
104	VII	/ - OL		VII.O.A-02	VII.C=10(A=02)	and piping cicilients
						Piping, piping components,
165	VII	A-02		VII.H1.A-02	VII.H1-5(A-02)	and piping elements
					VII.H2-15(A-	Piping, piping components,
39	VII	A-02		VII.H2.A-02	02)	and piping elements
40	VII	A 03				Closure bolting
40	VII	A-03		VII.I.A-03	VII.I-6(A-03)	Closure bolting

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	41	VII	A-04	VII.I.A-04	VII.I-3(A-04)	Closure bolting
	42	VII	A-05	VII.B.A-05	VII.B-1(A-05)	Cranes - rails
	43	VII	A-06	VII.B.A-06	VII.B-2(A-06)	Cranes: structural girders
	10		7100	VII.B., (00	2(1100)	
	11	VII	A 07			Cranes: rails and structural
	44	VII	A-07	VII.B.A-07	VII.B-3(A-07)	girders
	45	VII	A-08	VII.F1.A-08	VII.F1-3(A-08)	Ducting and components (Internal surfaces)
						Ducting and components
	46	VII	A-08	VII.F2.A-08	VII.F2-3(A-08)	(Internal surfaces)
						Ducting and components
	47	VII	A-08	VII.F3.A-08	VII.F3-3(A-08)	(Internal surfaces)
	10	VII	A-08			Ducting and components (Internal surfaces)
	40	VII	A-00	VII.1 4.A-00	VII.I 4-2(A-00)	(internal sunaces)

52	VII	A-10		VII.F1.A-10	VII.F1-2(A-10)	Ducting and components (External surfaces)
53	VII	A-10		VII.F2.A-10	VII.F2-2(A-10)	Ducting and components (External surfaces)
54	VII	A-10		VII.F3.A-10	VII.F3-2(A-10)	Ducting and components (External surfaces)
55	VII	A-10				Ducting and components (External surfaces)
56	VII	A-100		VII.E1.A- 100	VII.E1-4(A- 100)	Heat exchanger components and tubes
57	VII	A-102		VII.I.A-102	VII.I-2(A-102)	Bolting
208	VII	A-105		VII.F1.A- 105	VII.F1-4(A- 105)	Ducting; closure bolting
209	VII	A-105		VII.F2.A- 105	VII.F2-4(A- 105)	Ducting; closure bolting
210	VII	A-105		VII.F3.A- 105	VII.F3-4(A- 105)	Ducting; closure bolting
211	VII	A-105		VII.F4.A- 105	VII.F4-3(A- 105)	Ducting; closure bolting
212	VII	A-105		VII.I.A-105	VII.I-7(A-105)	Ducting; closure bolting
223		A-19	A-19	VII.G.A-19	VII.G-1(A-19)	Fire barrier penetration seals
223	VII	A-19	<u>A-19</u>	VII.G.A-19	VII.G-1(A-19)	Fire barrier penetration
224		A-20	A-20		VII.G-2(A-20)	seals
225 226		A-21 A-22		VII.G.A-21 VII.G.A-22	VII.G-3(A-21) VII.G-4(A-22)	Fire rated doors Fire rated doors

					Piping, piping components,
227	VII	A-23	VII.G.A-23	VII.G-23(A-23)	and piping elements
228	VII	A-23	VII.H2.A-23		Piping, piping components, and piping elements
229	VII	A-24	VII.H1.A-24	VII.H1-8(A-24)	Piping, piping components, and piping elements
236	VII	A-26	VII.D.A-26	VII.D-2(A-26)	Piping, piping components, and piping elements: compressed air system
	VII	A-33			Piping, piping components, and piping elements
100	VII	A-34	VII.E1.A-34	VII.E1-18(A- 34)	Piping, piping components, and piping elements
101	VII	A-34	VII.E3.A-34		Piping, piping components, and piping elements
3	VII	A-47	VII.C1.A-47	VII.C1-10(A- 47)	Piping, piping components, and piping elements
4	VII	A-47	VII.C3.A-47	VII.C3-3(A-47)	Piping, piping components, and piping elements
5	VII	A-47	VII.G.A-47	VII.G-13(A-47)	Piping, piping components, and piping elements
6	VII	A-47	VII.H2.A-47	VII.H2-13(A- 47)	Piping, piping components, and piping elements
193	VII	A-50	VII.C2.A-50	VII.C2-8(A-50)	Piping, piping components, and piping elements

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	194	VII	A-50	VII.F3.A-50	VII.F3-18(A- 50)	Piping, piping components, and piping elements
	195	VII	A-51	VII.C1.A-51	VII.C1-11(A- 51)	Piping, piping components, and piping elements
	196	VII	A-51	VII.C3.A-51	VII.C3-4(A-51)	Piping, piping components, and piping elements
	197	VII	A-51	VII.G.A-51	VII.G-14(A-51)	Piping, piping components, and piping elements
	198	VII	A-51	VII.H2.A-51	VII.H2-14(A- 51)	Piping, piping components, and piping elements
	199	VII	A-52	VII.C2.A-52	VII.C2-10(A- 52)	Piping, piping components, and piping elements
	200	VII	A-53	VII.C3.A-53	VII.C3-7(A-53)	Piping, piping components, and piping elements
	201	VII	A-54	VII.C1.A-54	VII.C1-15(A- 54)	Piping, piping components, and piping elements
	202	VII	A-55	VII G A-55	VII G-19(A-55)	Piping, piping components, and piping elements
	203		A-56		VII.A3-10(A-	Piping, piping components, and piping elements
	204	VII	A-57	VII.E1.A-57	VII.E1-16(A- 57)	Piping, piping components, and piping elements
	117	VII	A-61	VII.E4.A-61	VII.E4-15(A- 61)	Piping, piping components, and piping elements
	118	VII	A-62	VII.E3.A-62	VII.E3-14(A- 62)	Piping, piping components, and piping elements
					/	

				VII.E4-13(A-	Piping, piping components,
119	VII	A-62	VII.E4.A-62		and piping elements
					Heat eveloper
65	VII	A-66	VII.C1.A-66	VII.C1-4(A-66)	Heat exchanger components
					Llastevehenser
					Heat exchanger components, non-
69	VII	A-69	VII.E1.A-69	VII.E1-9(A-69)	
72	VII	A-72	VII.C1.A-72	VII.C1-6(A-72)	#M#Heat exchanger tubes#M#
246	\/II	A 77			
246	VII	A-77	VII.I.A-77	VII.I-8(A-77)	External surfaces
247	VII	A-78	VII.I.A-78	VII.I-9(A-78)	External surfaces
248	VII	A-79	VII.A3.A-79	VII.A3-2(A-79)	External surfaces
249	VII	A-79	VII.E1.A-79	VII.E1-1(A-79)	External surfaces
250	VII	A-79	VII.I.A-79	VII.I-10(A-79)	External surfaces
200	7				
05.1					Piping and components
251	VII	A-80	VII.D.A-80	VII.D-3(A-80)	(External surfaces)
252	VII	A-81	VII.I.A-81	VII.I-11(A-81)	External surfaces
					Spent fuel storage racks:
					neutron-absorbing sheets
257	VII	A-86	VII.A2.A-86	VII.A2-4(A-86)	(PWR)
					Spent fuel storage racks:
					neutron-absorbing sheets
258	VII	A-87	VII.A2.A-87	VII.A2-2(A-87)	(BWR)

261	VII	A-90			V/II G-28(A-90)	Structural fire barriers: walls, ceilings and floors
201	VII	<u>A-30</u>		VII.O.A-30	VII.O-20(A-30)	
262	VII	A-91		VII.G.A-91	VII.G-29(A-91)	Structural fire barriers: walls, ceilings and floors
	\ /II					Structural fire barriers:
263	VII	A-92		VII.G.A-92	VII.G-30(A-92)	walls, ceilings and floors
264	1/11	A-93				Structural fire barriers: walls, ceilings and floors
204	VII	A-93		VII.G.A-95	VII.G-31(A-93)	wails, cellings and hoors
265	VII	A-94		VII.A1.A-94	VII.A1-1(A-94)	Structural steel
	х <i>и</i> ц				VII.H1-11(A-	- 1
266	VII	A-95		VII.H1.A-95	95)	Tanks
267	\/11	A-96			VII.A2-6(A-96)	Spent fuel storage racks
207	VII	A-90		VII.AZ.A-90	VII.A2-0(A-90)	
268	VII	A-97		VII.A2.A-97	VII.A2-7(A-97)	Spent fuel storage racks (PWR)
269	VII	AP-1		VII.A3.AP- 1	VII.A3-4(AP-1)	Piping, piping components, and piping elements
				VII.E1.AP-	VII.E1-10(AP-	Piping, piping components,
270	VII	AP-1		1	1)	and piping elements
4.470	N/11		A 45	VII.A3.AP-		
1470	VII	AP-100	A-15	100	VII.A3-1(A-15)	Elastomers, linings
1471	VII	AP-101	A-16	VII.A4.AP- 101	VII.A4-1(A-16)	Elastomers, linings
				VII.F1.AP-		Elastomer: seals and
1472	VII	AP-102	A-17	102	VII.F1-7(A-17)	components

				VII.F2.AP-		Elastomer: seals and
1473	VII	AP-102	A-17	102	VII.F2-7(A-17)	components
				VII.F3.AP-		Elastomer: seals and
1474	VII	AP-102	A-17	102	VII.F3-7(A-17)	components
1475	VII	AP-102	A-17	VII.F4.AP- 102	VII.F4-6(A-17)	Elastomer: seals and
1475	VII	AF-102	A-17	102	VII.F4-0(A-17)	components
1477	VII	AP-103	A-18	VII.F1.AP- 103	VII.F1-6(A-18)	Elastomer: seals and components
		/ 100				
				VII.F2.AP-		Elastomer: seals and
1478	VII	AP-103	A-18	103	VII.F2-6(A-18)	
				VII.F3.AP-		Elastomer: seals and
1479	VII	AP-103	A-18	103	VII.F3-6(A-18)	
				VII.F4.AP-		Elastomer: seals and
1480	VII	AP-103	A-18	103	VII.F4-5(A-18)	components
						Piping, piping components,
				VII.H2.AP-		and piping elements, diesel
1481	VII	AP-104	A-27	104	VII.H2-2(A-27)	engine exhaust
				VII.H1.AP-	VII.H1-10(A-	Piping, piping components,
1482	VII	AP-105	A-30	105	30)	and piping elements; tanks
				VII.H2.AP-	VII.H2-24(A-	Piping, piping components,
1483	VII	AP-105	A-30	105	30)	and piping elements; tanks
				VII.E3.AP-	VII.E3-18(A-	Piping, piping components,
1484	VII	AP-106	A-35	106	35)	and piping elements

1485	VII	AP-106	A-35	VII.E4.AP- 106	VII.E4-17(A- 35)	Piping, piping components, and piping elements
		711 100	7.00			
1486	VII	AP-107	A-39	VII.A3.AP- 107	VII.A3-9(A-39)	Piping, piping components, and piping elements
1487	VII	AP-108	A-40	VII.A4.AP- 108	VII.A4-12(A- 40)	Piping, piping components, and piping elements
1488	VII	AP-109	A-46	VII.F1.AP- 109	VII.F1-16(A- 46)	Piping, piping components, and piping elements
1489	VII	AP-109	A-46	VII.F2.AP- 109	VII.F2-14(A- 46)	Piping, piping components, and piping elements
1490		AP-109	A-46	VII.F3.AP- 109	VII.F3-16(A-	Piping, piping components, and piping elements
				VII.F4.AP-	46) VII.F4-12(A-	Piping, piping components,
271		AP-109 AP-11	<u>A-46</u>	109 VII.J.AP-11	46) VII.J-5(AP-11)	and piping elements Piping, piping components, and piping elements
1492	VII	AP-110	A-58	VII.A4.AP- 110	VII.A4-11(A- 58)	Piping, piping components, and piping elements
1493	VII	AP-110	A-58	VII.E3.AP- 110	VII.E3-15(A- 58)	Piping, piping components, and piping elements
1494	VII	AP-110	A-58	VII.E4.AP- 110	VII.E4-14(A- 58)	Piping, piping components, and piping elements
1495	VII	AP-111	A-70	VII.A4.AP- 111	VII.A4-2(A-70)	Heat exchanger components
1496	VII	AP-112	A-71	VII.E3.AP- 112	VII.E3-3(A-71)	Heat exchanger components

1497	VII	AP-113	A-73	VII.F1.AP- 113	VII.F1-5(A-73)	Elastomer: seals and components
1498	VII	AP-113	A-73	VII.F2.AP- 113	VII.F2-5(A-73)	Elastomer: seals and components
1499	VII	AP-113	A-73	VII.F3.AP- 113	VII.F3-5(A-73)	Elastomer: seals and components
1500	VII	AP-113	A-73	VII.F4.AP- 113	VII.F4-4(A-73)	Elastomer: seals and
1501		AP-114	A-76	VII.E1.AP- 114	VII.E1-7(A-76)	High-pressure pump, casing
1502		AP-115	A-76	VII.E1.AP- 115	VII.E1-7(A-76)	High-pressure pump, casing
				VII.G.AP-		Reactor coolant pump oil
1503	VII	AP-116	A-82	116	VII.G-27(A-82)	collection system: tanks
1504	VII	AP-117	A-83	VII.G.AP- 117	VII.G-26(A-83)	Reactor coolant pump oil collection system: piping, tubing, valve bodies
1505	VII	AP-118	A-84	VII.E1.AP- 118	VII.E1-5(A-84)	Heat exchanger components
1506	VII	AP-119	New Record	VII.E1.AP- 119		Heat exchanger components and tubes
1507	VII	AP-120	A-85	VII.E3.AP- 120	VII.E3-19(A- 85)	Regenerative heat exchanger components
1508	VII	AP-121	A-103	VII.D.AP- 121	VII.D-1(A-103)	Closure bolting
1509	VII	AP-122	A-104	VII.E1.AP- 122	VII.E1-8(A- 104)	High-pressure pump, closure bolting
				VII.J.AP-	,	Piping, piping components,
1511	VII	AP-123	New Record	123		and piping elements
1512	VII	AP-124	AP-26	VII.I.AP- 124	VII.I-5(AP-26)	Closure bolting

1513	1/11	AP-125	AP-27	VII.I.AP- 125		Closure bolting
1010	VII	AF-120	AF-21	125	VII.I-4(AF-27)	
1514	VII	AP-126	AP-28	VII.I.AP- 126	VII.I-1(AP-28)	Polting
1314	VII	AF-120	AF-20	120	VII.I-1(AF-20)	Doning
1515	VII	AP-127	AP-30	VII.C1.AP- 127	VII.C1-17(AP- 30)	Piping, piping components, and piping elements
1516	VII	AP-127	AP-30	VII.C2.AP- 127	VII.C2-13(AP- 30)	Piping, piping components, and piping elements
1517	VII	AP-127	AP-30	VII.E1.AP- 127	VII.E1-19(AP- 30)	Piping, piping components, and piping elements
1518		AP-127	AP-30	VII.E4.AP- 127		Piping, piping components,
1010	VII	AF-127	AF-30	127	30)	and piping elements
1519	VII	AP-127	AP-30	VII.F1.AP- 127	VII.F1-19(AP- 30)	Piping, piping components, and piping elements
1520	VII	AP-127	AP-30	VII.F2.AP- 127	VII.F2-17(AP- 30)	Piping, piping components, and piping elements
1521	VII	AP-127	AP-30	VII.F3.AP- 127	VII.F3-19(AP- 30)	Piping, piping components, and piping elements
1522	VII	AP-127	AP-30	VII.F4.AP- 127	VII.F4-15(AP- 30)	Piping, piping components, and piping elements
1523	VII	AP-127	AP-30	VII.G.AP- 127	VII.G-22(AP- 30)	Piping, piping components, and piping elements
1524	VII	AP-127	AP-30	VII.H2.AP- 127	VII.H2-20(AP- 30)	Piping, piping components, and piping elements
						Diesel engine exhaust
1525	VII	AP-128	AP-33	VII.H2.AP- 128	VII.H2-1(AP- 33)	piping, piping components, and piping elements

1526	VII	AP-129	AP-35	VII.H1.AP- 129	VII.H1-1(AP- 35)	Piping, piping components, and piping elements
1527	VII	AP-129	AP-35	VII.H2.AP- 129	VII.H2-7(AP- 35)	Piping, piping components, and piping elements
176	VII	AP-13		VII.J.AP-13	VII.J-6(AP-13)	Piping, piping components, and piping elements
1528	VII	AP-130	AP-38	VII.A4.AP- 130	VII.A4-5(AP- 38)	Piping, piping components, and piping elements
1529	VII	AP-130	AP-38	VII.E3.AP- 130	VII.E3-7(AP- 38)	Piping, piping components, and piping elements
1530	VII	AP-130	AP-38	VII.E4.AP- 130	VII.E4-4(AP- 38)	Piping, piping components, and piping elements
1531	VII	AP-131	AP-39	VII.H2.AP- 131	VII.H2-5(AP- 39)	Heat exchanger components
1532	VII	AP-132	AP-44	VII.G.AP- 132	VII.G-10(AP- 44)	Piping, piping components, and piping elements
1533	VII	AP-132	AP-44	VII.H1.AP- 132	VII.H1-3(AP- 44)	Piping, piping components, and piping elements
1534	VII	AP-132	AP-44	VII.H2.AP- 132	VII.H2-9(AP- 44)	Piping, piping components, and piping elements
1535	VII	AP-133	AP-47	VII.C1.AP- 133	VII.C1-8(AP- 47)	Piping, piping components, and piping elements
1536	VII	AP-133	AP-47	VII.C2.AP- 133	VII.C2-5(AP- 47)	Piping, piping components, and piping elements

1537	VII	AP-133	AP-47	VII.E1.AP- 133	VII.E1-12(AP- 47)	Piping, piping components, and piping elements
1538	VII	AP-133	AP-47	VII.E4.AP- 133	VII.E4-6(AP- 47)	Piping, piping components, and piping elements
1539	VII	AP-133	AP-47	VII.G.AP- 133	VII.G-11(AP- 47)	Piping, piping components, and piping elements
1540	VII	AP-133	AP-47	VII.H2.AP- 133	VII.H2-10(AP- 47)	Piping, piping components, and piping elements
1541	VII	AP-134	New Record	VII.J.AP- 134		Piping, piping components, and piping elements
1542	VII	AP-135	New Record	VII.J.AP- 135		Piping, piping components, and piping elements
1543	MI	AP-136	AP-54	VII.G.AP- 136	VII.G-17(AP- 54)	Piping, piping components, and piping elements
1040		711 100				
1544	VII	AP-136	AP-54	VII.H1.AP- 136	VII.H1-6(AP- 54)	Piping, piping components, and piping elements
1545	VII	AP-136	AP-54	VII.H2.AP- 136	VII.H2-16(AP- 54)	Piping, piping components, and piping elements
1546	VII	AP-137	AP-56	VII.C1.AP- 137	VII.C1-16(AP- 56)	Piping, piping components, and piping elements
1547	VII	AP-137	AP-56	VII.C3.AP- 137	VII.C3-8(AP- 56)	Piping, piping components, and piping elements
1548	VII	AP-137	AP-56	VII.G.AP- 137	VII.G-20(AP- 56)	Piping, piping components, and piping elements
1549	VII	AP-137	AP-56	VII.H1.AP- 137	VII.H1-7(AP- 56)	Piping, piping components, and piping elements
1550	VII	AP-137	AP-56	VII.H2.AP- 137	VII.H2-19(AP- 56)	Piping, piping components, and piping elements

						Piping, piping components,
1551	VII	AP-138	AP-59	138	59)	and piping elements
					VII.C2-12(AP-	
1552	VII	AP-138	AP-59	138	59)	and piping elements
					VII.E1-15(AP-	Dining nining components
1553	VII	AP-138	AP-59	VII.E1.AP- 138	59)	Piping, piping components, and piping elements
					· · · ·	
					VII.E4-12(AP-	Piping, piping components,
1554	VII	AP-138	AP-59	138	59)	and piping elements
						_
1555	VII	AP-138	AP-59	VII.G.AP- 138	VII.G-18(AP- 59)	Piping, piping components, and piping elements
				VII.H2.AP-	VII.H2-17(AP-	Piping, piping components,
1556	VII	AP-138	AP-59	138	59)	and piping elements
				VII.A4.AP-	VII.A4-4(AP-	
1557	VII	AP-139	AP-62	139	62)	Heat exchanger tubes
				VII.E3.AP-	VII.E3-6(AP-	
1558	VII	AP-139	AP-62	139	62)	Heat exchanger tubes
177	VII	AP-14		VII.J.AP-14	VII.J-8(AP-14)	Piping elements
				VII.A4.AP-	VII.A4-7(AP-	Piping, piping components,
1559	VII	AP-140	AP-64	140	64)	and piping elements
				VII.E3.AP-	VII.E3-9(AP-	Piping, piping components,
1560	VII	AP-140	AP-64	140	64)	and piping elements
					VII.E4-7(AP-	Piping, piping components,
1561	VII	AP-140	AP-64	140	64)	and piping elements

1562	VII	AP-141	AP-73	VII.E2.AP- 141	VII.E2-1(AP- 73)	Piping, piping components, and piping elements
1563	VII	AP-142	AP-74	VII.F1.AP- 142	VII.F1-14(AP- 74)	Piping, piping components, and piping elements
1564	VII	AP-142	AP-74	VII.F2.AP- 142	VII.F2-12(AP- 74)	Piping, piping components, and piping elements
1565	VII	AP-142	AP-74	VII.F3.AP- 142	VII.F3-14(AP- 74)	Piping, piping components, and piping elements
1566	VII	AP-142	AP-74	VII.F4.AP- 142	VII.F4-10(AP- 74)	Piping, piping components, and piping elements
1567	VII	AP-143	AP-78	VII.G.AP- 143	VII.G-9(AP- 78)	Piping, piping components, and piping elements
1596	VII	AP-144	New Record	VII.J.AP- 144		Piping, piping components, and piping elements
1834	VII	AP-149	New Record	VII.G.AP- 149		Fire Hydrants
178		AP-15		VII.J.AP-15	VII.J-10(AP- 15)	Piping elements
1835	VII	AP-150	New Record	VII.G.AP- 150		Halon/carbon dioxide fire suppression system piping, piping components, and piping elements
1836	VII	AP-151	New Record	VII.J.AP- 151		Heat exchanger components
1837		AP-152	New Record	VII.C1.AP- 152		Heat exchanger components other than tubes
1838		AP-153	New Record	VII.C1.AP- 153		Heat exchanger tubes

				VII.H2.AP-		
1839	VII	AP-154	New Record	154		Heat exchanger tubes
1000	VII			101		
				VII.C1.AP-		Piping, piping components,
1840	VII	AP-155	New Record	155		and piping elements
				VII.C1.AP-		Piping, piping components,
1841	VII	AP-156	New Record	156		and piping elements
1842	VII	AP-157	New Record	VII.C1.AP- 157		Piping, piping components, and piping elements
1042	VII	AF-157	New Record	157		and piping elements
				VII.I.AP-		Piping, piping components,
1844	VII	AP-159	New Record	159		and piping elements
					VII.J-14(AP-	Piping, piping components,
179	VII	AP-16		VII.J.AP-16		and piping elements
					, , , , , , , , , , , , , , , , , , ,	
10.15				VII.J.AP-		Piping, piping components,
1845	VII	AP-160	New Record	160		and piping elements
				VII.C1.AP-		Piping, piping components,
1846	VII	AP-161	New Record	161		and piping elements
				VII.H2.AP-		Piping, piping components,
1847	VII	AP-162	New Record	162		and piping elements
				VII.J.AP-		
1851	VII	AP-166	New Record	166		Piping elements

				VII.J.AP-		
1852	VII	AP-167	New Record	167		Piping elements
180	VII	AP-17		VII.J.AP-17	VII.J-15(AP- 17)	Piping, piping components, and piping elements
1856	VII	AP-171	New Record	VII.C1.AP- 171		Piping, piping components, and piping elements
1857	VII	AP-172	New Record	VII.C1.AP- 172		Piping, piping components, and piping elements
1858	VII	AP-173	New Record	VII.C1.AP- 173		Piping, piping components, and piping elements
1859	VII	AP-174	New Record	VII.C1.AP- 174		Piping, piping components, and piping elements
1860	VII	AP-175	New Record	VII.C1.AP- 175		Piping, piping components, and piping elements
1861	VII	AP-176	New Record	VII.C1.AP- 176		Piping, piping components, and piping elements
1862	VII	AP-177	New Record	VII.C1.AP- 177		Piping, piping components, and piping elements
1863	VII	AP-178	New Record	VII.C1.AP- 178		Piping, piping components, and piping elements
1887	VII	AP-179	A-65	VII.C1.AP- 179	VII.C1-3(A-65)	#M#Heat exchanger components#M#
181	VII	AP-18		VII.J.AP-18	VII.J-16(AP- 18)	Piping, piping components, and piping elements
1888	VII	AP-180	AP-83	VII.G.AP- 180	VII.G-8(AP- 83)	Piping, piping components, and piping elements
				VII.E2.AP-		Piping, piping components,
1889	VII	AP-181	A-59	181	VII.E2-2(A-59)	and piping elements

					VII.C1.AP-		Heat evaluation
2	331	VII	AP-183	A-64	183	VII.C1-5(A-64)	Heat exchanger components
	.001	VII	/ 100	7104	100		componenta
					VII.C2.AP-	VII.C2-11(AP-	Piping, piping components,
2	381	VII	AP-186	AP-60	186	60)	and piping elements
							Dining nining components
2	382	VII	AP-186	AP-60	VII.E3.AP- 186	VII.E3-13(AP- 60)	Piping, piping components, and piping elements
2	.502	VII	AI - 100	<u> </u>	100	00)	and piping ciements
					VII.E4.AP-	VII.E4-11(AP-	Piping, piping components,
2	383	VII	AP-186	AP-60	186	60)	and piping elements
2	384	1/11	AP-187	AP-61	VII.C1.AP- 187	VII.C1-7(AP- 61)	Heat avalanger tubes
	.304	VII	AF-107	AF-01	107	01)	Heat exchanger tubes
					VII.C3.AP-	VII.C3-1(AP-	
2	385	VII	AP-187	AP-61	187	61)	Heat exchanger tubes
		\ /II			VII.G.AP-	VII.G-7(AP-	
2	386	VII	AP-187	AP-61	187	61)	Heat exchanger tubes
					VII.H2.AP-	VII.H2-6(AP-	
2	387	VII	AP-187	AP-61	187	61)	Heat exchanger tubes
						VII.C2-3(AP-	
2	388	VII	AP-188	AP-63	188	63)	Heat exchanger tubes
					VII.E3.AP-	VII.E3-5(AP-	
2	389	VII	AP-188	AP-63	188	63)	Heat exchanger tubes
							, and the second s
						VII.E4-3(AP-	
2	390	VII	AP-188	AP-63	188	63)	Heat exchanger tubes
					VII.A3.AP-		Heat exchanger
2	391	VII	AP-189	A-63	189	VII.A3-3(A-63)	components
2	392	VII	AP-189	A-63	VII.A4.AP- 189	VII.A4-3(A-63)	Heat exchanger components
2	.592	VII	AI-109	A-00	109	VII.74-3(A-03)	components
					VII.C2.AP-		Heat exchanger
2	393	VII	AP-189	A-63	189	VII.C2-1(A-63)	components

2394	VII	AP-189	A-63	VII.E1.AP- 189	VII.E1-6(A-63)	Heat exchanger
2394	VII	AF-109	A-03	109	VII.E 1-0(A-03)	components
				VII.E3.AP-		Heat exchanger
2395	VII	AP-189	A-63	189	VII.E3-4(A-63)	
				VII.E4.AP-		Heat exchanger
2396	VII	AP-189	A-63	189	VII.E4-2(A-63)	components
2397	VII	AP-189	A-63	VII.F1.AP- 189	VII.F1-11(A- 63)	Heat exchanger components
				VII.F2.AP-		Heat exchanger
2398	VII	AP-189	A-63	189	VII.F2-9(A-63)	components
2399	VII	AP-189	A-63	VII.F3.AP- 189	VII.F3-11(A- 63)	Heat exchanger components
2000		/ 100	7.00	100	(00)	
				VII.F4.AP-		Heat exchanger
2400	VII	AP-189	A-63	189	VII.F4-8(A-63)	components
					VII.J-17(AP-	Piping, piping components,
182	VII	AP-19		VII.J.AP-19	19)	and piping elements
2402	VII	AP-191	A-67	VII.E3.AP- 191	VII.E3-1(A-67)	Heat exchanger components
2102						
				VII.E4.AP-		Heat exchanger
2403	VII	AP-191	A-67	191	VII.E4-1(A-67)	
2404	VII	AP-192	A-68	VII.E3.AP- 192	VII.E3-2(A-68)	Heat exchanger
2404	VII	AF-192	A-00	192	v11.E3-2(A-08)	components
						Piping, piping components,
2405	VII	AP-193	AP-45	193	45)	and piping elements

				VII.C1.AP-	VII.C1-19(A-	Piping, piping components,
240	6 VII	AP-194	A-38	194	38)	and piping elements
				VII.C3.AP-	VII.C3-10(A-	Piping, piping components,
240	7 VII	AP-194	A-38	194	38)	and piping elements
				VII.H2.AP-	VII.H2-22(A-	Piping, piping components,
240	8 VII	AP-194	A-38	194	38)	and piping elements
					,	
				VII.C3.AP-		Piping, piping components,
240	9 VII	AP-195	A-43	195	VII.C3-2(A-43)	and piping elements
				VII.C1.AP-		Piping, piping components,
241	0 VII	AP-196	A-44	196	VII.C1-9(A-44)	and piping elements
				VII.G.AP-		Piping, piping components,
241	1 VII	AP-197	A-45	197	VII.G-12(A-45)	and piping elements
					_()	
					VII.C1-18(A-	Piping, piping components,
241	2 VII	AP-198	A-01	198	01)	and piping elements

2413	VII	AP-198	A-01	VII.C3.AP- 198		Piping, piping components, and piping elements
2413	VII	AF-190	A-01	190	VII.C3-9(A-01)	
						Disian sisian composite
2414	VII	AP-198	A-01	VII.G.AP- 198	VII G-25(A-01)	Piping, piping components, and piping elements
2	•	/ 100		100		
				VII.H1.AP-		Piping, piping components,
2415	VII	AP-198	A-01	198	VII.H1-9(A-01)	and piping elements
					, , , , , , , , , , , , , , , , , , ,	
				VII.A3.AP-	VII.A3-5(AP-	Dining nining components
2416	VII	AP-199	AP-12	199	12)	Piping, piping components, and piping elements
						D
2417	VII	AP-199	AP-12	VII.A4.AP- 199	VII.A4-6(AP- 12)	Piping, piping components, and piping elements
2717	VII	AI -100	<u> </u>	100	12)	
2418	V/II	AP-199	AP-12	VII.C2.AP- 199	VII.C2-4(AP-	Piping, piping components, and piping elements
2410	VII	AF-199	AF-12	199	12)	
2440	V/II					Piping, piping components,
2419	VII	AP-199	AP-12	199	12)	and piping elements
0.400	. ///	4.5.400			VII.E3-8(AP-	Piping, piping components,
2420	VII	AP-199	AP-12	199	12)	and piping elements
	N // I				VII.E4-5(AP-	Piping, piping components,
2421	VII	AP-199	AP-12	199	12)	and piping elements
					VII.F1-15(AP-	Piping, piping components,
2422	VII	AP-199	AP-12	199	12)	and piping elements
					VII.F2-13(AP-	Piping, piping components,
2423	VII	AP-199	AP-12	199	12)	and piping elements
				VII.F3.AP-	VII.F3-15(AP-	Piping, piping components,
2424	VII	AP-199	AP-12	199	12)	and piping elements

				VII.F4.AP-	VII.F4-11(AP-	Piping, piping components,
2425	VII	AP-199	AP-12	199	12)	and piping elements
2426	VII	AP-199	AP-12	VII.H1.AP- 199	VII.H1-2(AP- 12)	Piping, piping components, and piping elements
2420	VII	AF-199	AF-12	199	12)	and piping elements
				VII.H2.AP-	VII.H2-8(AP-	Piping, piping components,
2427	VII	AP-199	AP-12	199	12)	and piping elements
						Piping, piping components,
183	VII	AP-2		VII.J.AP-2	VII.J-20(AP-2)	and piping elements
					· · · · ·	
					VII.J-18(AP-	Piping, piping components,
184	VII	AP-20		VII.J.AP-20	20)	and piping elements
				VII.C2.AP-	VII.C2-14(A-	Piping, piping components,
2430	VII	AP-202	A-25	202	25)	and piping elements; tanks
				VII.F1.AP-	VII.F1-20(A-	Piping, piping components,
2431	VII	AP-202	A-25	202	25)	and piping elements; tanks
		-			- /	
2432	1/11		A 05	VII.F2.AP- 202	VII.F2-18(A-	Piping, piping components,
2432	VII	AP-202	A-25	202	25)	and piping elements; tanks
				VII.F3.AP-	VII.F3-20(A-	Piping, piping components,
2433	VII	AP-202	A-25	202	25)	and piping elements; tanks
				VII.F4.AP-	VII.F4-16(A-	Piping, piping components,
2434	VII	AP-202	A-25	202	25)	and piping elements; tanks
				VII.H2.AP-		Piping, piping components,
2435	VII	AP-202	A-25	202	VII.H2-23(A- 25)	and piping elements; tanks
2420	VII	AP-203		VII.E1.AP-	VII.E1-2(AP-	Heat exchanger
2436	VII	AP-203	AP-34	203	34)	components
				VII.F1.AP-	VII.F1-8(AP-	Heat exchanger
2437	VII	AP-203	AP-34	203	34)	components

2438	VII	AP-203	AP-34	VII.F3.AP- 203	VII.F3-8(AP- 34)	Heat exchanger components
				VII.F1.AP-	VII.F1-13(AP-	
2439	VII	AP-204	AP-77	204	77)	Heat exchanger tubes
2440	VII	AP-204	AP-77	VII.F2.AP- 204	VII.F2-11(AP- 77)	Heat exchanger tubes
2441	VII	AP-204	AP-77	VII.F3.AP- 204	VII.F3-13(AP- 77)	Heat exchanger tubes
2442	VII	AP-204	AP-77	VII.F4.AP- 204	VII.F4-9(AP- 77)	Heat exchanger tubes
2443	VII	AP-205	AP-80	VII.C2.AP- 205	VII.C2-2(AP- 80)	Heat exchanger tubes
2444	VII	AP-205	AP-80	VII.F1.AP- 205	VII.F1-12(AP- 80)	Heat exchanger tubes
2445	VII	AP-205	AP-80	VII.F2.AP- 205	VII.F2-10(AP- 80)	Heat exchanger tubes
2446	VII	AP-205	AP-80	VII.F3.AP- 205	VII.F3-12(AP- 80)	Heat exchanger tubes
0.147			45.50	VII.C1.AP-		Piping, piping components,
2447	VII	AP-206	AP-53	206	53)	and piping elements
2448	VII	AP-206	AP-53	VII.C3.AP- 206	VII.C3-6(AP- 53)	Piping, piping components, and piping elements
2449	VII	AP-207	AP-75	VII.C1.AP- 207	VII.C1-1(AP- 75)	Elastomer: seals and components
2450	VII	AP-208	AP-76	VII.C1.AP- 208	VII.C1-2(AP- 76)	Elastomer: seals and components
				VII.C1.AP-		Piping, piping components,
2537	VII	AP-209	New Record	209		and piping elements; tanks
2538	VII	AP-209	New Record	VII.C2.AP- 209		Piping, piping components, and piping elements; tanks

				VII.C3.AP-		Piping, piping components,
2539	VII	AP-209	New Record	209		and piping elements; tanks
0540				VII.D.AP-		Piping, piping components,
2540	VII	AP-209	New Record	209		and piping elements; tanks
				VII.E1.AP-		Piping, piping components,
2541	VII	AP-209	New Record	209		and piping elements; tanks
05.40				VII.E4.AP-		Piping, piping components,
2542	VII	AP-209	New Record	209		and piping elements; tanks
				VII.F1.AP-		Piping, piping components,
2543	VII	AP-209	New Record	209		and piping elements; tanks
				VII.F2.AP-		Piping, piping components,
2544	VII	AP-209	New Record	209		and piping elements; tanks
				VII.F4.AP-		Piping, piping components,
2545	VII	AP-209	New Record	209		and piping elements; tanks
				VII.G.AP-		Piping, piping components,
2546	VII	AP-209	New Record	209		and piping elements; tanks
				VII.H1.AP-		Piping, piping components,
2547	VII	AP-209	New Record	209		and piping elements; tanks
				VII.H2.AP-		Piping, piping components,
2548	VII	AP-209	New Record	209		and piping elements; tanks
						Diping piping components
185	VII	AP-22		VII.J.AP-22	VII.J-19(AP- 22)	Piping, piping components, and piping elements
100	VII	/\ -22		VII.0.AF-22	<i>~~</i>)	
				VII.C1.AP-		Piping, piping components,
2562	VII	AP-221	New Record	221		and piping elements; tanks
0560	VII	AD 221	Now Record	VII.C2.AP-		Piping, piping components,
2563	VII	AP-221	New Record	221		and piping elements; tanks

				VII.C3.AP-		Piping, piping components,
2564	VII	AP-221	New Record	221		and piping elements; tanks
2505	V/II		New Decard	VII.D.AP-		Piping, piping components,
2565	VII	AP-221	New Record	221		and piping elements; tanks
2566	VII	AP-221	New Record	VII.E1.AP- 221		Piping, piping components, and piping elements; tanks
				VII.E4.AP-		Piping, piping components,
2567	VII	AP-221	New Record	221		and piping elements; tanks
				VII.F1.AP-		Piping, piping components,
2568	VII	AP-221	New Record	221		and piping elements; tanks
				VII.F2.AP-		Piping, piping components,
2569	VII	AP-221	New Record	221		and piping elements; tanks
				VII.F4.AP-		Piping, piping components,
2570	VII	AP-221	New Record	221		and piping elements; tanks
2571	VII	AP-221	New Record	VII.G.AP- 221		Piping, piping components, and piping elements; tanks
2371	VII	AF-22 I		221		and piping elements, tanks
						Disian sisian company
2572	VII	AP-221	New Record	VII.H1.AP- 221		Piping, piping components, and piping elements; tanks
				VII.H2.AP-		Piping, piping components,
2573	VII	AP-221	New Record	221		and piping elements; tanks
				VII.G.AP-		Piping, piping components,
2593	VII	AP-234	A-28	234	VII.G-21(A-28)	and piping elements
						Spent fuel storage racks:
				VII.A2.AP-		neutron-absorbing sheets
2596	VII	AP-235	A-88	235	VII.A2-5(A-88)	(PWR)

						Spent fuel storage racks:
				VII.A2.AP-		neutron-absorbing sheets
2597	VII	AP-236	A-89	236	VII.A2-3(A-89)	(BWR)
					· · · · · · · · ·	
				VII.C1.AP-		Piping, piping components,
2624	VII	AP-237	New Record	237		and piping elements
				VII.C1.AP-		Piping, piping components,
2625	VII	AP-238	New Record	238		and piping elements
				VII.C1.AP-		Piping, piping components,
2626	VII	AP-239	New Record	239		and piping elements
				VII.D.AP-		Piping, piping components,
2627	VII	AP-240	New Record	240		and piping elements
				VII.I.AP-		
2628	VII	AP-241	New Record	241		Bolting
				VII.I.AP-		
2629	VII	AP-242	New Record	242		Bolting
				VII.I.AP-		– <i>– – –</i>
2630	VII	AP-243	New Record	243		Bolting
0004	х <i>и</i> ц		New Decent	VII.I.AP-		Delline
2631	VII	AP-244	New Record	244		Bolting
						Dising sining components
2640	VII		New Record	VII.C1.AP-		Piping, piping components,
2649	VII	AP-248	New Record	248		and piping elements
				VII.C1.AP-		Piping, piping components,
2650	VII	AP-249	New Record	249		and piping elements
2030	VII	711-243	New Necolu	243		
				VII.C1.AP-		Piping, piping components,
2651	VII	AP-250	New Record	250		and piping elements
2001						
				VII.C1.AP-		Piping, piping components,
2652	VII	AP-251	New Record	251		and piping elements
2002						
				VII.C1.AP-		Piping, piping components,
2653	VII	AP-252	New Record	252		and piping elements

2654	VII	AP-253	New Record	VII.C1.AP- 253	Piping, piping components, and piping elements
2655	VII	AP-254	New Record	VII.C2.AP- 254	Piping, piping components, and piping elements
2656	VII	AP-255	New Record	VII.H2.AP- 255	Piping, piping components, and piping elements
2658	VII	AP-256	New Record	VII.I.AP- 256	Piping, piping components, and piping elements
2660	VII	AP-257	New Record	VII.C2.AP- 257	Piping, piping components, and piping elements
2661	VII	AP-258	New Record	VII.H2.AP- 258	Piping, piping components, and piping elements
2662	VII	AP-259	New Record	VII.C2.AP- 259	Elastomer seals and components
2665	VII	AP-260	New Record	VII.J.AP- 260	Piping, piping components, and piping elements
2668	VII	AP-261	New Record	VII.I.AP- 261	Bolting
2671	VII	AP-262	New Record	VII.I.AP- 262	Bolting
				VII.I.AP-	
2674		AP-263	New Record	263 VII.I.AP-	Bolting
2677	VII	AP-264	New Record	264	Bolting
2679	VII	AP-265	New Record	VII.I.AP- 265	Bolting
2681		AP-266	New Record	VII.I.AP- 266	Bolting
2001	•	200		200	County

				VII.I.AP-	
2683	VII	AP-267	New Record	267	 Bolting
2684	VII	AP-268	New Record	VII.J.AP- 268	Piping, piping components, and piping elements
2686	VII	AP-269	New Record	VII.J.AP- 269	Piping, piping components, and piping elements
2688	VII	AP-270	New Record	VII.E5.AP- 270	Piping, piping components, and piping elements
2689		AP-271	New Record	VII.E5.AP- 271	Piping, piping components, and piping elements
2690	VII	AP-272	New Record	VII.E5.AP- 272	Piping, piping components, and piping elements
2004	\ /II	AD 070	New Decord	VII.E5.AP-	Piping, piping components,
2691	VII	AP-273	New Record	273	 and piping elements
2692	VII	AP-274	New Record	VII.E5.AP- 274	Piping, piping components, and piping elements
2693	VII	AP-275	New Record	VII.E5.AP- 275	Heat exchanger components
				VII.E5.AP-	Heat exchanger
2694	VII	AP-276	New Record	276	components
2695	VII	AP-277	New Record	VII.J.AP- 277	Piping, piping components, and piping elements
2696	VII	AP-278	New Record	VII.E5.AP- 278	Piping, piping components, and piping elements; tanks

2697	VII	AP-279	New Record	VII.E5.AP- 279		Piping, piping components, and piping elements; tanks
2097	VII	AF-219	New Record	219		and piping elements, tanks
				VII.E5.AP-		Dining nining components
2698	VII	AP-280	New Record	280		Piping, piping components, and piping elements; tanks
2699	VII	AP-281	New Record	VII.E5.AP- 281		Piping, piping components, and piping elements; tanks
2000		711 201		201		
2700	VII	AP-282	AP-3	VII.J.AP- 282	VII.J-21(AP-3)	Piping, piping components, and piping elements
			<u> </u>			and piping sector
				VII.E3.AP-	VII.E3-16(A-	Piping, piping components,
2728	VII	AP-283	A-60	283	60)	and piping elements
26	VII	AP-31		VII.A3.AP- 31	VII.A3-7(AP- 31)	Piping, piping components, and piping elements
27	VII	AP-31		VII.A4.AP- 31	VII.A4-10(AP- 31)	Piping, piping components, and piping elements
28	VII	AP-31		VII.C2.AP- 31	VII.C2-9(AP- 31)	Piping, piping components, and piping elements
	VII	AP-31		VII.E1.AP- 31	VII.E1-14(AP- 31)	Piping, piping components, and piping elements
	VII	AP-31		VII.E3.AP- 31	VII.E3-12(AP- 31)	Piping, piping components, and piping elements
				VII.E4.AP-	VII.E4-10(AP-	Piping, piping components,
31	VII	AP-31		31	31)	and piping elements
32	VII	AP-31		VII.F1.AP- 31	VII.F1-18(AP- 31)	Piping, piping components, and piping elements
33	VII	AP-31		VII.F2.AP- 31	VII.F2-16(AP- 31)	Piping, piping components, and piping elements
					/	

142	VII	AP-31	VII.F4.AP- 31	VII.F4-14(AP- 31)	Piping, piping components, and piping elements
143	VII	AP-31	VII.G.AP- 31	VII.G-16(AP- 31)	Piping, piping components, and piping elements
144	VII	AP-32	VII.A4.AP- 32	VII.A4-9(AP- 32)	Piping, piping components, and piping elements
145	VII	AP-32	VII.C2.AP- 32	VII.C2-7(AP- 32)	Piping, piping components, and piping elements
146	VII	AP-32	VII.E3.AP- 32	VII.E3-11(AP- 32)	Piping, piping components, and piping elements
147	VII	AP-32	VII.E4.AP- 32	VII.E4-9(AP- 32)	Piping, piping components, and piping elements
377	VII	AP-36	VII.J.AP-36	VII.J-1(AP-36)	Piping, piping components, and piping elements
378	VII	AP-37	VII.J.AP-37	VII.J-2(AP-37)	Piping, piping components, and piping elements
383	VII	AP-4	VII.J.AP-4	VII.J-22(AP-4)	Piping, piping components, and piping elements
384	VII	AP-40	VII.G.AP- 40	VII.G-6(AP- 40)	Heat exchanger components
385	VII	AP-40	VII.H2.AP- 40	VII.H2-4(AP- 40)	Heat exchanger components
386		AP-41		VII.F1-10(AP- 41)	Heat exchanger components
			VII.F2.AP-	VII.F2-8(AP-	Heat exchanger
2715	VII	AP-41	41	41)	components
440	VII	AP-41	VII.F3.AP- 41	VII.F3-10(AP- 41)	Heat exchanger components
441	VII	AP-41	VII.F4.AP- 41	VII.F4-7(AP- 41)	Heat exchanger components

442	VII	AP-41	VII.G.AP- 41	VII.G-5(AP- 41)	Heat exchanger components
443	VII	AP-41	VII.H2.AP- 41	VII.H2-3(AP- 41)	Heat exchanger components
110	•				Piping, piping components,
444	VII	AP-43	43	VII.A3-6(AP- 43)	and piping elements
445	VII	AP-43	VII.A4.AP- 43	VII.A4-8(AP- 43)	Piping, piping components, and piping elements
446	VII	AP-43	VII.C2.AP- 43	VII.C2-6(AP- 43)	Piping, piping components, and piping elements
170					
447	VII	AP-43	VII.E1.AP- 43	43)	Piping, piping components, and piping elements
			VII.E3.AP-	VII.E3-10(AP-	Piping, piping components,
448	VII	AP-43	43	43)	and piping elements
77	VII	AP-43	VII.E4.AP- 43	VII.E4-8(AP- 43)	Piping, piping components, and piping elements
78	VII	AP-43	VII.F1.AP- 43	VII.F1-17(AP- 43)	Piping, piping components, and piping elements
79	VII	AP-43	VII.F2.AP- 43	VII.F2-15(AP- 43)	Piping, piping components, and piping elements
80	VII	AP-43	VII.F3.AP- 43		Piping, piping components, and piping elements
81	VII	AP-43	VII.F4.AP- 43	VII.F4-13(AP- 43)	Piping, piping components, and piping elements
82	VII	AP-43	VII.H1.AP- 43	VII.H1-4(AP- 43)	Piping, piping components, and piping elements
83	VII	AP-43	VII.H2.AP- 43	VII.H2-12(AP- 43)	Piping, piping components, and piping elements
94	VII	AP-48	VII.J.AP-48	VII.J-7(AP-48)	Piping elements
95	VII	AP-49	VII.J.AP-49	VII.J-9(AP-49)	Piping elements
96		AP-50	VII.J.AP-50	VII.J-11(AP-	Piping elements
97		AP-51	VII.J.AP-51	VII.J-13(AP-	Piping elements
51	V II		1.0.71 -01		i iping cicilients

				VII.J-12(AP-	
449	VII	AP-52	VII.J.AP-52		Piping elements
455	N/11			VII.H2-18(AP-	Piping, piping components,
455	VII	AP-55	55	55)	and piping elements
					Piping, piping components,
396	VII	AP-6	VII.J.AP-6	VII.J-23(AP-6)	and piping elements
			VII.E1.AP-	VII.E1-3(AP-	Heat exchanger
186	VII	AP-65	65	65)	components
			VII.F1.AP-	VII.F1-9(AP-	Heat exchanger
187	VII	AP-65	65	65)	components
			VII.F3.AP-	VII.F3-9(AP-	Heat exchanger
188	VII	AP-65	65	65)	components
				VII.I-12(AP-	Dining nining components
189	VII	AP-66	VII.I.AP-66	66)	Piping, piping components, and piping elements
				,	
			VII.A2.AP-	VII.A2-1(AP-	Piping, piping components,
409	VII	AP-79	79	79)	and piping elements
			VII.A3.AP-	VII.A3-8(AP-	Piping, piping components,
410	VII	AP-79	79	79)	and piping elements
					Piping, piping components,
411	VII	AP-79	79	79)	and piping elements
					Piping, piping components,
412	VII	AP-8	VII.J.AP-8	VII.J-3(AP-8)	and piping elements
			VII.D.AP-	VII.D-4(AP-	Piping, piping components,
417	VII	AP-81	81	81)	and piping elements
			VII.E1.AP-	VII.E1-20(AP-	Piping, piping components,
418	VII	AP-82	82	82)	and piping elements; tanks
420	VII	AP-85	VII.E1.AP- 85	VII.E1-21(AP- 85)	Pump Casings
120					
421	MI	AP-9			Piping, piping components,
421	VII	AF-9	VII.J.AP-9	VII.J-4(AP-9)	and piping elements

1431	VII	AP-96	New Record	VII.J.AP-96		Piping elements
1434	VII	AP-97	New Record	VII.J.AP-97		Piping elements
1437	VII	AP-98	New Record	VII.J.AP-98		Piping elements
				VII.F1.AP-		
1467	VII	AP-99	A-09	99	VII.F1-1(A-09)	Ducting and components
1468	VII	AP-99	A-09	VII.F2.AP- 99	VII.F2-1(A-09)	Ducting and components
				VII.F3.AP-		
1469	VII	AP-99	A-09	99	VII.F3-1(A-09)	Ducting and components
1014	VIII	S-02		VIII.H.S-02	VIII.H-6(S-02)	Closure bolting
1015	VIII	S-03		VIII.H.S-03	VIII.H-3(S-03)	Closure bolting
1022	VIII	S-08		VIII.B1.S- 08	VIII.B1-10(S- 08)	Piping, piping components, and piping elements
1023	VIII	S-08		VIII.B2.S- 08	VIII.B2-5(S- 08)	Piping, piping components, and piping elements
598	VIII	S-11		VIII.D1.S- 11	VIII.D1-7(S- 11)	Piping, piping components, and piping elements
599	VIII	S-11		VIII.D2.S- 11	VIII.D2-6(S- 11)	Piping, piping components, and piping elements

				VIII.G-37(S-	Piping, piping components,
600	VIII	S-11	VIII.G.S-11		and piping elements
604	VIII	S-15	VIII.A.S-15	VIII.A-17(S- 15)	Piping, piping components, and piping elements
605	VIII	S-15	VIII.B1.S- 15	VIII.B1-9(S- 15)	Piping, piping components, and piping elements
606	VIII	S-15	VIII.B2.S- 15	VIII.B2-4(S- 15)	Piping, piping components, and piping elements
607	VIII	S-15	VIII.C.S-15	VIII.C-5(S-15)	Piping, piping components, and piping elements
608	VIII	S-16		VIII.D1-9(S- 16)	Piping, piping components, and piping elements
609	VIII	S-16	VIII.D2.S- 16	VIII.D2-8(S- 16)	Piping, piping components, and piping elements
610	VIII	S-16	VIII.E.S-16	VIII.E-35(S- 16)	Piping, piping components, and piping elements
611	VIII	S-16	VIII.F.S-16	VIII.F-26(S- 16)	Piping, piping components, and piping elements
612	VIII	S-16	VIII.G.S-16	VIII.G-39(S- 16)	Piping, piping components, and piping elements
					Heat exchanger
1036	VIII	S-23	VIII.A.S-23	VIII.A-1(S-23)	components
1037	VIII	S-23	VIII.E.S-23	VIII.E-5(S-23)	Heat exchanger components
1038	VIII	S-23	VIII.F.S-23	VIII.F-4(S-23)	Heat exchanger components
				()	
1020	\/III	S 22			Heat exchanger
1039	VIII	S-23	VIII.G.S-23	VIII.G-5(S-23)	components

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1043	VIII	S-25		VIILE S-25	VIII.E-2(S-25)	Heat exchanger components
						Heat exchanger
1044	VIII	S-25		VIII.F.S-25	VIII.F-1(S-25)	components
1045	VIII	S-25		VIII.G.S-25	VIII.G-2(S-25)	Heat exchanger components
616	VIII	S-27		VIII.G.S-27	VIII.G-16(S- 27)	Heat exchanger tubes
617	VIII	S-28			VIII.E-12(S- 28)	Heat exchanger tubes
040	\/III	0.00				
618	VIII	S-28		VIII.F.S-28	VIII.F-9(S-28)	Heat exchanger tubes
619	VIII	S-28		VIII.G.S-28	VIII.G-13(S- 28)	Heat exchanger tubes
620	VIII	S-29		VIII.H.S-29	VIII.H-7(S-29)	External surfaces
621	VIII	S-30		VIII.H.S-30	VIII.H-9(S-30)	External surfaces
622	VIII	S-31			VIII.E-39(S- 31)	Tanks
289	VIII	S-31			VIII.G-40(S- 31)	Tanks
204	\/III	S 40				Dalting
294	VIII	S-40		⊻111.⊓.ᢒ-40	VIII.H-2(S-40)	DUILING
295	VIII	S-41		VIII.H.S-41	VIII.H-8(S-41)	External surfaces
296	VIII	S-42		VIII.H.S-42	VIII.H-10(S- 42)	External surfaces
701	VIII	SP-1		VIII.I.SP-1	VIII.I-13(SP-1)	Piping, piping components, and piping elements
702	VIII	SP-10				Piping elements
1641		SP-100	SP-58		VIII.E-10(SP- 58)	Heat exchanger tubes

1642	VIII	SP-100	SP-58	VIII.F.SP- 100	VIII.F-7(SP- 58)	Heat exchanger tubes
1643	VIII	SP-100	SP-58	VIII.G.SP- 100	VIII.G-10(SP- 58)	Heat exchanger tubes
1644	VIII	SP-101	SP-61	VIII.A.SP- 101	VIII.A-5(SP- 61)	Piping, piping components, and piping elements
1645	VIII	SP-101	SP-61	VIII.F.SP- 101	VIII.F-15(SP- 61)	Piping, piping components, and piping elements
1646	VIII	SP-102	SP-62	VIII.G.SP- 102	VIII.G-12(SP- 62)	Heat exchanger tubes
1647	VIII	SP-103	SP-63	VIII.G.SP- 103	VIII.G-15(SP- 63)	Heat exchanger tubes
1821	VIII	SP-104	New Record	VIII.I.SP- 104		Piping, piping components, and piping elements
1825		SP-108	New Record	VIII.I.SP- 108		Piping elements
703	VIII	SP-11		VIII.I.SP-11	VIII.I-9(SP-11)	Piping, piping components, and piping elements
1827	VIII	SP-110	New Record	VIII.B1.SP- 110		Piping, piping components, and piping elements
2731	VIII	SP-110	New Record	VIII.B2.SP- 110		Piping, piping components, and piping elements
1828	VIII	SP-111	New Record	VIII.I.SP- 111		Piping elements
1830	VIII	SP-113	New Record	VIII.G.SP- 113		Heat exchanger components and tubes
1831	VIII	SP-114	New Record	VIII.G.SP- 114		Piping, piping components, and piping elements
				VIII.E.SP-		
1832	VIII	SP-115	New Record	115		Tanks
1833	VIII	SP-116	New Record	VIII.G.SP- 116		Tanks

(000				VIII.E.SP-		Heat exchanger
1892	VIII	SP-117	S-26	117	VIII.E-3(S-26)	components
1893	VIII	SP-117	S-26	VIII.F.SP- 117	VIII.F-2(S-26)	Heat exchanger components
		-			()	
				VIII.G.SP-		Heat exchanger
1894	VIII	SP-117	S-26	117	VIII.G-4(S-26)	components
						D
2549	VIII	SP-118	New Record	VIII.A.SP- 118		Piping, piping components, and piping elements; tanks
2550	VIII	SP-118	New Record	VIII.B1.SP- 118		Piping, piping components, and piping elements; tanks
						<u> </u>
0554		05.440		VIII.B2.SP-		Piping, piping components,
2551	VIII	SP-118	New Record	118		and piping elements; tanks
				VIII.C.SP-		Piping, piping components,
2552	VIII	SP-118	New Record	118		and piping elements; tanks
2553	VIII	SP-118	New Record	VIII.D1.SP- 118		Piping, piping components, and piping elements; tanks
2554	VIII	SP-118	New Record	VIII.D2.SP- 118		Piping, piping components, and piping elements; tanks
2004		5. 110				
				VIII.E.SP-		Piping, piping components,
2555	VIII	SP-118	New Record	118		and piping elements; tanks

				VIII.F.SP-		Piping, piping components,
2556	VIII	SP-118	New Record	118		and piping elements; tanks
0557	V/III	00.440	New Decend	VIII.G.SP-		Piping, piping components,
2557	VIII	SP-118	New Record	118		and piping elements; tanks
					VIII.I-10(SP-	Piping, piping components,
704	VIII	SP-12		VIII.I.SP-12		and piping elements
0574	1711	00 407		VIII.A.SP-		Piping, piping components,
2574	VIII	SP-127	New Record	127		and piping elements; tanks
				VIII.B1.SP-		Piping, piping components,
2575	VIII	SP-127	New Record	127		and piping elements; tanks
2576	17111	SP-127	New Record	VIII.B2.SP- 127		Piping, piping components, and piping elements; tanks
2570	VIII	37-127	New Record	127		and piping elements, tanks
				VIII.C.SP-		Piping, piping components,
2577	VIII	SP-127	New Record	127		and piping elements; tanks
				VIII.D1.SP-		Dining nining components
2578	VIII	SP-127	New Record	127		Piping, piping components, and piping elements; tanks
2010	•	01 121		121		
				VIII.D2.SP-		Piping, piping components,
2579	VIII	SP-127	New Record	127		and piping elements; tanks
				VIII.E.SP-		Piping, piping components,
2580	VIII	SP-127	New Record	127		and piping elements; tanks
0.000		00.407		VIII.F.SP-		Piping, piping components,
2581	VIII	SP-127	New Record	127		and piping elements; tanks
				VIII.G.SP-		Piping, piping components,
2582	VIII	SP-127	New Record	127		and piping elements; tanks
		0.0			VIII.I-11(SP-	Piping, piping components,
705	VIII	SP-13		VIII.I.SP-13	13)	and piping elements

						Steel Piping, piping components, and piping
2618	VIII	SP-136	S-12	VIII.G.SP- 136	VIII.G-36(S- 12)	elements exposed to Raw water
2632	VIII	SP-137	New Record	VIII.E.SP- 137		Tanks
2633	VIII	SP-138	New Record	VIII.E.SP- 138		Tanks
2634	VIII	SP-139	New Record	VIII.E.SP- 139		Tanks
2635	VIII	SP-140	New Record	VIII.E.SP- 140		Tanks
2636	VIII	SP-141	New Record	VIII.H.SP- 141		Bolting
2637	VIII	SP-142	New Record	VIII.H.SP- 142		Bolting
2638	VIII	SP-143	New Record	VIII.H.SP- 143		Bolting
2639	VIII	SP-144	New Record	VIII.H.SP- 144		Bolting
2640	VIII	SP-145	S-01	VIII.E.SP- 145	VIII.E-1(S-01)	Piping, piping components, and piping elements; tanks
2641	VIII	SP-145	S-01	VIII.G.SP- 145	VIII.G-1(S-01)	Piping, piping components, and piping elements; tanks
2642	VIII	SP-146	S-24	VIII.E.SP- 146	VIII.E-6(S-24)	Heat exchanger components

				VIII.F.SP-		Heat exchanger
2643	VIII	SP-146	S-24	146	VIII.F-5(S-24)	components
2644	VIII	SP-146	S-24	VIII.G.SP- 146	VIII.G-7(S-24)	Heat exchanger components
2659	VIII	SP-147	New Record	VIII.H.SP- 147		Piping, piping components, and piping elements
2666	VIII	SP-148	New Record	VIII.I.SP- 148		Piping, piping components, and piping elements
2669	VIII	SP-149	New Record	VIII.H.SP- 149		Bolting
706	VIII	SP-15		VIII.I.SP-15	VIII.I-12(SP- 15)	Piping, piping components, and piping elements
2672	VIII	SP-150	New Record	VIII.H.SP- 150		Bolting
2675	VIII	SP-151	New Record	VIII.H.SP- 151		Bolting
2685	VIII	SP-152	New Record	VIII.I.SP- 152		Piping, piping components, and piping elements
2687	VIII	SP-153	New Record	VIII.I.SP- 153		Piping, piping components, and piping elements
2701	VIII	SP-154	SP-2	VIII.I.SP- 154	VIII.I-14(SP-2)	Piping, piping components, and piping elements

2716	VIII	SP-155	SP-43	VIII.A.SP- 155	VIII.A-12(SP- 43)	Piping, piping components, and piping elements
2717	VIII	SP-155	SP-43	VIII.B1.SP- 155	VIII.B1-3(SP- 43)	Piping, piping components, and piping elements
2719	VIII	SP-155	SP43	VIII.B2.SP- 155	VIII.B2- 2(SP43)	Piping, piping components, and piping elements
2720		SP-157	SP-18		VIII.B1-1(SP- 18)	Piping, piping components, and piping elements
					VIII.B2-3(S-	Piping, piping components,
2724	VIII	SP-160	S-05	160	05)	and piping elements
632	VIII	SP-23		VIII.I.SP-23	VIII.I-1(SP-23)	Piping, piping components, and piping elements
1058	VIII	SP-26		VIII.E.SP- 26	VIII.E-22(SP- 26)	Piping, piping components, and piping elements
1059	VIII	SP-26		VIII.G.SP- 26	VIII.G-25(SP- 26)	Piping, piping components, and piping elements
1060	VIII	SP-27		VIII.A.SP- 27	VIII.A-8(SP- 27)	Piping, piping components, and piping elements
1061	VIII	SP-27		VIII.E.SP- 27	VIII.E-23(SP- 27)	Piping, piping components, and piping elements
1062	VIII	SP-27		VIII.F.SP- 27	VIII.F-19(SP- 27)	Piping, piping components, and piping elements
1063	VIII	SP-27		VIII.G.SP- 27	VIII.G-26(SP- 27)	Piping, piping components, and piping elements
1064	VIII	SP-28		VIII.A.SP- 28	VIII.A-7(SP- 28)	Piping, piping components, and piping elements
1065	VIII	SP-28		VIII.G.SP- 28	VIII.G-24(SP- 28)	Piping, piping components, and piping elements
1066	VIII	SP-29		VIII.E.SP- 29	VIII.E-19(SP- 29)	Piping, piping components, and piping elements
1067	VIII	SP-29		VIII.F.SP- 29	VIII.F-16(SP- 29)	Piping, piping components, and piping elements
1068	VIII	SP-29		VIII.G.SP- 29	VIII.G-21(SP- 29)	Piping, piping components, and piping elements

1069	VIII	SP-30	VIII.A.SP- 30	VIII.A-6(SP- 30)	Piping, piping components, and piping elements
298	VIII	SP-30	VIII.E.SP- 30	VIII.E-20(SP- 30)	Piping, piping components, and piping elements
299	VIII	SP-30	VIII.F.SP- 30	VIII.F-17(SP- 30)	Piping, piping components, and piping elements
300	VIII	SP-30	VIII.G.SP- 30	VIII.G-22(SP- 30)	Piping, piping components, and piping elements
301	VIII	SP-31	VIII.A.SP- 31	VIII.A-4(SP- 31)	Piping, piping components, and piping elements
302	VIII	SP-31	VIII.E.SP- 31	VIII.E-18(SP- 31)	Piping, piping components, and piping elements
303	VIII	SP-31	VIII.F.SP- 31	VIII.F-14(SP- 31)	Piping, piping components, and piping elements
304	VIII	SP-31	VIII.G.SP- 31	VIII.G-20(SP- 31)	Piping, piping components, and piping elements
310	VIII	SP-33	VIII.I.SP-33	VIII.I-4(SP-33)	Piping elements
311	VIII	SP-34	VIII.I.SP-34	VIII.I-7(SP-34)	Piping elements
312	VIII	SP-35	VIII.I.SP-35	VIII.I-8(SP-35)	Piping elements
313	VIII	SP-36	VIII.E.SP- 36	VIII.E-27(SP- 36)	Piping, piping components, and piping elements
314	VIII	SP-36	VIII.F.SP- 36	VIII.F-22(SP- 36)	Piping, piping components, and piping elements

315	VIII	SP-36	VIII.G.SP- 36	VIII.G-30(SP- 36)	Piping, piping components, and piping elements
1075	VIII	SP-39	VIII.E.SP- 39	VIII.E-24(SP- 39)	Piping, piping components, and piping elements
1076	VIII	SP-39	VIII.F.SP- 39	VIII.F-20(SP- 39)	Piping, piping components, and piping elements
1077	VIII	SP-39	VIII.G.SP- 39	VIII.G-27(SP- 39)	Piping, piping components, and piping elements
1078	VIII	SP-4	VIII.I.SP-4	VIII.I-15(SP-4)	Piping, piping components, and piping elements
1081	VIII	SP-41	VIII.E.SP- 41	VIII.E-11(SP- 41)	Heat exchanger tubes
1082	VIII	SP-41	VIII.F.SP- 41	VIII.F-8(SP- 41)	Heat exchanger tubes
1083	VIII	SP-41	VIII.G.SP- 41	VIII.G-11(SP- 41)	Heat exchanger tubes
1093	VIII	SP-5	VIII.I.SP-5	VIII.I-3(SP-5)	Piping, piping components, and piping elements
1095	VIII	SP-54	VIII.E.SP- 54	VIII.E-25(SP- 54)	Piping, piping components, and piping elements
1096	VIII	SP-54	VIII.F.SP- 54	VIII.F-21(SP- 54)	Piping, piping components, and piping elements
1097	VIII	SP-54	VIII.G.SP- 54	VIII.G-28(SP- 54)	Piping, piping components, and piping elements
1098	VIII	SP-55	VIII.E.SP- 55	VIII.E-21(SP- 55)	Piping, piping components, and piping elements
1099	VIII	SP-55	VIII.F.SP- 55	VIII.F-18(SP- 55)	Piping, piping components, and piping elements
1100	VIII	SP-55	VIII.G.SP- 55	VIII.G-23(SP- 55)	Piping, piping components, and piping elements
1101	VIII	SP-56	VIII.E.SP- 56	VIII.E-9(SP- 56)	Heat exchanger tubes

1102	VIII	SP-56		VIII.F.SP- 56	VIII.F-6(SP- 56)	Heat exchanger components
1102	VIII	01-50		VIII.G.SP-	VIII.G-9(SP-	
1103	VIII	SP-56		56	56)	Heat exchanger tubes
1104	VIII	SP-57		VIII.E.SP- 57	VIII.E-8(SP- 57)	Heat exchanger tubes
1108	VIII	SP-59		VIII.B1.SP- 59	VIII.B1-6(SP- 59)	Piping, piping components, and piping elements
1109	VIII	SP-6		VIII.I.SP-6	VIII.I-2(SP-6)	Piping, piping components, and piping elements
1110	VIII	SP-60		VIII.B1.SP- 60	VIII.B1-7(SP- 60)	Piping, piping components, and piping elements
1111	VIII	SP-60		VIII.G.SP- 60	VIII.G-34(SP- 60)	Piping, piping components, and piping elements
1116	VIII	SP-64		VIII.A.SP- 64	VIII.A-2(SP- 64)	Heat exchanger components and tubes
1117	VIII	SP-64		VIII.E.SP- 64	VIII.E-14(SP- 64)	Heat exchanger tubes
1118	VIII	SP-64		VIII.F.SP- 64	VIII.F-11(SP- 64)	Heat exchanger tubes
1119	VIII	SP-64		VIII.G.SP- 64	VIII.G-14(SP- 64)	Heat exchanger tubes
1432	VIII	SP-67	New Record	VIII.I.SP-67		Piping elements
1435		SP-68	New Record	VIII.I.SP-68		Piping elements
1438	VIII	SP-69	New Record	VIII.I.SP-69		Piping elements
1440	VIII	SP-70	New Record	VIII.I.SP-70		Piping elements
1568	VIII	SP-71	S-04	VIII.A.SP- 71	VIII.A-15(S- 04)	Piping, piping components, and piping elements
					,	
2721	VIII	SP-71	S-07	VIII.B1.SP- 71	VIII.B1-8(S- 07)	Piping, piping components, and piping elements

1569	VIII	SP-71	S-04	VIII.C.SP- 71	VIII.C-3(S-04)	Piping, piping components, and piping elements
1572		SP-73	S-09		VIII.B2-6(S- 09)	Piping, piping components,
1572	VIII	38-13	5-09	73	09)	and piping elements
1573	VIII	SP-73	S-09	VIII.C.SP- 73	VIII.C-6(S-09)	Piping, piping components, and piping elements
1574	VIII	SP-73	S-09	VIII.D2.SP- 73	VIII.D2-7(S- 09)	Piping, piping components, and piping elements
1575	VIII	SP-73	S-09	VIII.E.SP- 73	VIII.E-33(S- 09)	Piping, piping components, and piping elements
1576	VIII	SP-74	S-10	VIII.B1.SP- 74	VIII.B1-11(S- 10)	Piping, piping components, and piping elements
1578	VIII	SP-74	S-10	VIII.D1.SP- 74	VIII.D1-8(S- 10)	Piping, piping components, and piping elements
1580	VIII	SP-74	S-10	VIII.F.SP- 74	VIII.F-25(S- 10)	Piping, piping components, and piping elements
1581	VIII	SP-74	S-10	VIII.G.SP- 74	VIII.G-38(S- 10)	Piping, piping components, and piping elements
1582	VIII	SP-75	S-13	VIII.E.SP- 75	VIII.E-40(S- 13)	Tanks
1583	VIII	SP-75	S-13	VIII.G.SP- 75	VIII.G-41(S- 13)	Tanks
1584	VIII	SP-76	S-17	VIII.G.SP- 76	VIII.G-6(S-17)	Heat exchanger components

1585	VIII	SP-77	S-18	VIII.E.SP- 77	VIII.E-7(S-18)	Heat exchanger components
		-			()	
				VIII.E.SP-	VIII.E-37(S-	PWR heat exchanger
1586	VIII	SP-78	S-19	78	19)	components
				VIII.F.SP-	VIII.F-28(S-	PWR heat exchanger
1587	VIII	SP-78	S-19	78	19)	components
				VIII.G.SP-		Heat exchanger
1588	VIII	SP-79	S-20	79	VIII.G-3(S-20)	components
1120	\/III	SP-8		VIII.E.SP-8	VIII.E-16(SP-	Piping, piping components, and piping elements
1120	VIII	SF-0		VIII.E.3F-0	0)	and piping elements
					VIII.F-13(SP-	Piping, piping components,
1121	VIII	SP-8		VIII.F.SP-8		and piping elements
1122	VIII	SP-8		VIII.G.SP-8	VIII.G-18(SP- 8)	Piping, piping components, and piping elements
				VIII.E.SP-	,	
1589	VIII	SP-80	S-21	80	VIII.E-4(S-21)	Heat exchanger components and tubes
				VIII.E.SP-	VIII.E-36(S-	PWR heat exchanger
1590	VIII	SP-81	S-22	81	22)	components
					VIII.F-27(S-	PWR heat exchanger
1591	VIII	SP-81	S-22	81	22)	components
				VIII.H.SP-		
1592	VIII	SP-82	S-32	82	VIII.H-1(S-32)	Bolting
1500	\/III	SD 02	S 22	VIII.H.SP-		Cleaure belting
1593	VIII	SP-83	S-33	83	VIII.H-5(S-33)	Closure bolting
				VIII.H.SP-		
1594	VIII	SP-84	S-34	84	VIII.H-4(S-34)	Closure bolting

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1595	VIII	SP-85	S-39	VIII.F.SP- 85	VIII.F-3(S-39)	Heat exchanger components
1597	VIII	SP-86	New Record	VIII.I.SP-86		Piping, piping components, and piping elements
1598	VIII	SP-87	SP-16	VIII.B1.SP- 87	VIII.B1-4(SP- 16)	Piping, piping components, and piping elements
1599	VIII	SP-87	SP-16	VIII.C.SP- 87	VIII.C-1(SP- 16)	Piping, piping components, and piping elements
1600		SP-87	SP-16	VIII.D1.SP- 87	VIII.D1-4(SP- 16)	Piping, piping components, and piping elements
1601	VIII	SP-87	SP-16	VIII.D2.SP- 87	VIII.D2-4(SP- 16)	Piping, piping components, and piping elements
1602	VIII	SP-87	SP-16	VIII.E.SP- 87	VIII.E-29(SP- 16)	Piping, piping components, and piping elements
1603	VIII	SP-87	SP-16	VIII.F.SP- 87	VIII.F-23(SP- 16)	Piping, piping components, and piping elements
1604	VIII	SP-87	SP-16	VIII.G.SP- 87	VIII.G-32(SP- 16)	Piping, piping components, and piping elements
1605	VIII	SP-88	SP-17	VIII.B1.SP- 88	VIII.B1-5(SP- 17)	Piping, piping components, and piping elements
1606	VIII	SP-88	SP-17	VIII.C.SP- 88	VIII.C-2(SP- 17)	Piping, piping components, and piping elements
1607	VIII	SP-88	SP-17	VIII.D1.SP- 88	VIII.D1-5(SP- 17)	Piping, piping components, and piping elements
1608	VIII	SP-88	SP-17	VIII.E.SP- 88	VIII.E-30(SP- 17)	Piping, piping components, and piping elements
1609	VIII	SP-88	SP-17	VIII.F.SP- 88	VIII.F-24(SP- 17)	Piping, piping components, and piping elements
1610	VIII	SP-88	SP-17	VIII.G.SP- 88	VIII.G-33(SP- 17)	Piping, piping components, and piping elements
1123	VIII	SP-9		VIII.I.SP-9	VIII.I-5(SP-9)	Piping elements
1612	VIII	SP-90	SP-24	VIII.D1.SP- 90	VIII.D1-1(SP- 24)	Piping, piping components, and piping elements

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1613	VIII	SP-90	SP-24	VIII.D2.SP- 90	VIII.D2-1(SP- 24)	Piping, piping components, and piping elements
1614	VIII	SP-90	SP-24	VIII.E.SP- 90	VIII.E-15(SP- 24)	Piping, piping components, and piping elements
1615	VIII	SP-90	SP-24	VIII.F.SP- 90	VIII.F-12(SP- 24)	Piping, piping components, and piping elements
1616	VIII	SP-90	SP-24	VIII.G.SP- 90	VIII.G-17(SP- 24)	Piping, piping components, and piping elements
1617	VIII	SP-91	SP-25	VIII.A.SP- 91	VIII.A-14(SP- 25)	Piping, piping components, and piping elements
1618	VIII	SP-91	SP-25	VIII.D1.SP- 91	VIII.D1-6(SP- 25)	Piping, piping components, and piping elements
1619	VIII	SP-91	SP-25	VIII.D2.SP- 91	VIII.D2-5(SP- 25)	Piping, piping components, and piping elements
1620	VIII	SP-91	SP-25	VIII.E.SP- 91	VIII.E-32(SP- 25)	Piping, piping components, and piping elements
1621	VIII	SP-91	SP-25	VIII.G.SP- 91	VIII.G-35(SP- 25)	Piping, piping components, and piping elements
1622	VIII	SP-92	SP-32	VIII.A.SP- 92	VIII.A-3(SP- 32)	Piping, piping components, and piping elements
1623	VIII	SP-92	SP-32	VIII.D1.SP- 92	VIII.D1-2(SP- 32)	Piping, piping components, and piping elements
1624	VIII	SP-92	SP-32	VIII.D2.SP- 92	VIII.D2-2(SP- 32)	Piping, piping components, and piping elements
1625	VIII	SP-92	SP-32	VIII.E.SP- 92	VIII.E-17(SP- 32)	Piping, piping components, and piping elements
1626	VIII	SP-92	SP-32	VIII.G.SP- 92	VIII.G-19(SP- 32)	Piping, piping components, and piping elements
1627	VIII	SP-93	New Record	VIII.I.SP-93		Piping, piping components, and piping elements

1628	VIII	SP-94	SP-37	VIII.E.SP- 94	VIII.E-28(SP- 37)	Piping, piping components, and piping elements
1629	VIII	SP-94	SP-37	VIII.G.SP- 94	VIII.G-31(SP- 37)	Piping, piping components, and piping elements
1630	VIII	SP-95	SP-38	VIII.A.SP- 95	VIII.A-9(SP- 38)	Piping, piping components, and piping elements
1631	VIII	SP-95	SP-38	VIII.D1.SP- 95	VIII.D1-3(SP- 38)	Piping, piping components, and piping elements
1632	VIII	SP-95	SP-38	VIII.D2.SP- 95	VIII.D2-3(SP- 38)	Piping, piping components, and piping elements
1633	VIII	SP-95	SP-38	VIII.E.SP- 95	VIII.E-26(SP- 38)	Piping, piping components, and piping elements
1634	VIII	SP-95	SP-38	VIII.G.SP- 95	VIII.G-29(SP- 38)	Piping, piping components, and piping elements
1635	VIII	SP-96	SP-40	VIII.E.SP- 96	VIII.E-13(SP- 40)	Heat exchanger tubes
1636	VIII	SP-96	SP-40	VIII.F.SP- 96	VIII.F-10(SP- 40)	Heat exchanger tubes
1637	VIII	SP-97	SP-42	VIII.E.SP- 97	VIII.E-38(SP- 42)	Tanks
1638		SP-98	SP-45	VIII.A.SP- 98	VIII.A-11(SP- 45)	Piping, piping components, and piping elements
2723	VIII	SP-98	SP-44	VIII.B1.SP- 98	VIII.B1-2(SP- 44)	Piping, piping components, and piping elements
1639	VIII	SP-98	SP-45	VIII.B2.SP- 98	VIII.B2-1(SP- 45)	Piping, piping components, and piping elements
1640	VIII	SP-99	SP-53	VIII.G.SP- 99	VIII.G-8(SP- 53)	Heat exchanger tubes

Material	Environment	AgingEffect_Mechanism	AMP
			Chapter XI.S6, "Structures Monitoring"
			#*#If a de-watering system is relied
		Reduction of foundation	upon for control of erosion of cement
		strength and cracking	from porous concrete subfoundations,
		#*#due to differential	then the licensee is to ensure proper
		settlement and erosion	functioning of the de-watering system
Concrete;		of porous concrete	through the period of extended
porous concrete	Water – flowing	subfoundation	operation.
			Chapter XI.S6, "Structures Monitoring"
			#*#If a de-watering system is relied
		Reduction of foundation	upon for control of erosion of cement
		strength and cracking	from porous concrete subfoundations,
		#*#due to differential	then the licensee is to ensure proper
Concrete		settlement and erosion	functioning of the de-watering system
Concrete;	Mator flowing	of porous concrete subfoundation	through the period of extended
porous concrete	water – nowing	Subioundation	operation.
			Chapter XI.S6, "Structures Monitoring" #*#If a de-watering system is relied
		Reduction of foundation	upon for control of erosion of cement
		strength and cracking	from porous concrete subfoundations,
		#*#due to differential	then the licensee is to ensure proper
		settlement and erosion	functioning of the de-watering system
Concrete;		of porous concrete	through the period of extended
porous concrete	Water – flowing	subfoundation	operation.
	Water nothing		Chapter XI.S6, "Structures Monitoring"
			#*#If a de-watering system is relied
		Reduction of foundation	upon for control of erosion of cement
		strength and cracking	from porous concrete subfoundations,
		#*#due to differential	then the licensee is to ensure proper
		settlement and erosion	functioning of the de-watering system
Concrete;		of porous concrete	through the period of extended
porous concrete	Water – flowing	subfoundation	operation.
			Chapter XI.S6, "Structures Monitoring"
			#*#If a de-watering system is relied
		Reduction of foundation	upon for control of erosion of cement
		strength and cracking	from porous concrete subfoundations,
		#*#due to differential	then the licensee is to ensure proper
		settlement and erosion	functioning of the de-watering system
Concrete;		of porous concrete	through the period of extended
porous concrete	Water – flowing	subfoundation	operation.
			Chapter XI.S6, "Structures Monitoring"
			#*#If a de-watering system is relied
		Reduction of foundation	upon for control of erosion of cement
		strength and cracking	from porous concrete subfoundations,
		#*#due to differential	then the licensee is to ensure proper
Concretes		settlement and erosion	functioning of the de-watering system
Concrete;	Motor flouing	of porous concrete	through the period of extended
porous concrete	water – flowing	subfoundation	operation.

	Air – indoor,		
		Loss of material #*#due	Chapter XI.S2, "ASME Section XI,
Steel	– outdoor	to corrosion	Subsection IWL"
	Air – indoor,		
		Loss of material #*#due	Chapter XI.S2, "ASME Section XI,
Steel	– outdoor	to corrosion	Subsection IWL"
			Loss of tendon prestress is a time-
			limited aging analysis (TLAA) to be
			evaluated for the period of extended
			operation. #*#See the SRP, Section 4.5,
			"Concrete Containment Tendon
			Prestress" for acceptable methods for
			meeting the requirements of
			10 CFR 54.21(c)(1)(i) and (ii). See
			Chapter X.S1 of this report for meeting
		Loss of prestress #*#due	
	Air – indoor,	to relaxation; shrinkage;	10 CFR 54.21(c)(1)(iii). #*#For periodic
	uncontrolled or Air		monitoring of prestress, see Chapter
Steel	 outdoor 	temperature	XI.S2.
			Loss of tendon prestress is a time-
			limited aging analysis (TLAA) to be
			evaluated for the period of extended
			operation. #*#See the SRP, Section 4.5,
			"Concrete Containment Tendon
			Prestress" for acceptable methods for
			meeting the requirements of
			10 CFR 54.21(c)(1)(i) and (ii). See
			Chapter X.S1 of this report for meeting
		Loss of prestress #*#due	•
	Air – indoor,	to relaxation; shrinkage;	10 CFR 54.21(c)(1)(iii). #*#For periodic
	uncontrolled or Air		monitoring of prestress, see Chapter
Steel	– outdoor	temperature	XI.S2.
			Fatigue is a time-limited aging analysis
			(TLAA) to be evaluated for the period of
			extended operation. See the SRP,
		Cumulative fatigue	Section 4.6, "Containment Liner Plate
Steel; stainless	Air – indoor,	damage #*#due to	and Penetration Fatigue Analysis" for
steel; dissimilar		fatigue #*#(Only if CLB	acceptable methods for meeting the
metal welds	– outdoor	fatigue analysis exists)	requirements of 10 CFR 54.21(c)(1).
			Entique is a time limited entire analysis
			Fatigue is a time-limited aging analysis
			(TLAA) to be evaluated for the period of
		Cumulativo fatiguo	extended operation. See the SRP,
Stool: stoiplass	Air indoor	Cumulative fatigue	Section 4.6, "Containment Liner Plate
Steel; stainless	Air – indoor,	damage #*#due to	and Penetration Fatigue Analysis" for
steel; dissimilar metal welds	– outdoor	fatigue #*#(Only if CLB	acceptable methods for meeting the requirements of 10 CFR 54.21(c)(1).
		fatigue analysis exists)	
	Air – indoor,	Loss of material #*#due	Chapter XI.S1, "ASME Section XI,
		to general, pitting, and	Subsection IWE," and #*#Chapter
Steel	– outdoor	crevice corrosion	XI.S4, "10 CFR Part 50, Appendix J"
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	Air – indoor,	Loss of material #*#due	Chapter XI.S1, "ASME Section XI,
Ota al		to general, pitting, and	Subsection IWE," and #*#Chapter
Steel	– outdoor	crevice corrosion	XI.S4, "10 CFR Part 50, Appendix J"
			Fatigue is a time-limited aging analysis (TLAA) to be evaluated for the period of
		Cumulative fatigue	extended operation. See the SRP, Section 4.6, "Containment Liner Plate
		damage #*#due to	and Penetration Fatigue Analysis" for
Steel; stainless	Air – indoor,	fatigue #*#(Only if CLB	acceptable methods for meeting the
steel	uncontrolled	fatigue analysis exists) Fretting or lockup	requirements of 10 CFR 54.21(c)(1).
	Air – indoor,	#*#due to mechanical	Chapter XI.S1, "ASME Section XI,
Steel	uncontrolled	wear	Subsection IWE"
		Fretting or lockup	
Steel	Air – indoor, uncontrolled	#*#due to mechanical wear	Chapter XI.S1, "ASME Section XI, Subsection IWE"
Sleer		Fretting or lockup	
	Air – indoor,	#*#due to mechanical	Chapter XI.S1, "ASME Section XI,
Steel	uncontrolled	wear	Subsection IWE"
	Air – indoor,	Fretting or lockup #*#due to mechanical	Chapter XI.S1, "ASME Section XI,
Steel	uncontrolled	wear	Subsection IWE"
			Chapter XI.S1, "ASME Section XI,
	Air – indoor,	Cracking #*#due to	Subsection IWE," and #*#Chapter
Stainless steel	uncontrolled	stress corrosion cracking	XI.S4, "10 CFR Part 50, Appendix J" Chapter XI.S1, "ASME Section XI,
	Air – indoor,	Cracking #*#due to	Subsection IWE," and #*#Chapter
Stainless steel	uncontrolled		XI.S4, "10 CFR Part 50, Appendix J"
			Estique is a time limited aging applyois
			Fatigue is a time-limited aging analysis (TLAA) to be evaluated for the period of
			extended operation. See the SRP,
		Cumulative fatigue	Section 4.6, "Containment Liner Plate
Steel; stainless steel; dissimilar	Air – indoor,	damage #*#due to fatigue #*#(Only if CLB	and Penetration Fatigue Analysis" for acceptable methods for meeting the
metal welds	uncontrolled	fatigue analysis exists)	requirements of 10 CFR 54.21(c)(1).
		, j ,	
			Fatigue is a time-limited aging analysis
			(TLAA) to be evaluated for the period of extended operation. See the SRP,
		Cumulative fatigue	Section 4.6, "Containment Liner Plate
	Air – indoor,	damage #*#due to	and Penetration Fatigue Analysis" for
Steel; stainless	uncontrolled or	fatigue #*#(Only if CLB	acceptable methods for meeting the
steel	Treated water	fatigue analysis exists) Loss of material #*#due	requirements of 10 CFR 54.21(c)(1).
	Air – indoor,	to general (steel only),	Chapter XI.S1, "ASME Section XI,
Steel; stainless	uncontrolled or	pitting, and crevice	Subsection IWE," and #*#Chapter
steel	Treated water	corrosion	XI.S4, "10 CFR Part 50, Appendix J"

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		Loss of material #*#due	
	Air – indoor,	to general (steel only),	Chapter XI.S1, "ASME Section XI,
Steel; stainless	uncontrolled or	pitting, and crevice	Subsection IWE," and #*#Chapter
steel	Treated water	corrosion	XI.S4, "10 CFR Part 50, Appendix J"
Concrete	 – outdoor or 	Increase in porosity and permeability; cracking; loss of material (spalling, scaling) #*#due to aggressive chemical attack	#M#Chapter XI.S2, "ASME Section XI, Subsection IWL," or #*#Chapter XI.S6, "Structure Monitoring"#M#
Concrete	Soil	Cracking and distortion #*#due to increased stress levels from settlement	#M#Chapter XI.S2, "ASME Section XI, Subsection IWL," or #*#Chapter XI.S6, "Structure Monitoring" #*#If a de- watering system is relied upon for control of settlement, then the licensee is to ensure proper functioning of the de- watering system through the period of extended operation. #M#
		#M#Increase in porosity and permeability; loss of strength #*#due to leaching of calcium hydroxide and	#M#Further evaluation is required to determine if a plant-specific aging management program is needed to manage increase in porosity, and permeability due to leaching of calcium hydroxide and carbonation of concrete in Inaccessible Areas. A plant-specific aging management program is not required if (1) There is evidence in the accessible areas that the flowing water has not caused leaching and carbonation, or (2) Evaluation determined that the observed leaching of calcium hydroxide and carbonation in accessible areas has no impact on the intended function of the concrete
Concrete	Water – flowing	carbonation#M#	structure.#M#

		Cracking #*#due to	#M#Further evaluation is required to determine if a plant-specific aging management program is needed to manage cracking and expansion due to reaction with aggregate of concrete in Inaccessible Areas. A plant-specific aging management program is not required if (1) as described in NUREG- 1557, investigations, tests, and petrographic examinations of aggregates performed in accordance with ASTM C295 and other ASTM reactivity tests, as required, can demonstrate that those aggregates do not adversely react within concrete, or (2) For potentially reactive aggregates, aggregate concrete reaction is not significant if it is demonstrated that the
Concrete	Any environment	expansion from reaction with aggregates	in-place concrete can perform its intended function.#M#
Concrete	Soil	Cracking and distortion #*#due to increased stress levels from settlement	#M#Chapter XI.S2, "ASME Section XI, Subsection IWL," or #*#Chapter XI.S6, "Structure Monitoring" #*#If a de- watering system is relied upon for control of settlement, then the licensee is to ensure proper functioning of the de- watering system through the period of extended operation. #M#
Concrete	Soil	Cracking and distortion #*#due to increased stress levels from settlement	#M#Chapter XI.S2, "ASME Section XI, Subsection IWL," or #*#Chapter XI.S6, "Structure Monitoring" #*#If a de- watering system is relied upon for control of settlement, then the licensee is to ensure proper functioning of the de- watering system through the period of extended operation. #M#
Concrete	Soil	Cracking and distortion #*#due to increased stress levels from settlement	#M#Chapter XI.S2, "ASME Section XI, Subsection IWL," or #*#Chapter XI.S6, "Structure Monitoring" #*#If a de- watering system is relied upon for control of settlement, then the licensee is to ensure proper functioning of the de- watering system through the period of extended operation. #M#

Air – indoor,Air – indoor,Reduction of strength elevated temperaturepostulated design loads is to be made. #*#Higher temperatures than given above may be allowed in the concrete if tests and/or calculations are provided to evaluate the reduction in strength and modulus of elasticity and these				
Air – indoor, permeability; cracking; loss of material (spalling, scaling) #*#due to aggressive chemical #M#Chapter XI.52, "ASME Section XI, Subsection IWL," or #*#Chapter XI.S6, "Structure Monitoring#M# Steel; stainless steel; dissimilar metal welds Air – indoor, uncontrolled or metal welds Cracking #*#due to cyclic loading #*#(CLB fatigue analysis does not exist) Subsection IWE," and #*#Chapter XI.S4, "10 CFR Part 50, Appendix J*#M# #M#Plant-specific aging management program #*#The implementation of 10 CFR 50.55a and ASME Section XI, Subsection IWL would not be able to identify the reduction of strength and modulus of elasticity due to elevated temperature. Thus, for any portions of concrete containment that exceed specified temperature limits for normal operation or any other long-tem period. The temperatures shall not exceed 150°F. exceed 200°F. If significant equipment loads are supported by concrete at temperatures exceeding 150°F, an evaluation of the ability to withstand the postulated design loads is to be made. ###Higher temperatures and noid us are provided to elevated temperature ind modulus #*#due to elevated temperature	Concrete	uncontrolled or Air	permeability; cracking; loss of material (spalling, scaling) #*#due to aggressive chemical	Subsection IWL," or #*#Chapter XI.S6,
#M#Plant-specific aging management program #*The implementation of 10 CFR 50.55a and ASME Section XI, Subsection IWL would not be able to identify the reduction of strength and modulus of elasticity due to elevated temperature. Thus, for any portions of concrete containment that exceed specified temperature limits, further evaluations are warranted. Subsection CC-3400 of ASME Section III, Division 2, specifies the concrete temperature limits for normal operation or any other long-term period. The temperatures shall not exceed 150°F except for local areas, such as around penetrations, which are not allowed to exceed 200°F. If significant equipment loads are supported by concrete at temperatures exceeding 150°F, an evaluation of the ability to withstand the postulated design loads is to be made. #*#Higher temperatures than given above may be allowed in the concrete if tests and/or calculations are provided to evaluate the reduction in strength and modulus #*#due to elevated temperature	Steel; stainless steel; dissimilar	uncontrolled or Air – outdoor Air – indoor, uncontrolled or	permeability; cracking; loss of material (spalling, scaling) #*#due to aggressive chemical attack Cracking #*#due to cyclic loading #*#(CLB fatigue analysis does not	Subsection IWL," or #*#Chapter XI.S6, "Structure Monitoring"#M# #M#Chapter XI.S1, "ASME Section XI, Subsection IWE," and #*#Chapter XI.S4, "10 CFR Part 50, Appendix
Concrete – outdoor local) calculations.#M#	Concrete	uncontrolled or Air	Reduction of strength and modulus #*#due to elevated temperature (>150°F general; >200°F	program #*#The implementation of 10 CFR 50.55a and ASME Section XI, Subsection IWL would not be able to identify the reduction of strength and modulus of elasticity due to elevated temperature. Thus, for any portions of concrete containment that exceed specified temperature limits, further evaluations are warranted. Subsection CC-3400 of ASME Section III, Division 2, specifies the concrete temperature limits for normal operation or any other long-term period. The temperatures shall not exceed 150°F except for local areas, such as around penetrations, which are not allowed to exceed 200°F. If significant equipment loads are supported by concrete at temperatures exceeding 150°F, an evaluation of the ability to withstand the postulated design loads is to be made. #*#Higher temperatures than given above may be allowed in the concrete if tests and/or calculations are provided to evaluate the reduction in strength and modulus of elasticity and these reductions are applied to the design

Steel	Air – indoor, uncontrolled or Treated water	Loss of material #*#due to general, pitting, and crevice corrosion	#M#Chapter XI.S1, "ASME Section XI, Subsection IWE" #*# #*#Plant specific aging management program is required if plant operating experience identified significant corrosion of the torus ring girders and downcomers. If protective coating is credited for preventing corrosion of the torus shell, the coating should be included in scope of license renewal and subject to aging management review.#M#
Concrete	Water – flowing	#M#Increase in porosity and permeability; loss of strength #*#due to leaching of calcium hydroxide and carbonation#M#	#M#Further evaluation is required to determine if a plant-specific aging management program is needed to manage increase in porosity, and permeability due to leaching of calcium hydroxide and carbonation of concrete in Inaccessible Areas. A plant-specific aging management program is not required if (1) There is evidence in the accessible areas that the flowing water has not caused leaching and carbonation, or (2) Evaluation determined that the observed leaching of calcium hydroxide and carbonation in accessible areas has no impact on the intended function of the concrete structure.#M#
Concrete	Water – flowing	#M#Increase in porosity and permeability; loss of strength #*#due to leaching of calcium hydroxide and carbonation#M#	#M#Further evaluation is required to determine if a plant-specific aging management program is needed to manage increase in porosity, and permeability due to leaching of calcium hydroxide and carbonation of concrete in Inaccessible Areas. A plant-specific aging management program is not required if (1) There is evidence in the accessible areas that the flowing water has not caused leaching and carbonation, or (2) Evaluation determined that the observed leaching of calcium hydroxide and carbonation in accessible areas has no impact on the intended function of the concrete structure.#M#

#M#Air – indoor, uncontrolled or Concrete#M#	Loss of material #*#due to general, pitting, and crevice corrosion	#M#Chapter XI.S1, "ASME Section XI, Subsection IWE," and #*#Chapter XI.S4, "10 CFR Part 50, Appendix J"#M#
Concrete	None	None
Concrete	None	None
Concrete	None	None
Air – indoor, uncontrolled or Treated water	Loss of material #*#due to general, pitting, and crevice corrosion	#M#Chapter XI.S1, "ASME Section XI, Subsection IWE"#M#
Air – indoor, uncontrolled or Treated water	Loss of material #*#due to general, pitting, and crevice corrosion	#M#Chapter XI.S1, "ASME Section XI, Subsection IWE"#M#
Air – indoor, uncontrolled or Treated water	Loss of material #*#due to general, pitting, and crevice corrosion	#M#Chapter XI.S1, "ASME Section XI, Subsection IWE"#M#
		#M#Further evaluation is required to determine if a plant-specific aging management program is needed to manage cracking and expansion due to reaction with aggregate of concrete in Inaccessible Areas. A plant-specific aging management program is not required if (1) as described in NUREG- 1557, investigations, tests, and petrographic examinations of aggregates performed in accordance with ASTM C295 and other ASTM reactivity tests, as required, can demonstrate that those aggregates do not adversely react within concrete, or (2) For potentially reactive aggregates, aggregate concrete reaction is not
Any environment	expansion from reaction with aggregates	significant if it is demonstrated that the in-place concrete can perform its intended function.#M#
	uncontrolled or Concrete Concrete Concrete Concrete Air – indoor, uncontrolled or Treated water Air – indoor, uncontrolled or Treated water Air – indoor, uncontrolled or Treated water	uncontrolled or Concrete#M# to general, pitting, and crevice corrosion Concrete None Concrete None Concrete None Air – indoor, uncontrolled or Treated water Loss of material #*#due to general, pitting, and crevice corrosion Air – indoor, uncontrolled or Treated water Loss of material #*#due to general, pitting, and crevice corrosion Air – indoor, uncontrolled or Treated water Loss of material #*#due to general, pitting, and crevice corrosion Air – indoor, uncontrolled or Treated water Loss of material #*#due to general, pitting, and crevice corrosion Air – indoor, uncontrolled or Treated water Cracking #*#due to expansion from reaction

Concrete	Water – flowing	Increase in porosity and permeability; loss of strength #*#due to leaching of calcium hydroxide and carbonation	#M#Further evaluation is required to determine if a plant-specific aging management program is needed to manage increase in porosity, and permeability due to leaching of calcium hydroxide and carbonation of concrete in Inaccessible Areas. A plant-specific aging management program is not required if (1) There is evidence in the accessible areas that the flowing water has not caused leaching and carbonation, or (2) Evaluation determined that the observed leaching of calcium hydroxide and carbonation in accessible areas has no impact on the intended function of the concrete structure.#M#
			#M#Further evaluation is required for plants that are located in moderate to severe weathering conditions (weathering index >100 day-inch/yr) (NUREG-1557) to determine if a plant- specific aging management program is needed. A plant-specific aging management program is not required if documented evidence confirms that the existing concrete had air entrainment content (as per Table CC-2231-2 of the ASME Section III Division 2), and subsequent inspections of accessible areas did not exhibit degradation related to freeze-thaw. Such inspections should be considered a part of the evaluation. If this condition is not satisfied, then a plant-specific aging management program is required to manage loss of material (spalling, scaling) and cracking due to freeze-
		Loss of material (spalling, scaling) and	thaw of concrete in inaccessible areas. #*#The weathering index for the
Concrete	Air – outdoor or Ground water/soil	cracking #*#due to freeze-thaw	continental US is shown in ASTM C33- 90, Fig. 1.#M#
	A	Cracking #*#due to	
Steel; stainless	Air – indoor,	cyclic loading #*#(CLB	#N#Chapter VI S1 "ASME Section VI
steel; dissimilar metal welds	uncontrolled or Treated water	exist)	#M#Chapter XI.S1, "ASME Section XI, Subsection IWE"#M#
	Treated Water		

Concrete	#M#Air – outdoor or Ground water/soil#M#	Loss of material (spalling, scaling) and cracking #*#due to freeze-thaw	#M#Further evaluation is required for plants that are located in moderate to severe weathering conditions (weathering index >100 day-inch/yr) (NUREG-1557) to determine if a plant- specific aging management program is needed. A plant-specific aging management program is not required if documented evidence confirms that the existing concrete had air entrainment content (as per Table CC-2231-2 of the ASME Section III Division 2), and subsequent inspections of accessible areas did not exhibit degradation related to freeze-thaw. Such inspections should be considered a part of the evaluation. If this condition is not satisfied, then a plant-specific aging management program is required to manage loss of material (spalling, scaling) and cracking due to freeze- thaw of concrete in inaccessible areas. #*#The weathering index for the continental US is shown in ASTM C33- 90, Fig. 1.#M#
Steel	Air – indoor, uncontrolled or Air – outdoor	Loss of material #*#due to general, pitting, and crevice corrosion	Chapter XI.S1, "ASME Section XI, Subsection IWE"
Steel	– outdoor	Loss of material #*#due to general, pitting, and crevice corrosion Loss of preload #*#due	Chapter XI.S1, "ASME Section XI, Subsection IWE" Chapter XI.S1, "ASME Section XI, Subsection IWE," and #*#Chapter
Any Any	Any environment Any environment	to self-loosening Loss of preload #*#due to self-loosening Loss of coating integrity	XI.S4, "10 CFR Part 50, Appendix J" Chapter XI.S1, "ASME Section XI, Subsection IWE," and #*#Chapter XI.S4, "10 CFR Part 50, Appendix J"
Coatings	Air – indoor, uncontrolled	#*#due to blistering, cracking, flaking, peeling, or physical damage	Chapter XI.S8, "Protective Coating Monitoring and Maintenance"
Coatings	Air – indoor, uncontrolled	Loss of coating integrity #*#due to blistering, cracking, flaking, peeling, or physical damage	Chapter XI.S8, "Protective Coating Monitoring and Maintenance"

		Increase in porosity and	
		permeability; loss of	
		strength #*#due to	
		leaching of calcium	
		hydroxide and	#M#Chapter XI.S2, "ASME Section XI,
Concrete	Water – flowing	carbonation	Subsection IWL"#M#
		Increase in porosity and	
		permeability; loss of	
		strength #*#due to	
		leaching of calcium	
		hydroxide and	#M#Chapter XI.S2, "ASME Section XI,
Concrete	Water – flowing	carbonation	Subsection IWL"#M#
			Chapter XI.S1, "ASME Section XI,
			Subsection IWE" #*#Plant-specific
			aging management program is required
			if plant operating experience identified
			significant corrosion. If protective
			coating is credited for preventing
			corrosion, the coating should be
	Air – indoor,	Loss of material #*#due	included in scope of license renewal
	uncontrolled or	to general, pitting, and	and subject to aging management
Steel	Treated water	crevice corrosion	review.
		Loss of material	
		(spalling, scaling) and	
		cracking #*#due to	#M#Chapter XI.S2, "ASME Section XI,
Concrete	Air – outdoor	freeze-thaw	Subsection IWL"#M#
		#M#Increase in porosity	
		and permeability; loss of	
		strength #*#due to	
		leaching of calcium	
		hydroxide and	#M#Chapter XI.S2, "ASME Section XI,
Concrete	Water – flowing	carbonation#M#	Subsection IWL"#M#
	indici nowing		
		Cracking #*#due to	
		-	#M#Chapter XI.S2, "ASME Section XI,
Concrete	Any environment	with aggregates	Subsection IWL"#M#
	,		

			#M#Plant-specific aging management
			program #*# #*#The implementation of
			10 CFR 50.55a and ASME Section XI,
			Subsection IWL would not be able to
			identify the reduction of strength and modulus of elasticity due to elevated
			temperature. Thus, for any portions of
			concrete containment that exceed
			specified temperature limits, further
			evaluations are warranted. Subsection
			CC-3400 of ASME Section III,
			Division 2, specifies the concrete
			temperature limits for normal operation
			or any other long-term period. The
			temperatures shall not exceed 150°F
			except for local areas, such as around
			penetrations, which are not allowed to exceed 200°F. If significant equipment
			loads are supported by concrete at
			temperatures exceeding 150°F, an
			evaluation of the ability to withstand the
			postulated design loads is to be made.
			#*# #*#Higher temperatures than given
			above may be allowed in the concrete if
		Reduction of strength	tests and/or calculations are provided to
	.	and modulus #*#due to	evaluate the reduction in strength and
	Air – indoor,	elevated temperature	modulus of elasticity and these
Concrete	– outdoor	(>150°F general; >200°F local)	reductions are applied to the design calculations.#M#
Concrete			#M#Chapter XI.S1, "ASME Section XI,
		Loss of material #*#due	Subsection IWE," and #*#Chapter
	Air – indoor,	to general, pitting, and	XI.S4, "10 CFR Part 50, Appendix
Steel	uncontrolled	crevice corrosion	J"#M#
			#M#Chapter XI.S1, "ASME Section XI,
		Loss of material #*#due	Subsection IWE," and #*#Chapter
Steel	Air – indoor,	to general, pitting, and	XI.S4, "10 CFR Part 50, Appendix
Steel	uncontrolled	crevice corrosion	J"#M# #M#Chapter XI.S1, "ASME Section XI,
		Loss of material #*#due	Subsection IWE," and #*#Chapter
	Air – indoor,	to general, pitting, and	XI.S4, "10 CFR Part 50, Appendix
Steel	uncontrolled	crevice corrosion	J"#M#
			#M#Chapter XI.S1, "ASME Section XI,
	Air – indoor,	Loss of material #*#due	Subsection IWE," and #*#Chapter
Steel; dissimilar		to general, pitting, and	XI.S4, "10 CFR Part 50, Appendix J"
metal welds	– outdoor	crevice corrosion	#M#
	Ain indeer	loss of motorial 4444	#M#Chapter XI.S1, "ASME Section XI,
Stool: dissimilar	Air – indoor,	Loss of material #*#due	Subsection IWE," and #*#Chapter
Steel; dissimilar metal welds	– outdoor	to general, pitting, and crevice corrosion	XI.S4, "10 CFR Part 50, Appendix J" #M#
inclai welus			#IVI#

		Creating #*#due to	#M#Chapter VI C1 "ACME Costion VI
Ctack stainlass	Air indoor	Cracking #*#due to	#M#Chapter XI.S1, "ASME Section XI,
Steel; stainless	Air – indoor,	cyclic loading #*#(CLB	Subsection IWE," and #*#Chapter
steel; dissimilar metal welds			XI.S4, "10 CFR Part 50, Appendix
	– outdoor	exist) Cracking #*#due to	J"#M# #M#Chapter XI.S1, "ASME Section XI,
Staal: stainlass	Air indoor	0	•
Steel; stainless	Air – indoor,	cyclic loading #*#(CLB	Subsection IWE," and #*#Chapter
steel; dissimilar			XI.S4, "10 CFR Part 50, Appendix
metal welds	– outdoor	exist)	J"#M#
Ctainless steel	Air indoor		#M#Chapter XI.S1, "ASME Section XI,
Stainless steel;	Air – indoor,		Subsection IWE," and #*#Chapter
dissimilar metal		Cracking #*#due to	XI.S4, "10 CFR Part 50, Appendix
welds	– outdoor	stress corrosion cracking	
	.		#M#Chapter XI.S1, "ASME Section XI,
Stainless steel;	Air – indoor,		Subsection IWE," and #*#Chapter
dissimilar metal		Cracking #*#due to	XI.S4, "10 CFR Part 50, Appendix
welds	– outdoor	stress corrosion cracking	J"#M#
		Loss of leak tightness	#M#Chapter XI.S1, "ASME Section XI,
	· ·	#*#due to mechanical	Subsection IWE," and #*#Chapter
	uncontrolled or Air	wear of locks, hinges	XI.S4, "10 CFR Part 50, Appendix
Steel	 outdoor 	and closure mechanisms	J"#M#
		Loss of leak tightness	#M#Chapter XI.S1, "ASME Section XI,
	Air – indoor,	#*#due to mechanical	Subsection IWE," and #*#Chapter
	uncontrolled or Air	wear of locks, hinges	XI.S4, "10 CFR Part 50, Appendix
Steel	– outdoor	and closure mechanisms	J"#M#
		#M#Loss of sealing	
Elastomers,		#*#due to wear,	
rubber and		damage, erosion, tear,	
other similar	Air – indoor,	surface cracks, or other	#M#Chapter XI.S1, "ASME Section XI,
materials	uncontrolled	defects#M#	Subsection IWE"#M#
		#M#Loss of sealing	
Elastomers,		#*#due to wear,	
rubber and		damage, erosion, tear,	
other similar	Air – indoor,	surface cracks, or other	#M#Chapter XI.S1, "ASME Section XI,
materials	uncontrolled	defects#M#	Subsection IWE"#M#
		#M#Loss of sealing	
Elastomers,		#*#due to wear,	
rubber and	Air – indoor,	damage, erosion, tear,	
other similar		surface cracks, or other	#M#Chapter XI.S4, "10 CFR Part 50,
materials	– outdoor	defects#M#	Appendix J "#M#
		#M#Loss of sealing	
Elastomers,		#*#due to wear,	
rubber and	Air – indoor,	damage, erosion, tear,	
other similar		surface cracks, or other	#M#Chapter XI.S4, "10 CFR Part 50,
materials	– outdoor	defects#M#	Appendix J "#M#
materiais			
			#M#Chapter XI S1 "ASME Section XI
		Loss of motorial #*#dua	#M#Chapter XI.S1, "ASME Section XI,
	#NA#Air indoor	Loss of material #*#due	Subsection IWE," and #*#Chapter
Steel		to general, pitting, and	XI.S4, "10 CFR Part 50, Appendix
Steel	uncontrolled#M#	crevice corrosion	J"#M#

			#M#Chapter VI 61 "A CME Costion VI
			#M#Chapter XI.S1, "ASME Section XI,
		Loss of material #*#due	Subsection IWE," and #*#Chapter
	#M#Air – indoor,	to general, pitting, and	XI.S4, "10 CFR Part 50, Appendix
Steel	uncontrolled#M#	crevice corrosion	J"#M#
Stool	Conorata	Nono	None
Steel	Concrete	None	None
			#M#Chapter XI.S1, "ASME Section XI,
	Air – indoor,	Loss of material #*#due	Subsection IWE," and #*#Chapter
	uncontrolled or	to general, pitting, and	XI.S4, "10 CFR Part 50, Appendix
Steel	Treated water	crevice corrosion	J"#M#
31661			5 #N#
			#M#Chapter XI.S1, "ASME Section XI,
	Air – indoor,	Loss of material #*#due	Subsection IWE," and #*#Chapter
	uncontrolled or	to general, pitting, and	XI.S4, "10 CFR Part 50, Appendix
Steel	Treated water	crevice corrosion	J"#M#
			#M#Chapter XI.S1, "ASME Section XI,
	Air – indoor,	Loss of material #*#due	Subsection IWE," and #*#Chapter
	uncontrolled or	to general, pitting, and	XI.S4, "10 CFR Part 50, Appendix
Steel	Treated water	crevice corrosion	J"#M#
			#M#Chapter XI.S1, "ASME Section XI,
			Subsection IWE," and #*#Chapter
			XI.S4, "10 CFR Part 50, Appendix J"
			#*#Significant corrosion of the torus
			shell and degradation of its protective
			coating are identified in IN 88-82. Other
			industrywide operating indicates a
			number of incidences of torus corrosion.
			License renewal applicants are advised
			to address their plant specific operating
			experience related to the torus shell
			corrosion. If the identified corrosion is
			significant, a plant specific aging
			management is required. If protective
			coating is credited for preventing
			corrosion of the torus shell, the coating
	Air – indoor,	Loss of material #*#due	should be included in scope of license
	uncontrolled or	to general, pitting, and	renewal and subject to aging
Steel	Treated water	crevice corrosion	management review . #M#
		Cracking #*#due to	#M#Chapter XI.S1, "ASME Section XI,
		cyclic loading #*#(CLB	Subsection IWE," and #*#Chapter
Steel; stainless	Air – indoor,		XI.S4, "10 CFR Part 50, Appendix
steel	uncontrolled	exist)	J"#M#
		00()	•

			#M#Chapter VI S1 "ASME Section VI
			#M#Chapter XI.S1, "ASME Section XI,
	A la la de se		Subsection IWE," and #*#Chapter
	Air – indoor,	Cracking #*#due to	XI.S4, "10 CFR Part 50, Appendix
Stainless steel	uncontrolled	stress corrosion cracking	J″#M#
		Loss of material	
		(spalling, scaling) and	
		cracking #*#due to	#M#Chapter XI.S2, "ASME Section XI,
Concrete	Air – outdoor	freeze-thaw	Subsection IWL"#M#
		Loss of material	
		(spalling, scaling) and	
	Air – outdoor or	cracking #*#due to	#M#Chapter XI.S2, "ASME Section XI,
Concrete	Ground water/soil	freeze-thaw	Subsection IWL"#M#
			#M#Further evaluation is required to
			determine if a plant-specific aging
			management program is needed to
			manage increase in porosity, and
			permeability due to leaching of calcium
			hydroxide and carbonation of concrete
			in Inaccessible Areas. A plant-specific
			aging management program is not
			required if #*#(1) There is evidence in
			the accessible areas of adjacent
			structures that the flowing water has not
		Increase in porosity and	caused leaching and carbonation, or
		permeability; loss of	#*#(2) Evaluation determined that the
		strength #*#due to	observed leaching of calcium hydroxide
		-	
		leaching of calcium	and carbonation in accessible areas has
		hydroxide and	no impact on the intended function of
Concrete	Water – flowing	carbonation	the concrete structure.#M#
			#M#Further evaluation is required to
			determine if a plant-specific aging
			management program is needed to
			manage increase in porosity, and
			permeability due to leaching of calcium
			hydroxide and carbonation of concrete
			in Inaccessible Areas. A plant-specific
			aging management program is not
			required if #*#(1) There is evidence in
			the accessible areas of adjacent
			structures that the flowing water has not
		Increase in porosity and	caused leaching and carbonation, or
		permeability; loss of	#*#(2) Evaluation determined that the
		strength #*#due to	observed leaching of calcium hydroxide
		leaching of calcium	and carbonation in accessible areas has
		hydroxide and	no impact on the intended function of
Concrete	Water flowing	carbonation	the concrete structure.#M#
Concrete	Water – flowing	carbonation	

Concrete	Water – flowing	#M#Increase in porosity and permeability; loss of strength #*#due to leaching of calcium hydroxide and carbonation#M#	#M#Chapter XI.S2, "ASME Section XI, Subsection IWL"#M#
Concrete	Water – flowing	#M#Increase in porosity and permeability; loss of strength #*#due to leaching of calcium hydroxide and carbonation#M#	#M#Chapter XI.S2, "ASME Section XI, Subsection IWL"#M#
Concrete	Water – flowing	#M#Increase in porosity and permeability; loss of strength #*#due to leaching of calcium hydroxide and carbonation#M#	#M#Chapter XI.S2, "ASME Section XI, Subsection IWL"#M#

			#M#Plant-specific aging management program #*# #*#The implementation of 10 CFR 50.55a and ASME Code, Section XI, Subsection IWL would not be able to identify the reduction of strength and modulus due to elevated temperature. Thus, for any portions of concrete containment that exceed specified temperature limits, further evaluations are warranted. Subsection CC-3400 of ASME Section III, Division 2, specifies the concrete temperature limits for normal operation or any other long-term period. The temperatures shall not exceed 150°F except for local areas, such as around penetrations, which are not allowed to exceed 200°F. If significant equipment loads are supported by concrete at temperatures exceeding 150°F, an evaluation of the ability to withstand the postulated design loads is to be made. #*# #*#Higher temperatures than given
			#*# #*#Higher temperatures than given above may be allowed in the concrete if
		Reduction of strength and modulus #*#due to	tests and/or calculations are provided to
	Air – indoor,	elevated temperature	evaluate the reduction in strength and modulus of elasticity, and these
		(>150°F general; >200°F	reductions are applied to the design
Concrete		local)	calculations.#M#

	Air – indoor, uncontrolled or Air	Reduction of strength and modulus #*#due to elevated temperature (>150°F general; >200°F	#M#Plant-specific aging management program #*# #*#The implementation of 10 CFR 50.55a and ASME Section XI, Subsection IWL would not be able to identify the reduction of strength and modulus due to elevated temperature. Thus, for any portions of concrete containment that exceed specified temperature limits, further evaluations are warranted. Subsection CC-3400 of ASME Section III, Division 2, specifies the concrete temperature limits for normal operation or any other long-term period. The temperatures shall not exceed 150°F except for local areas, such as around penetrations, which are not allowed to exceed 200°F. If significant equipment loads are supported by concrete at temperatures exceeding 150°F, an evaluation of the ability to withstand the postulated design loads is to be made. #*# #*#Higher temperatures than given above may be allowed in the concrete if tests and/or calculations are provided to evaluate the reduction in strength and modulus of elasticity, and these reductions are applied to the design
Concrete	– outdoor	local)	calculations.#M#
Concrete	Any environment	Cracking #*#due to expansion from reaction with aggregates	#M#Chapter XI.S2, "ASME Section XI, Subsection IWL"#M#
Concrete	Any environment	Cracking #*#due to expansion from reaction with aggregates	#M#Chapter XI.S2, "ASME Section XI, Subsection IWL"#M#
Concrete	Any environment	Cracking #*#due to expansion from reaction with aggregates	#M#Chapter XI.S2, "ASME Section XI, Subsection IWL"#M#
Concrete	Any environment	Cracking #*#due to expansion from reaction with aggregates	#M#Chapter XI.S2, "ASME Section XI, Subsection IWL"#M#

			#M#Chapter XI.S1, "ASME Section XI,
			Subsection IWE" and #*#Chapter XI.S4,
			•
			"10 CFR Part 50, Appendix J"
			#*#Additional plant-specific activities are
			warranted if loss of material due to
			corrosion is significant for inaccessible
			areas (embedded containment steel
			shell or liner).#*#Loss of material due to
			corrosion is not significant if the
			following conditions are satisfied: #*#1.
			Concrete meeting the requirements of
			ACI 318 or 349 and the guidance of
			201.2R was used for the concrete in
			contact with the embedded containment
			shell or liner. #*#2. The moisture
			barrier, at the junction where the shell or
			liner becomes embedded, is subject to
			aging management activities in
			accordance with ASME Section XI,
			Subsection IWE requirements. #*#3.
			The concrete is monitored to ensure
			that it is free of penetrating cracks that
			provide a path for water seepage to the
			surface of the containment shell or liner.
			#*#4. Borated water spills and water
			ponding on the concrete floor are
			common and when detected are
			cleaned up or diverted to a sump in a
			timely manner. #*# Operating
	Air – indoor,	Loss of material #*#due	experience has identified significant
	uncontrolled or	to general, pitting, and	corrosion in some plants.#*# #*#If any
Steel	Treated water	crevice corrosion	of the above conditions cannot be
01661	Treated water		

			#M#Chapter XI.S1, "ASME Section XI,
			Subsection IWE" and #*# #*#Chapter
			XI.S4, "10 CFR Part 50, Appendix J"
			#*# #*# Additional plant-specific
			activities are warranted if loss of
			material due to corrosion is significant
			for inaccessible areas (embedded
			containment steel shell or liner).#*#
			#*#Loss of material due to corrosion is
			not significant if the following conditions
			are satisfied: #*#1. Concrete meeting
			the requirements of ACI 318 or 349 and
			the guidance of 201.2R was used for
			the concrete in contact with the
			embedded containment shell or liner.
			#*#2. The moisture barrier, at the
			junction where the shell or liner
			becomes embedded, is subject to aging
			management activities in accordance
			with ASME Section XI, Subsection IWE
			requirements. #*#3. The concrete is
			monitored to ensure that it is free of
			penetrating cracks that provide a path
			for water seepage to the surface of the
			containment shell or liner. #*#4.
			Borated water spills and water ponding
			on the concrete floor are common and
			when detected are cleaned up or
			diverted to a sump in a timely manner.
	Air – indoor,	Loss of material #*#due	#*# Operating experience has
	uncontrolled or	to general, pitting, and	identified significant corrosion in some
Steel	Treated water	crevice corrosion	plants.#*# #*#If any of the above

			#M#Chapter XI.S1, "ASME Section XI,
			Subsection IWE" and #*# #*#Chapter
			· · · · · · · · · · · · · · · · · · ·
			XI.S4, "10 CFR Part 50, Appendix J"
			#*# #*# Additional plant-specific
			activities are warranted if loss of
			material due to corrosion is significant
			for inaccessible areas (embedded
			containment steel shell or liner).#*#
			#*#Loss of material due to corrosion is
			not significant if the following conditions
			are satisfied: #*#1. Concrete meeting
			the requirements of ACI 318 or 349 and
			the guidance of 201.2R was used for
			the concrete in contact with the
			embedded containment shell or liner.
			#*#2. The moisture barrier, at the
			junction where the shell or liner
			becomes embedded, is subject to aging
			management activities in accordance
			with ASME Section XI, Subsection IWE
			requirements. #*#3. The concrete is
			monitored to ensure that it is free of
			penetrating cracks that provide a path
			for water seepage to the surface of the
			containment shell or liner. #*#4.
			Borated water spills and water ponding
			on the concrete floor are common and
			when detected are cleaned up or
	A		diverted to a sump in a timely manner.
	Air – indoor,	Loss of material #*#due	#*# Operating experience has
	uncontrolled or	to general, pitting, and	identified significant corrosion in some
Steel	Treated water	crevice corrosion	plants.#*# #*#If any of the above
		Cracking #*#due to	
	#M#Air – indoor,	cyclic loading #*#(CLB	
Steel; stainless	uncontrolled or		#M#Chapter XI.S1, "ASME Section XI,
steel	Treated water#M#	exist)	Subsection IWE"#M#

	Reduction of strength and modulus #*#due to elevated temperature (>150°F general; >200°F local)	#M#Plant-specific aging management program #*# #*#The implementation of 10 CFR 50.55a and ASME Section XI, Subsection IWL would not be able to identify the reduction of strength and modulus of elasticity due to elevated temperature. Thus, for any portions of concrete containment that exceed specified temperature limits, further evaluations are warranted. Subsection CC-3400 of ASME Section III, Division 2, specifies the concrete temperature limits for normal operation or any other long-term period. The temperatures shall not exceed 150°F except for local areas, such as around penetrations, which are not allowed to exceed 200°F. If significant equipment loads are supported by concrete at temperatures exceeding 150°F, an evaluation of the ability to withstand the postulated design loads is to be made. #*# #*#Higher temperatures than given above may be allowed in the concrete if tests and/or calculations are provided to evaluate the reduction in strength and modulus of elasticity and these reductions are applied to the design calculations.#M#
Any environment	Cracking #*#due to	#M#Chapter XI.S2, "ASME Section XI, Subsection IWL"#M#

		Cracking #*#due to	#M#Further evaluation is required to determine if a plant-specific aging management program is needed to manage cracking and expansion due to reaction with aggregate of concrete in Inaccessible Areas. A plant-specific aging management program is not required if (1) as described in NUREG- 1557, investigations, tests, and petrographic examinations of aggregates performed in accordance with ASTM C295 and other ASTM reactivity tests, as required, can demonstrate that those aggregates do not adversely react within concrete, or (2) For potentially reactive aggregates, aggregate concrete reaction is not significant if it is demonstrated that the
		expansion from reaction	in-place concrete can perform its
Concrete	Any environment	with aggregates	intended function.#M#
Concrete; steel	Air – indoor, uncontrolled or Air – outdoor	Cracking; loss of bond; and loss of material (spalling, scaling) #*#due to corrosion of embedded steel	Chapter XI.S2, "ASME Section XI, Subsection IWL"
Concrete	Soil	Cracking and distortion #*#due to increased stress levels from settlement	#M#Chapter XI.S2, "ASME Section XI, Subsection IWL," or #*#Chapter XI.S6, "Structure Monitoring" #*#If a de- watering system is relied upon for control of settlement, then the licensee is to ensure proper functioning of the de- watering system through the period of extended operation. #M#
Concrete	Soil	Cracking and distortion #*#due to increased stress levels from settlement	#M#Chapter XI.S2, "ASME Section XI, Subsection IWL," or #*#Chapter XI.S6, "Structure Monitoring" #*#If a de- watering system is relied upon for control of settlement, then the licensee is to ensure proper functioning of the de- watering system through the period of extended operation. #M#

Concrete	Air – outdoor or Ground water/soil	Loss of material (spalling, scaling) and cracking #*#due to freeze-thaw	#M#Further evaluation is required for plants that are located in moderate to severe weathering conditions (weathering index >100 day-inch/yr) (NUREG-1557) to determine if a plant- specific aging management program is needed. A plant-specific aging management program is not required if documented evidence confirms that the existing concrete had air entrainment content (as per Table CC-2231-2 of the ASME Section III Division 2), and subsequent inspections of accessible areas did not exhibit degradation related to freeze-thaw. Such inspections should be considered a part of the evaluation. If this condition is not satisfied, then a plant-specific aging management program is required to manage loss of material (spalling, scaling) and cracking due to freeze- thaw of concrete in inaccessible areas. #*#The weathering index for the continental US is shown in ASTM C33- 90, Fig. 1.#M#
Concrete	Ground water/soil	Increase in porosity and permeability; cracking; loss of material (spalling, scaling) #*#due to aggressive chemical attack	#M#Chapter XI.S2, "ASME Section XI, Subsection IWL," or #*#Chapter XI.S6, "Structure Monitoring"#M#
Concrete	Ground water/soil	Increase in porosity and permeability; cracking; loss of material (spalling, scaling) #*#due to aggressive chemical attack	#M#Chapter XI.S2, "ASME Section XI, Subsection IWL," or #*#Chapter XI.S6, "Structure Monitoring"#M#
Concrete	Ground water/soil	Increase in porosity and permeability; cracking; loss of material (spalling, scaling) #*#due to aggressive chemical attack	#M#Chapter XI.S2, "ASME Section XI, Subsection IWL," or #*#Chapter XI.S6, "Structure Monitoring"#M#

Concrete	Ground water/soil	Increase in porosity and permeability; cracking; loss of material (spalling, scaling) #*#due to aggressive chemical attack	#M#Chapter XI.S2, "ASME Section XI, Subsection IWL," or #*#Chapter XI.S6, "Structure Monitoring"#M#
Concrete	 – outdoor or 	Increase in porosity and permeability; cracking; loss of material (spalling, scaling) #*#due to aggressive chemical attack	#M#Chapter XI.S2, "ASME Section XI, Subsection IWL," or #*#Chapter XI.S6, "Structure Monitoring"#M#
Concrete; steel	Air – indoor, uncontrolled or Air – outdoor	Cracking; loss of bond; and loss of material (spalling, scaling) #*#due to corrosion of embedded steel	#M#Chapter XI.S2, "ASME Section XI, Subsection IWL"#M#
Concrete; steel	Air – indoor, uncontrolled or Air – outdoor	Cracking; loss of bond; and loss of material (spalling, scaling) #*#due to corrosion of embedded steel	#M#Chapter XI.S2, "ASME Section XI, Subsection IWL"#M#
Concrete; steel	Air – indoor, uncontrolled or Air – outdoor	Cracking; loss of bond; and loss of material (spalling, scaling) #*#due to corrosion of embedded steel	#M#Chapter XI.S2, "ASME Section XI, Subsection IWL," or #*#Chapter XI.S6, "Structure Monitoring"#M#
Concrete; steel	Air – indoor, uncontrolled or Air – outdoor	Cracking; loss of bond; and loss of material (spalling, scaling) #*#due to corrosion of embedded steel	#M#Chapter XI.S2, "ASME Section XI, Subsection IWL," or #*#Chapter XI.S6, "Structure Monitoring"#M#
Concrete; steel	Air – indoor,	Cracking; loss of bond; and loss of material (spalling, scaling) #*#due to corrosion of embedded steel	#M#Chapter XI.S2, "ASME Section XI, Subsection IWL"#M#
Concrete; steel	Air – indoor, uncontrolled or Air – outdoor	Cracking; loss of bond; and loss of material (spalling, scaling) #*#due to corrosion of embedded steel	#M#Chapter XI.S2, "ASME Section XI, Subsection IWL"#M#
Concrete; steel	Air – indoor, uncontrolled or Air – outdoor	Cracking; loss of bond; and loss of material (spalling, scaling) #*#due to corrosion of embedded steel	#M#Chapter XI.S6, "Structures Monitoring"#M#

		Creeking: loss of hand:	
		Cracking; loss of bond;	
	A	and loss of material	
	Air – indoor,	(spalling, scaling)	
	uncontrolled or Air	#*#due to corrosion of	#M#Chapter XI.S6, "Structures
Concrete; steel	 – outdoor 	embedded steel	Monitoring"#M#
			#M#Further evaluation is required to
			determine if a plant-specific aging
			management program is needed to
			manage cracking and expansion due to
			reaction with aggregate of concrete in
			Inaccessible Areas. A plant-specific
			aging management program is not
			required if (1) as described in NUREG-
			1557, investigations, tests, and
			petrographic examinations of
			aggregates performed in accordance
			with ASTM C295 and other ASTM
			reactivity tests, as required, can
			demonstrate that those aggregates do
			not adversely react within concrete, or
			(2) For potentially reactive aggregates,
			aggregate concrete reaction is not
		Cracking #*#due to	significant if it is demonstrated that the
		expansion from reaction	in-place concrete can perform its
Concrete	Any environment	with aggregates	intended function.#M#
	,		
		Increase in porosity and	
		permeability; cracking;	
	Air – indoor,	loss of material (spalling,	
		••••	#M#Chapter VI S2 "ASME Section VI
	uncontrolled or Air		#M#Chapter XI.S2, "ASME Section XI,
	– outdoor or	aggressive chemical	Subsection IWL," or #*#Chapter XI.S6,
Concrete	Ground water/soil	attack	"Structure Monitoring"#M#
		Increase in porosity and	
		permeability; cracking;	
		loss of material (spalling,	
	#M#Air – indoor,	scaling) #*#due to	
		aggressive chemical	#M#Chapter XI.S2, "ASME Section XI,
Concrete	– outdoor#M#	attack	Subsection IWL"#M#
001101010		Cracking; loss of bond;	
		and loss of material	
	Air indeer		
	Air – indoor,	(spalling, scaling)	
		#*#due to corrosion of	#M#Chapter XI.S2, "ASME Section XI,
Concrete; steel	– outdoor	embedded steel	Subsection IWL"#M#
		Cracking; loss of bond;	
		and loss of material	
	Air – indoor,	(spalling, scaling)	#M#Chapter XI.S2, "ASME Section XI,
	uncontrolled or Air	#*#due to corrosion of	Subsection IWL," or #*#Chapter XI.S6,
Concrete; steel	– outdoor	embedded steel	"Structure Monitoring"#M#

		Cracking; loss of bond;	
		and loss of material	
	Air indoor		#M#Chapter VI S2 "ASME Section VI
	Air – indoor,	(spalling, scaling)	#M#Chapter XI.S2, "ASME Section XI,
		#*#due to corrosion of	Subsection IWL," or #*#Chapter XI.S6,
Concrete; steel	– outdoor	embedded steel	"Structure Monitoring"#M#
			#M#Chapter XI.S1, "ASME Section XI,
			Subsection IWE" and #*# #*#Chapter
			XI.S4, "10 CFR Part 50, Appendix J"
			#*# #*# Additional plant-specific
			activities are warranted if loss of
			material due to corrosion is significant
			for inaccessible areas (embedded
			containment steel shell or liner).#*#
			#*#Loss of material due to corrosion is
			not significant if the following conditions
			are satisfied: #*#1. Concrete meeting
			the requirements of ACI 318 or 349 and
			the guidance of 201.2R was used for
			the containment concrete in contact with
			the embedded containment shell or
			liner. #*#2. The moisture barrier, at the
			junction where the shell or liner
			becomes embedded, is subject to aging
			management activities in accordance
			with ASME Section XI, Subsection IWE
			requirements. #*#3. The concrete is
			monitored to ensure that it is free of
			penetrating cracks that provide a path
			for water seepage to the surface of the
			containment shell or liner. #*#4.
			Borated water spills and water ponding
			on the concrete floor are common and
			when detected are cleaned up or
		Loss of material #*#due	diverted to a sump in a timely manner.
	Air – indoor,	to general, pitting, and	#*# Operating experience has
Steel	uncontrolled	crevice corrosion	identified significant corrosion in some

			#M#Chapter XI.S1, "ASME Section XI,
			Subsection IWE" and #*#Chapter XI.S4,
			"10 CFR Part 50, Appendix J"
			#*#Additional plant-specific activities are
			warranted if loss of material due to
			corrosion is significant for inaccessible
			areas (embedded containment steel
			shell or liner).#*#Loss of material due to
			corrosion is not significant if the
			following conditions are satisfied: #*#1.
			Concrete meeting the requirements of
			ACI 318 or 349 and the guidance of
			201.2R was used for the containment
			concrete in contact with the embedded
			containment shell or liner. #*#2. The
			moisture barrier, at the junction where
			the shell or liner becomes embedded, is
			subject to aging management activities
			in accordance with ASME Section XI,
			Subsection IWE requirements. #*#3.
			The concrete is monitored to ensure
			that it is free of penetrating cracks that
			provide a path for water seepage to the
			surface of the containment shell or liner.
			#*#4. Borated water spills and water
			ponding on the concrete floor are
			common and when detected are
			cleaned up or diverted to a sump in a
			timely manner. #*# Operating
		Loss of material #*#due	experience has identified significant
	Air – indoor,	to general, pitting, and	corrosion in some plants.#*#If any of the
Steel	uncontrolled	crevice corrosion	above conditions cannot be satisfied,

			#M#Chapter XI.S1, "ASME Section XI,
			Subsection IWE" and #*#Chapter XI.S4,
			"10 CFR Part 50, Appendix J"
			#*#Additional plant-specific activities are
			warranted if loss of material due to
			corrosion is significant for inaccessible
			areas (embedded containment steel
			shell or liner).#*#Loss of material due to
			corrosion is not significant if the
			following conditions are satisfied: #*#1.
			Concrete meeting the requirements of
			ACI 318 or 349 and the guidance of
			201.2R was used for the containment
			concrete in contact with the embedded
			containment shell or liner. #*#2. The
			moisture barrier, at the junction where
			the shell or liner becomes embedded, is
			subject to aging management activities
			in accordance with ASME Section XI,
			Subsection IWE requirements. #*#3.
			The concrete is monitored to ensure
			that it is free of penetrating cracks that
			provide a path for water seepage to the
			surface of the containment shell or liner.
			#*#4. Borated water spills and water
			ponding on the concrete floor are
			common and when detected are
			cleaned up or diverted to a sump in a
			timely manner. #*# Operating
		Loss of material #*#due	experience has identified significant
	Air – indoor,	to general, pitting, and	corrosion in some plants.#*#If any of the
Steel	uncontrolled	crevice corrosion	above conditions cannot be satisfied,

			#M#Further evaluation is required to
			determine if a plant-specific aging
			management program is needed to
			manage cracking and expansion due to
			reaction with aggregate of concrete in
			Inaccessible Areas. A plant-specific
			aging management program is not
			required if (1) as described in NUREG-
			1557, investigations, tests, and
			petrographic examinations of
			aggregates performed in accordance
			with ASTM C295 and other ASTM
			reactivity tests, as required, can
			demonstrate that those aggregates do
			not adversely react within concrete, or
			(2) For potentially reactive aggregates,
		Cracking #*#due to	aggregate concrete reaction is not significant if it is demonstrated that the
		-	in-place concrete can perform its
Concrete	Any environment	with aggregates	intended function.#M#
			#M#Further evaluation is required to
			determine if a plant-specific aging
			management program is needed to
			manage cracking and expansion due to
			reaction with aggregate of concrete in Inaccessible Areas. A plant-specific
			aging management program is not
			required if (1) as described in NUREG-
			1557, investigations, tests, and
			petrographic examinations of
			aggregates performed in accordance
			with ASTM C295 and other ASTM
			reactivity tests, as required, can
			demonstrate that those aggregates do
			not adversely react within concrete, or
			(2) For potentially reactive aggregates,
		Cracking #*#duc to	aggregate concrete reaction is not significant if it is demonstrated that the
		Cracking #*#due to expansion from reaction	in-place concrete can perform its
Concrete	Any environment	with aggregates	intended function.#M#
		Cracking #*#due to	
	Air – indoor,	restraint shrinkage,	
		creep, and aggressive	
Concrete block	– outdoor	environment	Chapter XI.S5, "Masonry Walls"
	a	Cracking #*#due to	
	Air – indoor,	restraint shrinkage,	
Concrete block	– outdoor	creep, and aggressive	Chapter XI S5 "Masonry Walls"
Concrete block		environment	Chapter XI.S5, "Masonry Walls"

		Cracking #*#due to	
	Air – indoor,	restraint shrinkage,	
		creep, and aggressive	
Concrete block	– outdoor	environment	Chapter XI.S5, "Masonry Walls"
		Cracking #*#due to	
	Air – indoor,	restraint shrinkage,	
	uncontrolled or Air	creep, and aggressive	
Concrete block	 outdoor 	environment	Chapter XI.S5, "Masonry Walls"
		Cracking #*#due to	
	Air – indoor,	restraint shrinkage,	
	uncontrolled or Air	creep, and aggressive	
Concrete block	 outdoor 	environment	Chapter XI.S5, "Masonry Walls"
Stainless steel	Treated water or Treated borated water	Cracking #*#due to stress corrosion cracking; #*#Loss of material #*#due to pitting and crevice corrosion	Chapter XI.M2, "Water Chemistry," and #*#Monitoring of the spent fuel pool water level in accordance with technical specifications and leakage from the leak chase channels.
Concrete	Water – flowing	Loss of material #*#due to abrasion; cavitation	Chapter XI.S7, "Regulatory Guide 1.127, Inspection of Water-Control Structures Associated with Nuclear Power Plants" or the FERC / US Army Corp of Engineers dam inspections and maintenance programs.
Various	Water – flowing or standing	Loss of material; loss of form #*#due to erosion, settlement, sedimentation, frost action, waves, currents, surface runoff, seepage	Chapter XI.S7, "Regulatory Guide 1.127, Inspection of Water-Control Structures Associated with Nuclear Power Plants" or the FERC / US Army Corp of Engineers dam inspections and maintenance programs.
Stainless steel	Water – standing	Cracking #*#due to stress corrosion cracking; #*#Loss of material #*#due to pitting and crevice corrosion	A plant-specific aging management program is to be evaluated.
Stainless steel	Water – standing	Cracking #*#due to stress corrosion cracking; #*#Loss of material #*#due to pitting and crevice corrosion	A plant-specific aging management program is to be evaluated.
Steel	Air – indoor, uncontrolled or Air – outdoor	Loss of material #*#due to general and pitting corrosion	Chapter XI.S3, "ASME Section XI, Subsection IWF"

	Air – indoor,	Loss of material #*#due	
		to general and pitting	Chapter XI.S3, "ASME Section XI,
Steel	– outdoor	corrosion	Subsection IWF"
	Air – indoor,	Loss of material #*#due	
	uncontrolled or Air	to general and pitting	Chapter XI.S3, "ASME Section XI,
Steel	– outdoor	corrosion	Subsection IWF"
	Air with borated	Loss of material #*#due	
Steel	water leakage	to boric acid corrosion	Chapter XI.M10, "Boric Acid Corrosion"
	Air with borated	Loss of material #*#due	
Steel		to boric acid corrosion	Chapter XI M10 "Beria Agid Corregion"
Sleer	water leakage		Chapter XI.M10, "Boric Acid Corrosion"
	Air with borated	Loss of material #*#due	
Steel	water leakage	to boric acid corrosion	Chapter XI.M10, "Boric Acid Corrosion"
	Tatol Touriago		
	Air with borated	Loss of material #*#due	
Steel	water leakage	to boric acid corrosion	Chapter XI.M10, "Boric Acid Corrosion"
	Air with borated	Loss of material #*#due	
Steel	water leakage	to boric acid corrosion	Chapter XI.M10, "Boric Acid Corrosion"
	Air with horstad	Loop of motorial #*#du	
Stool	Air with borated	Loss of material #*#due	Chapter VI M10 "Devic Asid Corrector"
Steel	water leakage	to boric acid corrosion	Chapter XI.M10, "Boric Acid Corrosion"
			Fatigue is a time-limited aging analysis
			(TLAA) to be evaluated for the period of
		Cumulative fatigue	extended operation. See the SRP,
		damage #*#due to	Section 4.3 "Metal Fatigue," for
	Air – indoor,	fatigue #*#(Only if CLB	acceptable methods for meeting the
Steel	uncontrolled	fatigue analysis exists)	requirements of 10 CFR 54.21(c)(1).
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Steel	Air – indoor, uncontrolled	Cumulative fatigue damage #*#due to fatigue #*#(Only if CLB fatigue analysis exists)	Fatigue is a time-limited aging analysis (TLAA) to be evaluated for the period of extended operation. See the SRP, Section 4.3 "Metal Fatigue," for acceptable methods for meeting the requirements of 10 CFR 54.21(c)(1).
Steel	Air – indoor, uncontrolled	Cumulative fatigue damage #*#due to fatigue #*#(Only if CLB fatigue analysis exists)	Fatigue is a time-limited aging analysis (TLAA) to be evaluated for the period of extended operation. See the SRP, Section 4.3 "Metal Fatigue," for acceptable methods for meeting the requirements of 10 CFR 54.21(c)(1).
Steel	Air – indoor, uncontrolled or Air – outdoor	Loss of mechanical function #*#due to corrosion, distortion, dirt, overload, fatigue due to vibratory and cyclic thermal loads	Chapter XI.S3, "ASME Section XI, Subsection IWF"
Steel	Air – indoor, uncontrolled or Air – outdoor	Loss of mechanical function #*#due to corrosion, distortion, dirt, overload, fatigue due to vibratory and cyclic thermal loads	Chapter XI.S3, "ASME Section XI, Subsection IWF"
Steel	Air – indoor, uncontrolled or Air – outdoor	Loss of mechanical function #*#due to corrosion, distortion, dirt, overload, fatigue due to vibratory and cyclic thermal loads	Chapter XI.S3, "ASME Section XI, Subsection IWF"
Non-metallic (e.g., rubber)	Air – indoor, uncontrolled or Air – outdoor	Reduction or loss of isolation function #*#due to radiation hardening, temperature, humidity, sustained vibratory loading	Chapter XI.S3, "ASME Section XI, Subsection IWF"
Non-metallic (e.g., rubber)	Air – indoor, uncontrolled or Air – outdoor	Reduction or loss of isolation function #*#due to radiation hardening, temperature, humidity, sustained vibratory loading	Chapter XI.S3, "ASME Section XI, Subsection IWF"

to freeze-thaw. Such inspections should be considered a part of the evaluation. If this condition is not satisfied, then a plant-specific aging management program is required to manage loss of material (spalling, scaling) and cracking due to freeze- thaw of concrete in inaccessible areas. (spalling, scaling) and #*#The weathering index for the				
Steel; stainless steel Treated water <60C (<140 F)		uncontrolled or Air	isolation function #*#due to radiation hardening, temperature, humidity, sustained vibratory	
#M#Concrete# uncontrolled or Air - outdoor or Ground and loss of material (spalling, scaling) ###Concrete# Ground #*#due to corrosion of embedded steel #M#Chapter XI.S6, "Structures M# Increase in porosity and permeability: cracking; loss of material (spalling, scaling) #*#due to aggressive chemical #M#Chapter XI.S6, "Structures Concrete Ground water/soil attack #M#Chapter XI.S6, "Structures Monitoring*#M# #M#Chapter XI.S6, "Structures Monitoring*#M# Concrete Ground water/soil attack #M#Chapter XI.S6, "Structures Monitoring*#M# #M#Chapter XI.S6, "Structures Monitoring*#M# Concrete Ground water/soil attack #M#Chapter XI.S6, "Structures Monitoring*#M# #M#Chapter XI.S6, "Structures Monitoring*#M# Concrete Ground water/soil attack #M#Chapter XI.S6, "Structures Multical Application attack #M#Chapter XI.S6, "Structures Monitoring*#M# Ground water/soil attack #M#Ecrite evaluation is required for plants that are located in moderate to severe weathering index >100 day-inch/yr) Multical Application reparent is a plant-specific aging management program is not required if documented evidence confirms that the existing concrete had air entrainment content (as per Table C		<60C (<140 F)	to general (steel only), pitting, and crevice corrosion	BWR water, and #*#Chapter XI.S3,
concrete Ground water/soil ggressive chemical #M#Chapter XI.S6, "Structures Concrete Ground water/soil attack Monitoring"#M# Concrete Ground water/soil #M#Further evaluation is required for plants that are located in moderate to severe weathering conditions (weathering index >100 day-inch/yr) (NUREG-1557) to determine if a plant-specific aging management program is not required if documented evidence confirms that the existing concrete had air entrainment content (as per Table CC-2231-2 of the ASME Section III Division 2), and subsequent inspections of accessible areas did not exhibit degradation related to freeze-thaw. Such inspections should be considered a part of the evaluation. If this condition is not satisfied, then a plant-specific aging management program is required to manage loss of material (spalling, scaling) and cracking due to freeze-thaw of concrete in inaccessible areas.		uncontrolled or Air – outdoor or Ground	and loss of material (spalling, scaling) #*#due to corrosion of	
Joint StrateJoint Strate <td>Concrete</td> <td>Ground water/soil</td> <td>permeability; cracking; loss of material (spalling, scaling) #*#due to aggressive chemical</td> <td></td>	Concrete	Ground water/soil	permeability; cracking; loss of material (spalling, scaling) #*#due to aggressive chemical	
ConcreteAir – outdoorcracking #*#due to freeze-thawcontinental US is shown in ASTM C33- 90, Fig. 1.#M#			(spalling, scaling) and cracking #*#due to	plants that are located in moderate to severe weathering conditions (weathering index >100 day-inch/yr) (NUREG-1557) to determine if a plant- specific aging management program is needed. A plant-specific aging management program is not required if documented evidence confirms that the existing concrete had air entrainment content (as per Table CC-2231-2 of the ASME Section III Division 2), and subsequent inspections of accessible areas did not exhibit degradation related to freeze-thaw. Such inspections should be considered a part of the evaluation. If this condition is not satisfied, then a plant-specific aging management program is required to manage loss of material (spalling, scaling) and cracking due to freeze- thaw of concrete in inaccessible areas. #*#The weathering index for the continental US is shown in ASTM C33-

		Loss of material (spalling, scaling) and cracking #*#due to freeze-thaw	#M#Further evaluation is required for plants that are located in moderate to severe weathering conditions (weathering index >100 day-inch/yr) (NUREG-1557) to determine if a plant- specific aging management program is needed. A plant-specific aging management program is not required if documented evidence confirms that the existing concrete had air entrainment content (as per Table CC-2231-2 of the ASME Section III Division 2), and subsequent inspections of accessible areas did not exhibit degradation related to freeze-thaw. Such inspections should be considered a part of the evaluation. If this condition is not satisfied, then a plant-specific aging management program is required to manage loss of material (spalling, scaling) and cracking due to freeze- thaw of concrete in inaccessible areas. #*#The weathering index for the continental US is shown in ASTM C33- OD
Concrete	Air – outdoor	II CCZC-III dW	90, Fig. 1.#M#

Loss of material (spalling, scaling) and cracking #*#due to	#M#Further evaluation is required for blants that are located in moderate to severe weathering conditions (weathering index >100 day-inch/yr) (NUREG-1557) to determine if a plant- specific aging management program is needed. A plant-specific aging management program is not required if documented evidence confirms that the existing concrete had air entrainment content (as per Table CC-2231-2 of the ASME Section III Division 2), and subsequent inspections of accessible areas did not exhibit degradation related to freeze-thaw. Such inspections should be considered a part of the evaluation. If this condition is not satisfied, then a plant-specific aging management program is required to manage loss of material (spalling, scaling) and cracking due to freeze- thaw of concrete in inaccessible areas. #*#The weathering index for the continental US is shown in ASTM C33- 90, Fig. 1.#M#
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Loss of material (spalling, scaling) and cracking #*#due to	#M#Further evaluation is required for blants that are located in moderate to severe weathering conditions (weathering index >100 day-inch/yr) (NUREG-1557) to determine if a plant- specific aging management program is needed. A plant-specific aging management program is not required if documented evidence confirms that the existing concrete had air entrainment content (as per Table CC-2231-2 of the ASME Section III Division 2), and subsequent inspections of accessible areas did not exhibit degradation related to freeze-thaw. Such inspections should be considered a part of the evaluation. If this condition is not satisfied, then a plant-specific aging management program is required to manage loss of material (spalling, scaling) and cracking due to freeze- thaw of concrete in inaccessible areas. #*#The weathering index for the continental US is shown in ASTM C33- 90, Fig. 1.#M#
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Loss of material (spalling, scaling) and cracking #*#due to	#M#Further evaluation is required for blants that are located in moderate to severe weathering conditions (weathering index >100 day-inch/yr) (NUREG-1557) to determine if a plant- specific aging management program is needed. A plant-specific aging management program is not required if documented evidence confirms that the existing concrete had air entrainment content (as per Table CC-2231-2 of the ASME Section III Division 2), and subsequent inspections of accessible areas did not exhibit degradation related to freeze-thaw. Such inspections should be considered a part of the evaluation. If this condition is not satisfied, then a plant-specific aging management program is required to manage loss of material (spalling, scaling) and cracking due to freeze- thaw of concrete in inaccessible areas. #*#The weathering index for the continental US is shown in ASTM C33- 90, Fig. 1.#M#
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Loss of material (spalling, scaling) and cracking #*#due to	#M#Further evaluation is required for blants that are located in moderate to severe weathering conditions (weathering index >100 day-inch/yr) (NUREG-1557) to determine if a plant- specific aging management program is needed. A plant-specific aging management program is not required if documented evidence confirms that the existing concrete had air entrainment content (as per Table CC-2231-2 of the ASME Section III Division 2), and subsequent inspections of accessible areas did not exhibit degradation related to freeze-thaw. Such inspections should be considered a part of the evaluation. If this condition is not satisfied, then a plant-specific aging management program is required to manage loss of material (spalling, scaling) and cracking due to freeze- thaw of concrete in inaccessible areas. #*#The weathering index for the continental US is shown in ASTM C33- 90, Fig. 1.#M#
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Concrete	Air – outdoor	Loss of material (spalling, scaling) and cracking #*#due to freeze-thaw	#M#Further evaluation is required for plants that are located in moderate to severe weathering conditions (weathering index >100 day-inch/yr) (NUREG-1557) to determine if a plant- specific aging management program is needed. A plant-specific aging management program is not required if documented evidence confirms that the existing concrete had air entrainment content (as per Table CC-2231-2 of the ASME Section III Division 2), and subsequent inspections of accessible areas did not exhibit degradation related to freeze-thaw. Such inspections should be considered a part of the evaluation. If this condition is not satisfied, then a plant-specific aging management program is required to manage loss of material (spalling, scaling) and cracking due to freeze- thaw of concrete in inaccessible areas. #*#The weathering index for the continental US is shown in ASTM C33- 90, Fig. 1.#M#
#M#Concrete# M#	Water – flowing	#M#Increase in porosity and permeability; loss of strength #*#due to leaching of calcium hydroxide and carbonation#M#	#M#Further evaluation is required to determine if a plant-specific aging management program is needed to manage increase in porosity, and permeability due to leaching of calcium hydroxide and carbonation of concrete in Inaccessible Areas. A plant-specific aging management program is not required if (1) There is evidence in the accessible areas that the flowing water has not caused leaching and carbonation, or (2) Evaluation determined that the observed leaching of calcium hydroxide and carbonation in accessible areas has no impact on the intended function of the concrete structure.#M#

#M#Concrete#		Loss of material (spalling, scaling) and cracking #*#due to	#M#Further evaluation is required for plants that are located in moderate to severe weathering conditions (weathering index >100 day-inch/yr) (NUREG-1557) to determine if a plant- specific aging management program is needed. A plant-specific aging management program is not required if documented evidence confirms that the existing concrete had air entrainment content (as per Table CC-2231-2 of the ASME Section III Division 2), and subsequent inspections of accessible areas did not exhibit degradation related to freeze-thaw. Such inspections should be considered a part of the evaluation. If this condition is not satisfied, then a plant-specific aging management program is required to manage loss of material (spalling, scaling) and cracking due to freeze- thaw of concrete in inaccessible areas. #*#The weathering index for the continental US is shown in ASTM C33-
M# Concrete	Air – outdoor Air – indoor, uncontrolled	Reduction of strength and modulus #*#due to elevated temperature (>150°F general; >200°F local)	90, Fig. 1.#M# #M#Plant-specific aging management program #*# #*# Subsection CC-3400 of ASME Section III, Division 2, and Appendix A of ACI 349 specifies the concrete temperature limits for normal operation or any other long-term period. The temperatures shall not exceed 150°F except for local areas, such as around penetrations, where the temperatures are not allowed to exceed 200°F. If significant equipment loads are supported by concrete at temperatures exceeding 150°F, an evaluation of the ability to withstand the postulated design loads is to be made. #*# #*#Higher temperatures than those given above may be allowed in the concrete if tests and/or calculations are provided to evaluate the reduction in strength and modulus of elasticity and these reductions.#M#

			#M#Plant-specific aging management
			program #*# #*# Subsection CC-3400
			of ASME Section III, Division 2, and
			Appendix A of ACI 349 specifies the
			concrete temperature limits for normal
			operation or any other long-term period.
			The temperatures shall not exceed
			150°F except for local areas, such as
			around penetrations, where the
			temperatures are not allowed to exceed
			200°F. If significant equipment loads
			are supported by concrete at
			temperatures exceeding 150°F, an
			evaluation of the ability to withstand the
			postulated design loads is to be made.
			#*# #*#Higher temperatures than those
			given above may be allowed in the
		Reduction of strength	concrete if tests and/or calculations are
		and modulus #*#due to	provided to evaluate the reduction in
		elevated temperature	strength and modulus of elasticity and
	Air – indoor,		these reductions are applied to the
Concrete	uncontrolled	local)	design calculations.#M#
			#M#Plant-specific aging management
			program #*# #*# Subsection CC-3400
			of ASME Section III, Division 2, and
			Appendix A of ACI 349 specifies the
			concrete temperature limits for normal
			operation or any other long-term period.
			The temperatures shall not exceed
			150°F except for local areas, such as
			around penetrations, where the
			temperatures are not allowed to exceed
			200°F. If significant equipment loads
			are supported by concrete at
			temperatures exceeding 150°F, an
			evaluation of the ability to withstand the
			postulated design loads is to be made.
			#*# #*#Higher temperatures than those
			given above may be allowed in the
		Reduction of strength	concrete if tests and/or calculations are
		and modulus #*#due to	provided to evaluate the reduction in
	Air indeer	elevated temperature	strength and modulus of elasticity and
	Air – indoor,	(>150°F general; >200°F	these reductions are applied to the
Concrete	uncontrolled	local)	design calculations.#M#

			#M#Plant-specific aging management
			program #*# #*# Subsection CC-3400
			of ASME Section III, Division 2, and
			Appendix A of ACI 349 specifies the
			concrete temperature limits for normal
			operation or any other long-term period.
			The temperatures shall not exceed
			150°F except for local areas, such as
			around penetrations, where the
			temperatures are not allowed to exceed 200°F. If significant equipment loads
			are supported by concrete at
			temperatures exceeding 150°F, an
			evaluation of the ability to withstand the
			postulated design loads is to be made.
			#*# #*#Higher temperatures than those
			given above may be allowed in the
		Reduction of strength	concrete if tests and/or calculations are
		and modulus #*#due to	provided to evaluate the reduction in
		elevated temperature	strength and modulus of elasticity and
Comenta	Air – indoor,		these reductions are applied to the
Concrete	uncontrolled	local)	design calculations.#M#
			#M#Plant-specific aging management
			program #*# #*# Subsection CC-3400
			of ASME Section III, Division 2, and
			Appendix A of ACI 349 specifies the
			concrete temperature limits for normal
			operation or any other long-term period.
			The temperatures shall not exceed
			150°F except for local areas, such as
			around penetrations, where the temperatures are not allowed to exceed
			200°F. If significant equipment loads
			are supported by concrete at
			temperatures exceeding 150°F, an
			evaluation of the ability to withstand the
			postulated design loads is to be made.
			#*# #*#Higher temperatures than those
			given above may be allowed in the
		Reduction of strength	concrete if tests and/or calculations are
		and modulus #*#due to	provided to evaluate the reduction in
		elevated temperature	strength and modulus of elasticity and
	Air indeer	(>150°E gonoral: >200°E	these reductions are applied to the
Concrete	Air – indoor, uncontrolled	(>150°F general; >200°F local)	these reductions are applied to the design calculations.#M#

			#M#Further evaluation is required to
			determine if a plant-specific aging
			management program is needed to
			manage cracking and expansion due to
			reaction with aggregate of concrete in
			Inaccessible Areas. A plant-specific
			aging management program is not
			required if (1) as described in NUREG-
			1557, investigations, tests, and
			petrographic examinations of
			aggregates performed in accordance
			with ASTM C295 and other ASTM
			reactivity tests, as required, can
			demonstrate that those aggregates do
			not adversely react within concrete, or
			(2) For potentially reactive aggregates,
			aggregate concrete reaction is not
		Cracking #*#due to	significant if it is demonstrated that the
#M#Concrete#		expansion from reaction	in-place concrete can perform its
M#	Any environment	with aggregates	intended function.#M#
			#M#Further evaluation is required to
			determine if a plant-specific aging
			management program is needed to
			manage cracking and expansion due to
			reaction with aggregate of concrete in
			Inaccessible Areas. A plant-specific
			aging management program is not
			required if (1) as described in NUREG-
			1557, investigations, tests, and
			petrographic examinations of
			aggregates performed in accordance
			with ASTM C295 and other ASTM
			reactivity tests, as required, can
			demonstrate that those aggregates do
			not adversely react within concrete, or
			(2) For potentially reactive aggregates,
			aggregate concrete reaction is not
		Cracking #*#due to	significant if it is demonstrated that the
#M#Concrete#		expansion from reaction	in-place concrete can perform its
M#	Any environment	with aggregates	intended function.#M#

			#M#Further evaluation is required to
			determine if a plant-specific aging
			management program is needed to
			manage cracking and expansion due to
			reaction with aggregate of concrete in
			Inaccessible Areas. A plant-specific
			aging management program is not
			required if (1) as described in NUREG-
			1557, investigations, tests, and
			petrographic examinations of
			aggregates performed in accordance
			with ASTM C295 and other ASTM
			reactivity tests, as required, can
			demonstrate that those aggregates do
			not adversely react within concrete, or
			(2) For potentially reactive aggregates,
			aggregate concrete reaction is not
		Cracking #*#due to	significant if it is demonstrated that the
#M#Concrete#		expansion from reaction	in-place concrete can perform its
M#	Any environment	with aggregates	intended function.#M#
			#M#Further evaluation is required to
			determine if a plant-specific aging
			management program is needed to
			manage cracking and expansion due to
			reaction with aggregate of concrete in
			Inaccessible Areas. A plant-specific
			aging management program is not
			required if (1) as described in NUREG-
			1557, investigations, tests, and
			petrographic examinations of
			aggregates performed in accordance
			with ASTM C295 and other ASTM
			reactivity tests, as required, can
			demonstrate that those aggregates do
			not adversely react within concrete, or
			(2) For potentially reactive aggregates,
			aggregate concrete reaction is not
		Cracking #*#due to	significant if it is demonstrated that the
#M#Concrete#		expansion from reaction	in-place concrete can perform its
M#	Any environment	with aggregates	intended function.#M#
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			#M#Further evaluation is required to
			determine if a plant-specific aging
			management program is needed to
			manage cracking and expansion due to
			reaction with aggregate of concrete in
			Inaccessible Areas. A plant-specific
			aging management program is not
			required if (1) as described in NUREG-
			1557, investigations, tests, and
			petrographic examinations of
			aggregates performed in accordance
			with ASTM C295 and other ASTM
			reactivity tests, as required, can
			demonstrate that those aggregates do
			not adversely react within concrete, or
			(2) For potentially reactive aggregates,
			aggregate concrete reaction is not
		Cracking #*#due to	significant if it is demonstrated that the
#M#Concrete#		expansion from reaction	in-place concrete can perform its
M#	Any environment	with aggregates	intended function.#M#
			#M#Further evaluation is required to
			determine if a plant-specific aging
			management program is needed to
			manage cracking and expansion due to
			reaction with aggregate of concrete in
			Inaccessible Areas. A plant-specific
			aging management program is not
			required if (1) as described in NUREG-
			1557, investigations, tests, and
			petrographic examinations of
			aggregates performed in accordance
			with ASTM C295 and other ASTM
			reactivity tests, as required, can
			demonstrate that those aggregates do
			not adversely react within concrete, or
			(2) For potentially reactive aggregates,
			aggregate concrete reaction is not
		Cracking #*#due to	significant if it is demonstrated that the
#M#Concrete#		expansion from reaction	in-place concrete can perform its
M#	Any environment	with aggregates	intended function.#M#
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			#M#Further evaluation is required to
			determine if a plant-specific aging
			management program is needed to
			manage cracking and expansion due to
			reaction with aggregate of concrete in
			Inaccessible Areas. A plant-specific
			aging management program is not
			required if (1) as described in NUREG-
			1557, investigations, tests, and
			petrographic examinations of
			aggregates performed in accordance
			with ASTM C295 and other ASTM
			reactivity tests, as required, can
			demonstrate that those aggregates do
			not adversely react within concrete, or
			(2) For potentially reactive aggregates,
			aggregate concrete reaction is not
#NA#Concrete#		Cracking #*#due to	significant if it is demonstrated that the
#M#Concrete# M#	Any onvironment	expansion from reaction with aggregates	in-place concrete can perform its intended function.#M#
	Any environment	with aggregates	
			#M#Further evaluation is required to
			determine if a plant-specific aging
			management program is needed to
			manage cracking and expansion due to
			reaction with aggregate of concrete in
			Inaccessible Areas. A plant-specific
			aging management program is not
			required if (1) as described in NUREG-
			1557, investigations, tests, and
			petrographic examinations of
			aggregates performed in accordance with ASTM C295 and other ASTM
			reactivity tests, as required, can
			demonstrate that those aggregates do
			not adversely react within concrete, or
			(2) For potentially reactive aggregates,
			aggregate concrete reaction is not
		Cracking #*#due to	significant if it is demonstrated that the
#M#Concrete#		expansion from reaction	in-place concrete can perform its
M#	Any environment	with aggregates	intended function.#M#
		Cracking; loss of bond;	
		and loss of material	
#N##C 1 //		(spalling, scaling)	
#M#Concrete#	Cround water/asil	#*#due to corrosion of	#M#Chapter XI.S6, "Structures
M#	Ground water/soil	embedded steel	Monitoring"#M#

		Cracking; loss of bond;	
		and loss of material	
		(spalling, scaling)	
#M#Concrete#		#*#due to corrosion of	#M#Chapter XI.S6, "Structures
M#	Ground water/soil	embedded steel	Monitoring"#M#
		Cracking; loss of bond;	
		and loss of material	
		(spalling, scaling)	
#M#Concrete#		#*#due to corrosion of	#M#Chapter XI.S6, "Structures
M#	Ground water/soil	embedded steel	Monitoring"#M#
		Cracking; loss of bond;	
		and loss of material	
		(spalling, scaling)	
#M#Concrete#		#*#due to corrosion of	#M#Chapter XI.S6, "Structures
M#	Ground water/soil	embedded steel	Monitoring"#M#
		Cracking; loss of bond;	
		and loss of material	
		(spalling, scaling)	
#M#Concrete#		#*#due to corrosion of	#M#Chapter XI.S6, "Structures
M#	Ground water/soil	embedded steel	Monitoring"#M#
		Cracking; loss of bond;	
		and loss of material	
		(spalling, scaling)	
#M#Concrete#		#*#due to corrosion of	#M#Chapter XI.S6, "Structures
M#	Ground water/soil	embedded steel	Monitoring"#M#
		Cracking; loss of bond;	
		and loss of material	
		(spalling, scaling)	
#M#Concrete#		#*#due to corrosion of	#M#Chapter XI.S6, "Structures
M#	Ground water/soil	embedded steel	Monitoring"#M#
		Loss of material #*#due	
Steel	Ground water/soil	to corrosion	Chapter XI.S6, "Structures Monitoring"

#M#Concrete# M#	Any environment	Cracking #*#due to expansion from reaction with aggregates	#M#Further evaluation is required to determine if a plant-specific aging management program is needed to manage cracking and expansion due to reaction with aggregate of concrete in Inaccessible Areas. A plant-specific aging management program is not required if (1) as described in NUREG- 1557, investigations, tests, and petrographic examinations of aggregates performed in accordance with ASTM C295 and other ASTM reactivity tests, as required, can demonstrate that those aggregates do not adversely react within concrete, or (2) For potentially reactive aggregates, aggregate concrete reaction is not significant if it is demonstrated that the in-place concrete can perform its intended function.#M#
Steel	Air – indoor, uncontrolled or Air – outdoor or Water – flowing or standing	Loss of material #*#due to general, pitting, and crevice corrosion	Chapter XI.S7, "Regulatory Guide 1.127, Inspection of Water-Control Structures Associated with Nuclear Power Plants" or the FERC / US Army Corp of Engineers dam inspections and maintenance programs.
Wood	standing or	Loss of material; change in material properties #*#due to weathering, chemical degradation, and insect infestation repeated wetting and drying, fungal decay	Chapter XI.S7, "Regulatory Guide 1.127, Inspection of Water-Control Structures Associated with Nuclear Power Plants" or the FERC / US Army Corp of Engineers dam inspections and maintenance programs.
Steel	Air – indoor, uncontrolled	Loss of material #*#due to general, pitting, and crevice corrosion	Chapter XI.S3, "ASME Section XI, Subsection IWF"
Steel	Air – indoor, uncontrolled	Loss of material #*#due to general, pitting, and crevice corrosion	Chapter XI.S3, "ASME Section XI, Subsection IWF"
Steel	Air – indoor, uncontrolled	Loss of material #*#due to general, pitting, and crevice corrosion	Chapter XI.S3, "ASME Section XI, Subsection IWF"
Any	Any environment	Loss of preload #*#due to self-loosening	Chapter XI.S3, "ASME Section XI, Subsection IWF"

Any	Any environment	Loss of preload #*#due to self-loosening	Chapter XI.S3, "ASME Section XI, Subsection IWF"
Any	Any environment	Loss of preload #*#due to self-loosening	Chapter XI.S3, "ASME Section XI, Subsection IWF"
#M#Concrete# M#	Air – outdoor	Loss of material (spalling, scaling) and cracking #*#due to freeze-thaw	#M#Chapter XI.S6, "Structures Monitoring"#M#
#M#Concrete# M#	Air – outdoor	Loss of material (spalling, scaling) and cracking #*#due to freeze-thaw	#M#Chapter XI.S6, "Structures Monitoring"#M#
#M#Concrete# M#	Air – outdoor	Loss of material (spalling, scaling) and cracking #*#due to freeze-thaw	#M#Chapter XI.S6, "Structures Monitoring"#M#
#M#Concrete# M#	Air – outdoor	Loss of material (spalling, scaling) and cracking #*#due to freeze-thaw	#M#Chapter XI.S6, "Structures Monitoring"#M#
#M#Concrete# M#	Air – outdoor	Loss of material (spalling, scaling) and cracking #*#due to freeze-thaw	#M#Chapter XI.S6, "Structures Monitoring"#M#
#M#Concrete# M#	Air – outdoor	Loss of material (spalling, scaling) and cracking #*#due to freeze-thaw	#M#Chapter XI.S6, "Structures Monitoring"#M#
#M#Concrete# M#	Air – outdoor	Loss of material (spalling, scaling) and cracking #*#due to freeze-thaw Loss of material #*#due	#M#Chapter XI.S6, "Structures Monitoring"#M# Chapter XI.M2, "Water Chemistry," and
Stainless steel	Treated water	to pitting and crevice corrosion Loss of material #*#due	#*#Chapter XI.S3, "ASME Section XI, Subsection IWF" Chapter XI.M2, "Water Chemistry," and
Stainless steel	Treated water	to pitting and crevice corrosion	#*#Chapter XI.S3, "ASME Section XI, Subsection IWF"
Stainless steel	Treated water	Loss of material #*#due to pitting and crevice corrosion	Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.S3, "ASME Section XI, Subsection IWF"

		Loss of material #*#due	
Steel;		to pitting and crevice	Chapter XI.S3, "ASME Section XI,
galvanized steel	Air outdoor	corrosion	Subsection IWF"
galvallized steel		Loss of material #*#due	
Steel;		to pitting and crevice	Chapter XI.S3, "ASME Section XI,
galvanized steel	Air outdoor	corrosion	Subsection IWF"
galvanizeu sieer		Loss of material #*#due	
Stool			Chapter VI S2 "ASME Section VI
Steel;	Air outdoor	to pitting and crevice corrosion	Chapter XI.S3, "ASME Section XI,
galvanized steel	Air – Outdoor		Subsection IWF"
		Increase in porosity and	
		permeability; loss of	
		strength #*#due to	
#N 4#O a ra a na ta #		leaching of calcium	
#M#Concrete#		hydroxide and	#M#Chapter XI.S6, "Structures
M#	Water – flowing	carbonation	Monitoring"#M#
		Increase in porosity and	
		permeability; loss of	
		strength #*#due to	
		leaching of calcium	
#M#Concrete#		hydroxide and	#M#Chapter XI.S6, "Structures
M#	Water – flowing	carbonation	Monitoring"#M#
		Increase in porosity and	
		permeability; loss of	
		strength #*#due to	
		leaching of calcium	
#M#Concrete#		hydroxide and	#M#Chapter XI.S6, "Structures
M#	Water – flowing	carbonation	Monitoring"#M#
		Increase in porosity and	
		permeability; loss of	
		strength #*#due to	
		leaching of calcium	
#M#Concrete#		hydroxide and	#M#Chapter XI.S6, "Structures
M#	Water – flowing	carbonation	Monitoring"#M#
		Increase in porosity and	
		permeability; loss of	
		strength #*#due to	
		leaching of calcium	
#M#Concrete#		hydroxide and	#M#Chapter XI.S6, "Structures
M#	Water – flowing	carbonation	Monitoring"#M#
		Increase in porosity and	
		permeability; loss of	
		strength #*#due to	
		leaching of calcium	
#M#Concrete#		hydroxide and	#M#Chapter XI.S6, "Structures
M#	Water – flowing	carbonation	Monitoring"#M#
	in stor in orthing	Increase in porosity and	
		permeability; loss of	
		strength #*#due to	
		leaching of calcium	
#M#Concrete#		hydroxide and	#M#Chapter XI.S6, "Structures
M#	Water – flowing	carbonation	Monitoring"#M#
1117	water – nowing	Carbonation	

		Loss of material #*#due	
	Air – indoor,	to general, pitting and	
Steel	uncontrolled	crevice corrosion	Chapter XI.S6, "Structures Monitoring"
		Loss of material #*#due	
	Air – indoor,	to general, pitting and	
Steel	uncontrolled	crevice corrosion	Chapter XI.S6, "Structures Monitoring"
		Loss of material #*#due	
	Air – indoor,	to general, pitting and	
Steel	uncontrolled	crevice corrosion	Chapter XI.S6, "Structures Monitoring"
		Loss of material #*#due	
	Air – indoor,	to general, pitting and	
Steel	uncontrolled	crevice corrosion	Chapter XI.S6, "Structures Monitoring"
	Air indoor	Loss of material #*#due	
Steel	Air – indoor, uncontrolled	to general, pitting and crevice corrosion	Chapter XI S6 "Structures Menitoring"
51661	uncontrolled		Chapter XI.S6, "Structures Monitoring"
		Loss of material #*#due	
	Air – indoor,	to general, pitting and	
Steel	uncontrolled	crevice corrosion	Chapter XI.S6, "Structures Monitoring"
		Loss of material #*#due	
o	Air – indoor,	to general, pitting and	
Steel	uncontrolled	crevice corrosion	Chapter XI.S6, "Structures Monitoring"
		Loss of material #*#due	
	Air – indoor,	to general, pitting and	
Steel	uncontrolled	crevice corrosion	Chapter XI.S6, "Structures Monitoring"
		Loss of material #*#due	
	Air – indoor,	to general, pitting and	
Steel	uncontrolled	crevice corrosion	Chapter XI.S6, "Structures Monitoring"
		Loss of material #*#due	
	Air – indoor,	to general, pitting and	
Steel	uncontrolled	crevice corrosion	Chapter XI.S6, "Structures Monitoring"
			, , , , , , , , , , , , , , , , , , ,
		Loss of material #*#due	
	Air – indoor,	to general, pitting and	
Steel	uncontrolled	crevice corrosion	Chapter XI.S6, "Structures Monitoring"
		loss of metarial #*#-!	
	Air – indoor,	Loss of material #*#due to general, pitting and	
Steel	uncontrolled	crevice corrosion	Chapter XI.S6, "Structures Monitoring"
	anoontrolled		
		Loss of material #*#due	
	Air – indoor,	to general, pitting and	
Steel	uncontrolled	crevice corrosion	Chapter XI.S6, "Structures Monitoring"

#M#Concrete#		-	#M#Chapter XI.S6, "Structures
M#	Any environment	with aggregates	Monitoring"#M#
#M#Concrete# M#	Any environment	Cracking #*#due to expansion from reaction with aggregates	#M#Chapter XI.S6, "Structures Monitoring"#M#
#M#Concrete# M#	Any environment	Cracking #*#due to expansion from reaction with aggregates	#M#Chapter XI.S6, "Structures Monitoring"#M#
#M#Concrete# M#	Any environment	Cracking #*#due to expansion from reaction with aggregates	#M#Chapter XI.S6, "Structures Monitoring"#M#
#M#Concrete# M#	Any environment	Cracking #*#due to expansion from reaction with aggregates	#M#Chapter XI.S6, "Structures Monitoring"#M#
#M#Concrete# M#	Any environment	Cracking #*#due to expansion from reaction with aggregates	#M#Chapter XI.S6, "Structures Monitoring"#M#
#M#Concrete# M#	Any environment	Cracking #*#due to expansion from reaction with aggregates	#M#Chapter XI.S6, "Structures Monitoring"#M#
#M#Concrete# M#	Any environment	Cracking #*#due to expansion from reaction with aggregates	#M#Chapter XI.S6, "Structures Monitoring"#M#
#M#Concrete# M#	Air – indoor,	Cracking; loss of bond; and loss of material (spalling, scaling) #*#due to corrosion of embedded steel	#M#Chapter XI.S6, "Structures Monitoring"#M#
#M#Concrete# M#	Air – indoor,	Cracking; loss of bond; and loss of material (spalling, scaling) #*#due to corrosion of embedded steel	#M#Chapter XI.S6, "Structures Monitoring"#M#
#M#Concrete# M#	Air – indoor,	Cracking; loss of bond; and loss of material (spalling, scaling) #*#due to corrosion of embedded steel	#M#Chapter XI.S6, "Structures Monitoring"#M#
#M#Concrete# M#	Air – indoor, uncontrolled or Air – outdoor	Cracking; loss of bond; and loss of material (spalling, scaling) #*#due to corrosion of embedded steel	#M#Chapter XI.S6, "Structures Monitoring"#M#

		Cracking; loss of bond;	
		and loss of material	
	Air – indoor,	(spalling, scaling)	
#M#Concrete#		#*#due to corrosion of	#M#Chapter XI.S6, "Structures
M#	– outdoor	embedded steel	Monitoring"#M#
IVI#			
		Cracking; loss of bond;	
	Ala lasta a	and loss of material	
	Air – indoor,	(spalling, scaling)	
#M#Concrete#		#*#due to corrosion of	#M#Chapter XI.S6, "Structures
M#	– outdoor	embedded steel	Monitoring"#M#
		Cracking; loss of bond;	
		and loss of material	
	Air – indoor,	(spalling, scaling)	
#M#Concrete#		#*#due to corrosion of	#M#Chapter XI.S6, "Structures
M#	– outdoor	embedded steel	Monitoring"#M#
		Loss of preload #*#due	
Any	Any environment	to self-loosening	Chapter XI.S6, "Structures Monitoring"
		Loss of preload #*#due	
Any	Any environment	to self-loosening	Chapter XI.S6, "Structures Monitoring"
		Loss of preload #*#due	
Any	Any environment	to self-loosening	Chapter XI.S6, "Structures Monitoring"
		Loss of preload #*#due	
Any	Any environment	to self-loosening	Chapter XI.S6, "Structures Monitoring"
		Loss of preload #*#due	
Any	Any environment	to self-loosening	Chapter XI.S6, "Structures Monitoring"
,	,	0	
		Loss of preload #*#due	
Any	Any environment	to self-loosening	Chapter XI.S6, "Structures Monitoring"
	,	<u> </u>	
		Loss of preload #*#due	
Any	Any environment	to self-loosening	Chapter XI.S6, "Structures Monitoring"
,	,		
		Loss of preload #*#due	
Any	Any environment	to self-loosening	Chapter XI.S6, "Structures Monitoring"
		Loss of preload #*#due	
Any	Any environment	to self-loosening	Chapter XI.S6, "Structures Monitoring"
		Loss of preload #*#due	
Δηγ	Any environment	to self-loosening	Chapter XI.S6, "Structures Monitoring"
Any		to sen-ioosening	
		Loss of prolood #*#due	
A. D. V.	Any onvironment	Loss of preload #*#due	Chapter VI S6 "Structures Meritaria"
Any	Any environment	to self-loosening	Chapter XI.S6, "Structures Monitoring"
		less of angles of the late	
0	A	Loss of preload #*#due	
Any	Any environment	to self-loosening	Chapter XI.S6, "Structures Monitoring"

		Loss of preload #*#due	
Any	Any environment	to self-loosening	Chapter XI.S6, "Structures Monitoring"
		Cracking; loss of bond;	
		and loss of material	
		(spalling, scaling)	
#M#Concrete#		#*#due to corrosion of	#M#Chapter XI.S6, "Structures
M#	Ground water/soil	embedded steel	Monitoring"#M#
lvi π	Cround water/son	Cracking; loss of bond;	
		and loss of material	
		(spalling, scaling)	
#M#Concrete#		#*#due to corrosion of	#M#Chapter XI.S6, "Structures
M#	Ground water/soil	embedded steel	Monitoring"#M#
	Cround water/son	Cracking; loss of bond;	
		and loss of material	
		(spalling, scaling)	
#M#Concrete#		#*#due to corrosion of	#M#Chapter XI.S6, "Structures
M#	Ground water/soil	embedded steel	Monitoring"#M#
		Cracking; loss of bond;	
		and loss of material	
		(spalling, scaling)	
#M#Concrete#		#*#due to corrosion of	#M#Chapter XI.S6, "Structures
M#	Ground water/soil	embedded steel	Monitoring"#M#
		Cracking; loss of bond;	
		and loss of material	
		(spalling, scaling)	
#M#Concrete#		#*#due to corrosion of	#M#Chapter XI.S6, "Structures
M#	Ground water/soil	embedded steel	Monitoring"#M#
		Cracking; loss of bond;	
		and loss of material	
		(spalling, scaling)	
#M#Concrete#		#*#due to corrosion of	#M#Chapter XI.S6, "Structures
M#	Ground water/soil	embedded steel	Monitoring"#M#
		Cracking; loss of bond;	
		and loss of material	
		(spalling, scaling)	
#M#Concrete#		#*#due to corrosion of	#M#Chapter XI.S6, "Structures
M#	Ground water/soil	embedded steel	Monitoring"#M#
		Loss of material #*#due	
Steel;		to general, pitting, and	
galvanized steel	Air – outdoor	crevice corrosion	Chapter XI.S6, "Structures Monitoring"
		Loss of material #*#due	
Steel;		to general, pitting, and	
galvanized steel	Air – outdoor	crevice corrosion	Chapter XI.S6, "Structures Monitoring"
		Loss of material #*#due	
Steel;		to general, pitting, and	
galvanized steel	Air – outdoor	crevice corrosion	Chapter XI.S6, "Structures Monitoring"

		Loss of material #*#due	
Steel;		to general, pitting, and	
galvanized steel	Air – outdoor	crevice corrosion	Chapter XI.S6, "Structures Monitoring"
		Loss of material #*#due	
Steel;		to general, pitting, and	
galvanized steel	Air – outdoor	crevice corrosion	Chapter XI.S6, "Structures Monitoring"
		Loop of motorial #*#dua	
Steel;		Loss of material #*#due to general, pitting, and	
galvanized steel	Air – outdoor	crevice corrosion	Chapter XI.S6, "Structures Monitoring"
garvarnzoù otoor			
		Loss of material #*#due	
Steel;		to general, pitting, and	
galvanized steel	Air – outdoor	crevice corrosion	Chapter XI.S6, "Structures Monitoring"
		Loss of material #*#due	
Steel;	A. ()	to general, pitting, and	
galvanized steel	Air – Outdoor	crevice corrosion	Chapter XI.S6, "Structures Monitoring"
		Loss of material #*#due	
Steel;		to general, pitting, and	
galvanized steel	Air – outdoor	crevice corrosion	Chapter XI.S6, "Structures Monitoring"
<u>J </u>			
		Loss of material #*#due	
Steel;		to general, pitting, and	
galvanized steel	Air – outdoor	crevice corrosion	Chapter XI.S6, "Structures Monitoring"
Steel		Loss of material #*#due	
Steel; galvanized steel	Air outdoor	to general, pitting, and crevice corrosion	Chapter XI.S6, "Structures Monitoring"
galvanized steel			Chapter XI.30, Structures Monitoring
		Loss of material #*#due	
Steel;		to general, pitting, and	
galvanized steel	Air – outdoor	crevice corrosion	Chapter XI.S6, "Structures Monitoring"
		Increase in porosity and	
		permeability; cracking;	
	Air indeer	loss of material (spalling,	
#M#Concrete#	Air – indoor, uncontrolled or Air	scaling) #*#due to aggressive chemical	#M#Chapter XI.S6, "Structures
M#Concrete#	– outdoor	attack	Monitoring"#M#
	54(400)		
		Increase in porosity and	
		permeability; cracking;	
		loss of material (spalling,	
	Air – indoor,	scaling) #*#due to	
#M#Concrete#		aggressive chemical	#M#Chapter XI.S6, "Structures
M#	– outdoor	attack	Monitoring"#M#

#M#Concrete# M#	Air – indoor, uncontrolled or Air – outdoor	Increase in porosity and permeability; cracking; loss of material (spalling, scaling) #*#due to aggressive chemical attack	#M#Chapter XI.S6, "Structures Monitoring"#M#
#M#Concrete# M#	Air – indoor, uncontrolled or Air – outdoor	Increase in porosity and permeability; cracking; loss of material (spalling, scaling) #*#due to aggressive chemical attack	#M#Chapter XI.S6, "Structures Monitoring"#M#
#M#Concrete# M#	Air – indoor, uncontrolled or Air – outdoor	Increase in porosity and permeability; cracking; loss of material (spalling, scaling) #*#due to aggressive chemical attack	#M#Chapter XI.S6, "Structures Monitoring"#M#
#M#Concrete# M#	Air – indoor, uncontrolled or Air – outdoor	Increase in porosity and permeability; cracking; loss of material (spalling, scaling) #*#due to aggressive chemical attack	#M#Chapter XI.S6, "Structures Monitoring"#M#
#M#Concrete# M#	Air – indoor, uncontrolled or Air – outdoor	Increase in porosity and permeability; cracking; loss of material (spalling, scaling) #*#due to aggressive chemical attack	#M#Chapter XI.S6, "Structures Monitoring"#M#
#M#Concrete# M#	Ground water/soil	Increase in porosity and permeability; cracking; loss of material (spalling, scaling) #*#due to aggressive chemical attack	#M#Chapter XI.S6, "Structures Monitoring"#M#
#M#Concrete# M#	Ground water/soil	Increase in porosity and permeability; cracking; loss of material (spalling, scaling) #*#due to aggressive chemical attack	#M#Chapter XI.S6, "Structures Monitoring"#M#

#M#Concrete# M#	Ground water/soil	Increase in porosity and permeability; cracking; loss of material (spalling, scaling) #*#due to aggressive chemical attack	#M#Chapter XI.S6, "Structures Monitoring"#M#
#M#Concrete# M#	Ground water/soil	Increase in porosity and permeability; cracking; loss of material (spalling, scaling) #*#due to aggressive chemical attack	#M#Chapter XI.S6, "Structures Monitoring"#M#
#M#Concrete# M#	Ground water/soil	Increase in porosity and permeability; cracking; loss of material (spalling, scaling) #*#due to aggressive chemical attack	#M#Chapter XI.S6, "Structures Monitoring"#M#
#M#Concrete# M#	Ground water/soil	Increase in porosity and permeability; cracking; loss of material (spalling, scaling) #*#due to aggressive chemical attack	#M#Chapter XI.S6, "Structures Monitoring"#M#
#M#Concrete# M#	Ground water/soil	Increase in porosity and permeability; cracking; loss of material (spalling, scaling) #*#due to aggressive chemical attack	#M#Chapter XI.S6, "Structures Monitoring"#M#
Galvanized steel; aluminum	Air with borated water leakage	Loss of material #*#due to boric acid corrosion	Chapter XI.M10, "Boric Acid Corrosion"
Galvanized steel; aluminum	Air with borated water leakage	Loss of material #*#due to boric acid corrosion	Chapter XI.M10, "Boric Acid Corrosion"
Galvanized steel; aluminum	Air with borated water leakage	Loss of material #*#due to boric acid corrosion	Chapter XI.M10, "Boric Acid Corrosion"

Galvanized	Air with borated	Loss of material #*#due	
	water leakage	to boric acid corrosion	Chapter XI.M10, "Boric Acid Corrosion"
Galvanized	Air with borated	Loss of material #*#due	
steel; aluminum	water leakage	to boric acid corrosion	Chapter XI.M10, "Boric Acid Corrosion"
Calvanizad	Air with hereted	Loop of motorial #*#dua	
Galvanized	Air with borated	Loss of material #*#due	Chapter XI M10 "Beria Acid Corregion"
steel; aluminum	water leakage	to boric acid corrosion	Chapter XI.M10, "Boric Acid Corrosion"
Galvanized	Air with borated	Loss of material #*#due	
steel; aluminum	water leakage	to boric acid corrosion	Chapter XI.M10, "Boric Acid Corrosion"
			Chapter XI.S6, "Structures Monitoring"
			#*#If a de-watering system is relied
		Cracking and distortion	upon for control of settlement, then the
		#*#due to increased	licensee is to ensure proper functioning
#M#Concrete#	-	stress levels from	of the de-watering system through the
M#	Soil	settlement	period of extended operation.
			Chapter XI.S6, "Structures Monitoring"
			#*#If a de-watering system is relied
		Cracking and distortion	upon for control of settlement, then the
		#*#due to increased	licensee is to ensure proper functioning
#M#Concrete#		stress levels from	of the de-watering system through the
M#	Soil	settlement	period of extended operation.
			Chapter XI.S6, "Structures Monitoring"
			#*#If a de-watering system is relied
		Cracking and distortion	upon for control of settlement, then the
		#*#due to increased	licensee is to ensure proper functioning
#M#Concrete#		stress levels from	of the de-watering system through the
M#	Soil	settlement	period of extended operation.
			Chapter XI.S6, "Structures Monitoring"
			#*#If a de-watering system is relied
		Cracking and distortion	upon for control of settlement, then the
#N/#Corcercter/#		#*#due to increased	licensee is to ensure proper functioning
#M#Concrete#	Soil	stress levels from	of the de-watering system through the
M#	Soil	settlement	period of extended operation.

#M#Concrete# M#	Soil	Cracking and distortion #*#due to increased stress levels from settlement	Chapter XI.S6, "Structures Monitoring" #*#If a de-watering system is relied upon for control of settlement, then the licensee is to ensure proper functioning of the de-watering system through the period of extended operation.
#M#Concrete# M#	Soil	Cracking and distortion #*#due to increased stress levels from settlement	Chapter XI.S6, "Structures Monitoring" #*#If a de-watering system is relied upon for control of settlement, then the licensee is to ensure proper functioning of the de-watering system through the period of extended operation.
#M#Concrete# M#	Soil	Cracking and distortion #*#due to increased stress levels from settlement	Chapter XI.S6, "Structures Monitoring" #*#If a de-watering system is relied upon for control of settlement, then the licensee is to ensure proper functioning of the de-watering system through the period of extended operation.
#M#Concrete# M#	Soil	Cracking and distortion #*#due to increased stress levels from settlement	Chapter XI.S6, "Structures Monitoring" #*#If a de-watering system is relied upon for control of settlement, then the licensee is to ensure proper functioning of the de-watering system through the period of extended operation.
Low-alloy steel, actual measured yield strength ≥ 150 ksi (1,034 MPa)	Air – indoor, uncontrolled or Air – outdoor	Cracking #*#due to stress corrosion cracking	Chapter XI.S6, "Structures Monitoring" #*##*#Note: ASTM A 325, F 1852, and ASTM A 490 bolts used in civil structures have not shown to be prone to SCC. SCC potential need not be evaluated for these bolts.
Low-alloy steel, actual measured yield strength ≥ 150 ksi (1,034 MPa)	Air – indoor, uncontrolled or Air – outdoor	Cracking #*#due to stress corrosion cracking	Chapter XI.S6, "Structures Monitoring" #*##*#Note: ASTM A 325, F 1852, and ASTM A 490 bolts used in civil structures have not shown to be prone to SCC. SCC potential need not be evaluated for these bolts.
Low-alloy steel, actual measured yield strength ≥ 150 ksi (1,034 MPa)	Air – indoor, uncontrolled or Air – outdoor	Cracking #*#due to stress corrosion cracking	Chapter XI.S6, "Structures Monitoring" #*##*#Note: ASTM A 325, F 1852, and ASTM A 490 bolts used in civil structures have not shown to be prone to SCC. SCC potential need not be evaluated for these bolts.

Low-alloy steel, actual measured yield strength ≥ 150 ksi (1,034 MPa)	Air – indoor, uncontrolled or Air – outdoor	Cracking #*#due to stress corrosion cracking	Chapter XI.S6, "Structures Monitoring" #*##*#Note: ASTM A 325, F 1852, and ASTM A 490 bolts used in civil structures have not shown to be prone to SCC. SCC potential need not be evaluated for these bolts.
Low-alloy steel, actual measured yield strength ≥ 150 ksi (1,034 MPa)	Air – indoor, uncontrolled or Air – outdoor	Cracking #*#due to stress corrosion cracking	Chapter XI.S6, "Structures Monitoring" #*##*#Note: ASTM A 325, F 1852, and ASTM A 490 bolts used in civil structures have not shown to be prone to SCC. SCC potential need not be evaluated for these bolts.
Low-alloy steel, actual measured yield strength ≥ 150 ksi (1,034 MPa)	Air – indoor, uncontrolled or Air – outdoor	Cracking #*#due to stress corrosion cracking	Chapter XI.S6, "Structures Monitoring" #*##*#Note: ASTM A 325, F 1852, and ASTM A 490 bolts used in civil structures have not shown to be prone to SCC. SCC potential need not be evaluated for these bolts.
Low-alloy steel, actual measured yield strength ≥ 150 ksi (1,034 MPa)	Air – indoor, uncontrolled or Air – outdoor	Cracking #*#due to stress corrosion cracking	Chapter XI.S6, "Structures Monitoring" #*##*#Note: ASTM A 325, F 1852, and ASTM A 490 bolts used in civil structures have not shown to be prone to SCC. SCC potential need not be evaluated for these bolts.
Low-alloy steel, actual measured yield strength ≥ 150 ksi (1,034 MPa)	Air – indoor, uncontrolled or Air – outdoor	Cracking #*#due to stress corrosion cracking	Chapter XI.S6, "Structures Monitoring" #*##*#Note: ASTM A 325, F 1852, and ASTM A 490 bolts used in civil structures have not shown to be prone to SCC. SCC potential need not be evaluated for these bolts.
Low-alloy steel, actual measured yield strength ≥ 150 ksi (1,034 MPa)	Air – indoor, uncontrolled or Air – outdoor	Cracking #*#due to stress corrosion cracking	Chapter XI.S6, "Structures Monitoring" #*##*#Note: ASTM A 325, F 1852, and ASTM A 490 bolts used in civil structures have not shown to be prone to SCC. SCC potential need not be evaluated for these bolts.
Low-alloy steel, actual measured yield strength ≥ 150 ksi (1,034 MPa)	Air – indoor, uncontrolled or Air – outdoor	Cracking #*#due to stress corrosion cracking	Chapter XI.S6, "Structures Monitoring" #*##*#Note: ASTM A 325, F 1852, and ASTM A 490 bolts used in civil structures have not shown to be prone to SCC. SCC potential need not be evaluated for these bolts.

Low-alloy steel, actual measured yield strength ≥ 150 ksi (1,034 MPa)	Air – indoor, uncontrolled or Air – outdoor	Cracking #*#due to stress corrosion cracking	Chapter XI.S6, "Structures Monitoring" #*##*#Note: ASTM A 325, F 1852, and ASTM A 490 bolts used in civil structures have not shown to be prone to SCC. SCC potential need not be evaluated for these bolts.
Low-alloy steel, actual measured yield strength ≥ 150 ksi (1,034 MPa)	Air – indoor, uncontrolled or Air – outdoor	Cracking #*#due to stress corrosion cracking	Chapter XI.S6, "Structures Monitoring" #*##*#Note: ASTM A 325, F 1852, and ASTM A 490 bolts used in civil structures have not shown to be prone to SCC. SCC potential need not be evaluated for these bolts.
Coatings	Air – indoor, uncontrolled	Loss of coating integrity #*#due to blistering, cracking, flaking, peeling, physical damage	Chapter XI.S8, "Protective Coating Monitoring and Maintenance"
Steel	Air – indoor, uncontrolled or Air – outdoor	Loss of material #*#due to corrosion	Chapter XI.S6, "Structures Monitoring" #*#If protective coatings are relied upon to manage the effects of aging, the structures monitoring program is to include provisions to address protective coating monitoring and maintenance.
Steel	Air – indoor, uncontrolled or Air – outdoor	Loss of material #*#due to corrosion	Chapter XI.S6, "Structures Monitoring" #*#If protective coatings are relied upon to manage the effects of aging, the structures monitoring program is to include provisions to address protective coating monitoring and maintenance.
Steel	Air – indoor, uncontrolled or Air – outdoor	Loss of material #*#due to corrosion	Chapter XI.S6, "Structures Monitoring" #*#If protective coatings are relied upon to manage the effects of aging, the structures monitoring program is to include provisions to address protective coating monitoring and maintenance.
Steel	Air – indoor, uncontrolled or Air – outdoor	Loss of material #*#due to corrosion	Chapter XI.S6, "Structures Monitoring" #*#If protective coatings are relied upon to manage the effects of aging, the structures monitoring program is to include provisions to address protective coating monitoring and maintenance.

Steel	Air – indoor, uncontrolled or Air – outdoor	Loss of material #*#due to corrosion	Chapter XI.S6, "Structures Monitoring" #*#If protective coatings are relied upon to manage the effects of aging, the structures monitoring program is to include provisions to address protective coating monitoring and maintenance.
Steel	Air – indoor, uncontrolled or Air – outdoor	Loss of material #*#due to corrosion	Chapter XI.S6, "Structures Monitoring" #*#If protective coatings are relied upon to manage the effects of aging, the structures monitoring program is to include provisions to address protective coating monitoring and maintenance.
Steel	Air – indoor, uncontrolled or Air – outdoor	Loss of material #*#due to corrosion	Chapter XI.S6, "Structures Monitoring" #*#If protective coatings are relied upon to manage the effects of aging, the structures monitoring program is to include provisions to address protective coating monitoring and maintenance.
Concrete	Soil	Cracking and distortion #*#due to increased stress levels from settlement	Chapter XI.S6, "Structures Monitoring" #*#If a de-watering system is relied upon for control of settlement, then the licensee is to ensure proper functioning of the de-watering system through the period of extended operation.
		Increase in porosity and permeability; loss of strength #*#due to leaching of calcium hydroxide and	Further evaluation is required to determine if a plant-specific aging management program is needed to manage increase in porosity, and permeability due to leaching of calcium hydroxide and carbonation of concrete in Inaccessible Areas. A plant-specific aging management program is not required if (1) There is evidence in the accessible areas that the flowing water has not caused leaching and carbonation, or (2) Evaluation determined that the observed leaching of calcium hydroxide and carbonation in accessible areas has no impact on the intended function of the concrete
Concrete	Water – flowing	carbonation	structure.

#M#Concrete; porous concrete#M#	Water – flowing under foundation	Reduction of foundation strength and cracking #*#due to differential settlement and erosion of porous concrete subfoundation	Chapter XI.S6, "Structures Monitoring" #*#If a de-watering system is relied upon for control of settlement, then the licensee is to ensure proper functioning of the de-watering system through the period of extended operation.
#M#Concrete; porous concrete#M#	Water – flowing under foundation	Reduction of foundation strength and cracking #*#due to differential settlement and erosion of porous concrete subfoundation	Chapter XI.S6, "Structures Monitoring" #*#If a de-watering system is relied upon for control of settlement, then the licensee is to ensure proper functioning of the de-watering system through the period of extended operation.
#M#Concrete; porous concrete#M#	Water – flowing under foundation	Reduction of foundation strength and cracking #*#due to differential settlement and erosion of porous concrete subfoundation	Chapter XI.S6, "Structures Monitoring" #*#If a de-watering system is relied upon for control of settlement, then the licensee is to ensure proper functioning of the de-watering system through the period of extended operation.
#M#Concrete; porous concrete#M#	Water – flowing under foundation	Reduction of foundation strength and cracking #*#due to differential settlement and erosion of porous concrete subfoundation	Chapter XI.S6, "Structures Monitoring" #*#If a de-watering system is relied upon for control of settlement, then the licensee is to ensure proper functioning of the de-watering system through the period of extended operation.
#M#Concrete; porous concrete#M#	Water – flowing under foundation	Reduction of foundation strength and cracking #*#due to differential settlement and erosion of porous concrete subfoundation	Chapter XI.S6, "Structures Monitoring" #*#If a de-watering system is relied upon for control of settlement, then the licensee is to ensure proper functioning of the de-watering system through the period of extended operation.
#M#Concrete; porous concrete#M#	Water – flowing under foundation	Reduction of foundation strength and cracking #*#due to differential settlement and erosion of porous concrete subfoundation	Chapter XI.S6, "Structures Monitoring" #*#If a de-watering system is relied upon for control of settlement, then the licensee is to ensure proper functioning of the de-watering system through the period of extended operation.
#M#Concrete; porous concrete#M#	Water – flowing under foundation	Reduction of foundation strength and cracking #*#due to differential settlement and erosion of porous concrete subfoundation	Chapter XI.S6, "Structures Monitoring" #*#If a de-watering system is relied upon for control of settlement, then the licensee is to ensure proper functioning of the de-watering system through the period of extended operation.

#M#Concrete; porous concrete#M#	Water – flowing under foundation	Reduction in foundation strength, cracking #*#due to differential settlement,erosion of porous concrete subfoundation	Chapter XI.S6, "Structures Monitoring" #*#If a de-watering system is relied upon for control of settlement, then the licensee is to ensure proper functioning of the de-watering system through the period of extended operation.
Concrete block	Air – outdoor	Loss of material (spalling, scaling) and cracking #*#due to freeze-thaw	Chapter XI.S5, "Masonry Walls"
#M#Lubrite; Fluorogold; Lubrofluor#M#	Air – indoor, uncontrolled	#M#Loss of mechanical function #*#due to corrosion, distortion, dirt, overload, wear#M#	#M#Chapter XI.S6, "Structures Monitoring"#M#
#M#Concrete# M#	Air – outdoor	Loss of material (spalling, scaling) and cracking #*#due to freeze-thaw	#M#Chapter XI.S7, "Regulatory Guide 1.127, Inspection of Water-Control Structures Associated with Nuclear Power Plants" or the FERC / US Army Corp of Engineers dam inspections and maintenance programs.#M#
#M#Concrete# M#	Water – flowing	#M#Increase in porosity and permeability; loss of strength #*#due to leaching of calcium hydroxide and carbonation#M#	#M#Chapter XI.S7, "Regulatory Guide 1.127, Inspection of Water-Control Structures Associated with Nuclear Power Plants" or the FERC / US Army Corp of Engineers dam inspections and maintenance programs.#M#
#M#Concrete# M#	#M#Air – indoor, uncontrolled or Air – outdoor or Ground water/soil#M#	Cracking; loss of bond; and loss of material (spalling, scaling) #*#due to corrosion of embedded steel	#M#Chapter XI.S7, "Regulatory Guide 1.127, Inspection of Water-Control Structures Associated with Nuclear Power Plants" or the FERC / US Army Corp of Engineers dam inspections and maintenance programs.#M#
Stainless steel	Air with borated water leakage	None	None
Stainless steel	Air with borated water leakage	None	None
Stainless steel	Air with borated water leakage	None	None

	A		
	Air with borated		
Stainless steel	water leakage	None	None
	Air with borated		
Stainless steel	water leakage	None	None
	Air with borated		
Stainless steel	water leakage	None	None
	A local the local stand		
	Air with borated		
Stainless steel	water leakage	None	None
#M#Low-alloy			
steel, actual			
measured yield			
strength ≥			
150 ksi (1,034	Air – indoor,	Cracking #*#due to	#M#Chapter XI.S3, "ASME Section XI,
MPa)#M#	uncontrolled	stress corrosion cracking	
Low-alloy steel,			
actual			
measured yield			
strength ≥			
-	Air indoor	Creating #*#due to	Chapter VI 52 "ASME Section VI
150 ksi (1,034	Air – indoor,	Cracking #*#due to	Chapter XI.S3, "ASME Section XI,
MPa)	uncontrolled	stress corrosion cracking	Subsection IWF"
Low-alloy steel,			
actual			
measured yield			
strength ≥			
150 ksi (1,034	Air – indoor,	Cracking #*#due to	Chapter XI.S3, "ASME Section XI,
MPa)	uncontrolled	stress corrosion cracking	Subsection IWF"
		Reduction in concrete	
		anchor capacity #*#due	
		to local concrete	
		degradation/ service-	
	Air – indoor,	induced cracking or	
#M#Concrete;		other concrete aging	
			Chapter XI S6 "Structures Menitories"
grout#M#	– outdoor	mechanisms	Chapter XI.S6, "Structures Monitoring"

#M#Concrete; grout#M#	Air – indoor, uncontrolled or Air – outdoor	Reduction in concrete anchor capacity #*#due to local concrete degradation/ service- induced cracking or other concrete aging mechanisms	Chapter XI.S6, "Structures Monitoring"
#M#Concrete; grout#M#	Air – indoor, uncontrolled or Air – outdoor	Reduction in concrete anchor capacity #*#due to local concrete degradation/ service- induced cracking or other concrete aging mechanisms	Chapter XI.S6, "Structures Monitoring"
#M#Concrete; grout#M#	Air – indoor, uncontrolled or Air – outdoor	Reduction in concrete anchor capacity #*#due to local concrete degradation/ service- induced cracking or other concrete aging mechanisms	Chapter XI.S6, "Structures Monitoring"
#M#Concrete; grout#M#		Reduction in concrete anchor capacity #*#due to local concrete degradation/ service- induced cracking or other concrete aging mechanisms	Chapter XI.S6, "Structures Monitoring"
#M#Concrete; grout#M#	Air – indoor,	Reduction in concrete anchor capacity #*#due to local concrete degradation/ service- induced cracking or other concrete aging mechanisms	Chapter XI.S6, "Structures Monitoring"
#M#Concrete; grout#M#	Air – indoor, uncontrolled or Air – outdoor	Reduction in concrete anchor capacity #*#due to local concrete degradation/ service- induced cracking or other concrete aging mechanisms	Chapter XI.S6, "Structures Monitoring"

Steel - outdo Air - in uncontristic Steel - outdo Mir - in uncontristic Steel - outdo #M#Lubrite®; graphitic tool steel; Air - in Fluorogold; uncontristic Lubrofluor#M# - outdo #M#Lubrite®; graphitic tool steel; Air - in #M#Lubrite®; graphitic tool steel; Air - in	door, colled or Air corros door, colled or Air corros door, colled or Air corros door, colled or Air corros door, corros door, corros corros door, corros corros door, corros corros door, corros corros corros door, corros	sion of material #*#due neral and pitting sion of material #*#due neral and pitting sion of material #*#due neral and pitting	Chapter XI.S6, "Structures Monitoring" Chapter XI.S6, "Structures Monitoring" Chapter XI.S6, "Structures Monitoring"
uncontr Steel – outdo Air – in uncontr uncontr uncontr outdo Air – in uncontr	door, colled or Air corros door, colled or Air corros door, colled or Air corros door, colled or Air corros door, corros door, corros corros door, corros corros door, corros corros door, corros corros corros door, corros	neral and pitting sion of material #*#due neral and pitting sion of material #*#due neral and pitting sion	Chapter XI.S6, "Structures Monitoring" Chapter XI.S6, "Structures Monitoring"
steel – outdo Air – in uncontr Steel – outdo Non-metallic uncontr (e.g., rubber) – outdo #M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool graphitic tool incontr Lubrofluor#M# – outdo	door, colled or Air corros door, colled or Air corros door, colled or Air corros door, colled or Air corros door, corros door, corros corros door, corros corros door, corros corros door, corros corros corros door, corros	neral and pitting sion of material #*#due neral and pitting sion of material #*#due neral and pitting sion	Chapter XI.S6, "Structures Monitoring" Chapter XI.S6, "Structures Monitoring"
Steel – outdo Air – in uncontri Steel – outdo Mir – in uncontri Uncontri – outdo Mar – in uncontri Uncontri – outdo M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontri Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontri Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontri Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool graphitic tool japhitic tool graphitic tool jap	door, Loss of corros of corros door, Loss of corros door, Reduc	sion of material #*#due neral and pitting sion of material #*#due neral and pitting sion of material #*#due neral and pitting	Chapter XI.S6, "Structures Monitoring" Chapter XI.S6, "Structures Monitoring"
Air – in Steel Air – outdo Air – in uncontr Steel – outdo Mir – in uncontr (e.g., rubber) – outdo #M#Lubrite®; graphitic tool steel; Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool steel; Fluorogold; uncontr Fluorogold; uncontr Fluorogold; uncontr Fluorogold; uncontr graphitic tool steel; Air – in Fluorogold; uncontr uncontr	door, Loss of corros or Loss of corros door, Loss of corros or corros door, Loss of corros door, Loss of corros door, Loss of corros rolled or Air to ger corros Reduc	of material #*#due neral and pitting sion of material #*#due neral and pitting sion of material #*#due neral and pitting	Chapter XI.S6, "Structures Monitoring" Chapter XI.S6, "Structures Monitoring"
Steel – outdo Air – in uncontr Steel – outdo Mir – in uncontr Uncontr – outdo Martin – in uncontr Uncontr – outdo #M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool	door, or Loss or corros door, colled or Air oor corros door, corros door, corros door, corros Reduc	neral and pitting sion of material #*#due neral and pitting sion of material #*#due neral and pitting	Chapter XI.S6, "Structures Monitoring"
Steel – outdo Air – in uncontr Steel – outdo Mir – in uncontr Uncontr – outdo Martin – in uncontr Uncontr – outdo #M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool	door, or Loss or corros door, colled or Air oor corros door, corros door, corros door, corros Reduc	neral and pitting sion of material #*#due neral and pitting sion of material #*#due neral and pitting	Chapter XI.S6, "Structures Monitoring"
Steel – outdo Air – in uncontr Steel – outdo Mir – in uncontr Uncontr – outdo Martin – in uncontr Uncontr – outdo #M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool	door, or Loss or corros door, colled or Air oor corros door, corros door, corros door, corros Reduc	neral and pitting sion of material #*#due neral and pitting sion of material #*#due neral and pitting	Chapter XI.S6, "Structures Monitoring"
Steel – outdo Air – in uncontri Steel – outdo Mair – in uncontri Uncontri – outdo #M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontri Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontri Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontri Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool graphitic tool steel; Graphitic tool and	door, Loss of corros rolled or Air to ger corros door, Loss of corros rolled or Air to ger corros Reduc	sion of material #*#due neral and pitting sion of material #*#due neral and pitting	Chapter XI.S6, "Structures Monitoring"
Air – in Steel – outdo Air – in uncontr Steel – outdo Air – in uncontr Steel – outdo Air – in uncontr (e.g., rubber) – outdo #M#Lubrite®; graphitic tool steel; Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool graphitic tool	door, Loss rolled or Air to ger oor corros door, Loss rolled or Air to ger oor corros Redu	of material #*#due neral and pitting sion of material #*#due neral and pitting	Chapter XI.S6, "Structures Monitoring"
Steel – outdo Steel – outdo Air – in uncontr uncontr – outdo Steel – outdo Non-metallic uncontr (e.g., rubber) – outdo #M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool graphitic tool jar	door, colled or Air door, colled or Air corros Reduce	neral and pitting sion of material #*#due neral and pitting	
Steel – outdo Steel – outdo Air – in uncontr uncontr – outdo Steel – outdo Non-metallic uncontr (e.g., rubber) – outdo #M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool graphitic tool jar	door, colled or Air door, colled or Air corros Reduce	neral and pitting sion of material #*#due neral and pitting	
Steel – outdo Steel – outdo Air – in uncontr uncontr – outdo Steel – outdo Non-metallic uncontr (e.g., rubber) – outdo #M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool graphitic tool jar	door, colled or Air door, colled or Air corros Reduce	neral and pitting sion of material #*#due neral and pitting	
Steel – outdo Air – inuuncontr Steel – outdo Steel – outdo Air – inuuncontr Steel – outdo Mir – inuuncontr (e.g., rubber) – outdo #M#Lubrite®; graphitic tool steel; Air – inu Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool steel; Air – inu Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool steel; Air – inu Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool graphitic tool steel;	door, Loss of corros	sion of material #*#due neral and pitting	
Steel – outdo Air – inuuncontr Steel – outdo Steel – outdo Air – inuuncontr Steel – outdo Mir – inuuncontr (e.g., rubber) – outdo #M#Lubrite®; graphitic tool steel; Air – inu Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool steel; Air – inu Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool steel; Air – inu Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool graphitic tool steel;	door, Loss of corros	sion of material #*#due neral and pitting	
Air – in Steel – outdo Air – in Non-metallic uncontri (e.g., rubber) – outdo #M#Lubrite®; graphitic tool steel; Fluorogold; Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontri Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontri Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontri Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool	door, Loss rolled or Air to ger oor corros Redu	of material #*#due neral and pitting	
Steeluncontr – outdoSteel– outdoAir – in uncontr (e.g., rubber)– outdo#M#Lubrite®; graphitic tool– outdosteel;Air – in Fluorogold;uncontr uncontr Lubrofluor#M# – outdo#M#Lubrite®; graphitic tool– in steel;Fluorogold;uncontr uncontr Lubrofluor#M# – outdo#M#Lubrite®; graphitic tool– in outdofluorogold;uncontr uncontr uncontr Lubrofluor#M# – outdo#M#Lubrite®; graphitic tool– in uncontr	rolled or Air to ger por corros Redu	neral and pitting	
Steeluncontr – outdoSteel– outdoAir – in uncontr (e.g., rubber)– outdo#M#Lubrite®; graphitic tool– outdosteel;Air – in Fluorogold;uncontr uncontr Lubrofluor#M# – outdo#M#Lubrite®; graphitic tool– in steel;Fluorogold;uncontr uncontr Lubrofluor#M# – outdo#M#Lubrite®; graphitic tool– in outdofluorogold;uncontr uncontr uncontr Lubrofluor#M# – outdo#M#Lubrite®; graphitic tool– in uncontr	rolled or Air to ger por corros Redu	neral and pitting	
Steeluncontr – outdoSteel– outdoAir – in uncontr (e.g., rubber)– outdo#M#Lubrite®; graphitic tool– outdosteel;Air – in Fluorogold;uncontr uncontr Lubrofluor#M# – outdo#M#Lubrite®; graphitic tool– in steel;Fluorogold;uncontr uncontr Lubrofluor#M# – outdo#M#Lubrite®; graphitic tool– in outdofluorogold;uncontr uncontr uncontr Lubrofluor#M# – outdo#M#Lubrite®; graphitic tool– in uncontr	rolled or Air to ger por corros Redu	neral and pitting	
Steel – outdo Air – in Air – in Non-metallic uncontrive (e.g., rubber) – outdo #M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontrive Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontrive Lubrofluor#M# – outdo Fluorogold; uncontrive Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontrive Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool	oor corros Redu		
Air – in Non-metallic uncontr (e.g., rubber) – outdo #M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool	Redu	51011	Chapter XI.S6, "Structures Monitoring"
Non-metallicuncontr(e.g., rubber)– outdo#M#Lubrite®;graphitic toolsteel;Air – inFluorogold;uncontrLubrofluor#M#– outdo#M#Lubrite®;graphitic toolsteel;Air – inFluorogold;uncontrLubrofluor#M#– outdo#M#Lubrite®;graphitic toolsteel;Air – inFluorogold;uncontrLubrofluor#M#– outdo#M#Lubrite®;graphitic tool			
Non-metallicuncontr(e.g., rubber)– outdo#M#Lubrite®;graphitic toolsteel;Air – inFluorogold;uncontrLubrofluor#M#– outdo#M#Lubrite®;graphitic toolsteel;Air – inFluorogold;uncontrLubrofluor#M#– outdo#M#Lubrite®;graphitic toolsteel;Air – inFluorogold;uncontrLubrofluor#M#– outdo#M#Lubrite®;graphitic tool		ation or loss of	
Non-metallicuncontr(e.g., rubber)– outdo#M#Lubrite®;graphitic toolsteel;Air – inFluorogold;uncontrLubrofluor#M#– outdo#M#Lubrite®;graphitic toolsteel;Air – inFluorogold;uncontrLubrofluor#M#– outdo#M#Lubrite®;graphitic toolsteel;Air – inFluorogold;uncontrLubrofluor#M#– outdo#M#Lubrite®;graphitic tool	in a lat	ction or loss of	
Non-metallicuncontr(e.g., rubber)– outdo#M#Lubrite®;graphitic toolsteel;Air – inFluorogold;uncontrLubrofluor#M#– outdo#M#Lubrite®;graphitic toolsteel;Air – inFluorogold;uncontrLubrofluor#M#– outdo#M#Lubrite®;graphitic toolsteel;Air – inFluorogold;uncontrLubrofluor#M#– outdo#M#Lubrite®;graphitic tool		ion function #*#due	
Non-metallicuncontr(e.g., rubber)– outdo#M#Lubrite®;graphitic toolsteel;Air – inFluorogold;uncontrLubrofluor#M#– outdo#M#Lubrite®;graphitic toolsteel;Air – inFluorogold;uncontrLubrofluor#M#– outdo#M#Lubrite®;graphitic toolsteel;Air – inFluorogold;uncontrLubrofluor#M#– outdo#M#Lubrite®;graphitic tool		liation hardening,	
(e.g., rubber)– outdo#M#Lubrite®; graphitic toolsteel;Air – indFluorogold;uncontriLubrofluor#M#– outdo#M#Lubrite®; graphitic toolsteel;Air – indFluorogold;uncontriLubrofluor#M#– outdo#M#Lubrite®; graphitic toolsteel;Air – indFluorogold;uncontriLubrofluor#M#– outdo#M#Lubrite®; graphitic toolgraphitic tool		erature, humidity,	
#M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; uncontr Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool	rolled or Air sustai	•	Chapter XI.S3, "ASME Section XI,
graphitic tool steel; Air – in Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool			Subsection IWF"
steel; Air – in Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool	#M#L	oss of mechanical	
Fluorogold;uncontrLubrofluor#M#– outdo#M#Lubrite®;graphitic toolsteel;Air – inFluorogold;uncontrLubrofluor#M#– outdo#M#Lubrite®;graphitic tool	function	on #*#due to	
Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool	door, corros	sion, distortion, dirt,	
#M#Lubrite®; graphitic tool steel; Air – in Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool	olled or Air debris	s, overload,	Chapter XI.S3, "ASME Section XI,
graphitic tool steel; Air – in Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool	or wear#	#M#	Subsection IWF"
steel; Air – in Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool	#M#L	oss of mechanical	
steel; Air – in Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool	functi	on #*#due to	
Fluorogold; uncontr Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool		sion, distortion, dirt,	
Lubrofluor#M# – outdo #M#Lubrite®; graphitic tool	olled or Air debris		Chapter XI.S3, "ASME Section XI,
#M#Lubrite®; graphitic tool			Subsection IWF"
graphitic tool		oss of mechanical	
		ion #*#due to	
		sion, distortion, dirt,	
	rolled or Air debris		Chapter XI.S3, "ASME Section XI,
Lubrofluor#M# – outdo			Subsection IWF"
		oss of mechanical	
#M#Lubrite®;			
graphitic tool		on #*#due to	
steel;		sion, distortion, dirt,	
Fluorogold; Air – in		s, overload,	
Lubrofluor#M# uncontr			Chapter XI.S6, "Structures Monitoring"
	rolled wear#	oss of mechanical	
graphitic tool	rolled wear# #M#L		
steel;	rolled wear# #M#L function	on #*#due to	
The second secon	rolled wear# #M#L function	ion #*#due to sion, distortion, dirt,	
Fluorogold; Air – in	rolled wear# #M#L function corros		
#M#Lubrite®; graphitic tool steel;		#M# .oss of mechanical	Chapter XI.S6, "Structures Monitoring"

#M#Lubrita®:		#M#Loss of mechanical	
#M#Lubrite®;			
graphitic tool		function #*#due to	
steel;		corrosion, distortion, dirt,	
Fluorogold;	Ala sutstand	debris, overload,	
	Air – outdoor	wear#M#	Chapter XI.S6, "Structures Monitoring"
#M#Lubrite®;		#M#Loss of mechanical	
graphitic tool		function #*#due to	
steel;		corrosion, distortion, dirt,	
Fluorogold;		debris, overload,	
Lubrofluor#M#	Air – outdoor	wear#M#	Chapter XI.S6, "Structures Monitoring"
Galvanized			
steel;		Loss of material #*#due	
aluminum;		to pitting and crevice	
stainless steel	Air – outdoor	corrosion	Chapter VI SG "Structures Manitoring"
stainiess steel	All – Ouldool	CONTOSION	Chapter XI.S6, "Structures Monitoring"
Galvanized			
steel;		Loss of material #*#due	
aluminum;		to pitting and crevice	
· ·	Air – outdoor	corrosion	Chapter XI.S6, "Structures Monitoring"
		Increase in porosity and permeability; loss of strength #*#due to leaching of calcium	#M#Further evaluation is required to determine if a plant-specific aging management program is needed to manage increase in porosity, and permeability due to leaching of calcium hydroxide and carbonation of concrete in Inaccessible Areas. A plant-specific aging management program is not required if (1) There is evidence in the accessible areas that the flowing water has not caused leaching and carbonation, or (2) Evaluation determined that the observed leaching of calcium hydroxide and carbonation in accessible areas has no impact on the
#M#Concrete#		hydroxide and	intended function of the concrete
M#	Water – flowing	carbonation	structure.#M#

#M#Concrete# M#	Water – flowing	Increase in porosity and permeability; loss of strength #*#due to leaching of calcium hydroxide and carbonation	#M#Further evaluation is required to determine if a plant-specific aging management program is needed to manage increase in porosity, and permeability due to leaching of calcium hydroxide and carbonation of concrete in Inaccessible Areas. A plant-specific aging management program is not required if (1) There is evidence in the accessible areas that the flowing water has not caused leaching and carbonation, or (2) Evaluation determined that the observed leaching of calcium hydroxide and carbonation in accessible areas has no impact on the intended function of the concrete structure.#M#
#M#Concrete# M#	Water – flowing	Increase in porosity and permeability; loss of strength #*#due to leaching of calcium hydroxide and carbonation	#M#Further evaluation is required to determine if a plant-specific aging management program is needed to manage increase in porosity, and permeability due to leaching of calcium hydroxide and carbonation of concrete in Inaccessible Areas. A plant-specific aging management program is not required if (1) There is evidence in the accessible areas that the flowing water has not caused leaching and carbonation, or (2) Evaluation determined that the observed leaching of calcium hydroxide and carbonation in accessible areas has no impact on the intended function of the concrete structure.#M#

#M#Concrete# M#	Water – flowing	Increase in porosity and permeability; loss of strength #*#due to leaching of calcium hydroxide and carbonation	#M#Further evaluation is required to determine if a plant-specific aging management program is needed to manage increase in porosity, and permeability due to leaching of calcium hydroxide and carbonation of concrete in Inaccessible Areas. A plant-specific aging management program is not required if (1) There is evidence in the accessible areas that the flowing water has not caused leaching and carbonation, or (2) Evaluation determined that the observed leaching of calcium hydroxide and carbonation in accessible areas has no impact on the intended function of the concrete structure.#M#
#M#Concrete# M#	Water – flowing	Increase in porosity and permeability; loss of strength #*#due to leaching of calcium hydroxide and carbonation	#M#Further evaluation is required to determine if a plant-specific aging management program is needed to manage increase in porosity, and permeability due to leaching of calcium hydroxide and carbonation of concrete in Inaccessible Areas. A plant-specific aging management program is not required if (1) There is evidence in the accessible areas that the flowing water has not caused leaching and carbonation, or (2) Evaluation determined that the observed leaching of calcium hydroxide and carbonation in accessible areas has no impact on the intended function of the concrete structure.#M#

#M#Concrete# M#	Water – flowing	Increase in porosity and permeability; loss of strength #*#due to leaching of calcium hydroxide and carbonation	#M#Further evaluation is required to determine if a plant-specific aging management program is needed to manage increase in porosity, and permeability due to leaching of calcium hydroxide and carbonation of concrete in Inaccessible Areas. A plant-specific aging management program is not required if (1) There is evidence in the accessible areas that the flowing water has not caused leaching and carbonation, or (2) Evaluation determined that the observed leaching of calcium hydroxide and carbonation in accessible areas has no impact on the intended function of the concrete structure.#M#
#M#Concrete# M#	Water – flowing	Increase in porosity and permeability; loss of strength #*#due to leaching of calcium hydroxide and carbonation Loss of sealing #*#due	#M#Further evaluation is required to determine if a plant-specific aging management program is needed to manage increase in porosity, and permeability due to leaching of calcium hydroxide and carbonation of concrete in Inaccessible Areas. A plant-specific aging management program is not required if (1) There is evidence in the accessible areas that the flowing water has not caused leaching and carbonation, or (2) Evaluation determined that the observed leaching of calcium hydroxide and carbonation in accessible areas has no impact on the intended function of the concrete structure.#M#
Elastomers (such as EPDM rubber)	Various	to deterioration of seals, gaskets, and moisture barriers (caulking, flashing, and other sealants)	Chapter XI.S6, "Structures Monitoring"
Aluminum; galvanized steel; stainless steel	Air – indoor, uncontrolled	None	None
Aluminum; galvanized steel; stainless steel	Air – indoor, uncontrolled	None	None

Aluminum; galvanized steel; stainless steel	Air – indoor, uncontrolled	None	None
Aluminum; galvanized steel; stainless steel	Air – indoor, uncontrolled	None	None
Aluminum; galvanized steel; stainless steel	Air – indoor, uncontrolled	None	None
Aluminum; galvanized steel; stainless steel	Air – indoor, uncontrolled	None	None
Aluminum; galvanized steel; stainless steel	Air – indoor, uncontrolled	None	None
Steel (with or without nickel- alloy or stainless steel cladding); stainless steel; nickel alloy	Reactor coolant	Cumulative fatigue damage #*#due to fatigue	Fatigue is a TLAA evaluated for the period of extended operation, and for Class 1 components environmental effects on fatigue are to be addressed. (See SRP, Sec 4.3 "Metal Fatigue," for acceptable methods to comply with 10 CFR 54.21(c)(1))
			Monitoring and control of primary water chemistry in accordance with EPRI 1014986 minimize the potential for SCC. Material selection according to NUREG-0313, Rev. 2, guidelines of ≤0.035% C and ≥7.5% ferrite reduces susceptibility to SCC. #*#For CASS components that do not meet either one of the above, a plant-specific aging management program is evaluated #*#The program is to include (a) adequate inspection methods to ensure detection of cracks, and (b) flaw evaluation methodology for CASS
Cast austenitic stainless steel	Reactor coolant	Cracking #*#due to stress corrosion cracking	components that are susceptible to thermal aging embrittlement.

Cast austenitic stainless steel	Reactor coolant >250°C (>482°F)	Loss of fracture toughness #*#due to thermal aging embrittlement	Chapter XI.M1, "ASME Section XI Inservice Inspection, Subsections IWB, IWC, and IWD" for Class 1 components #*#For pump casings and valve bodies, screening for susceptibility to thermal aging is not necessary. The ASME Section XI inspection requirements are sufficient for managing the effects of loss of fracture toughness due to thermal aging embrittlement of CASS pump casings and valve bodies.
Cast austenitic stainless steel	Reactor coolant >250°C (>482°F)	Loss of fracture toughness #*#due to thermal aging embrittlement	Chapter XI.M1, "ASME Section XI Inservice Inspection, Subsections IWB, IWC, and IWD" for Class 1 components #*#For pump casings and valve bodies, screening for susceptibility to thermal aging is not necessary. The ASME Section XI inspection requirements are sufficient for managing the effects of loss of fracture toughness due to thermal aging embrittlement of CASS pump casings and valve bodies.
Steel (with stainless steel cladding); stainless steel	Reactor coolant	Cracking #*#due to stress corrosion cracking	Chapter XI.M1, "ASME Section XI Inservice Inspection, Subsections IWB, IWC, and IWD" for Class 1 components, and #*#Chapter XI.M2,
Steel	Air with reactor coolant leakage	Cracking #*#due to stress corrosion cracking	Chapter XI.M18, "Bolting Integrity"
Stainless steel; nickel alloy	Reactor coolant and neutron flux	Cracking #*#due to stress corrosion cracking, intergranular stress corrosion cracking, irradiation- assisted stress corrosion cracking	Chapter XI.M9, "BWR Vessel Internals" for jet pump assembly, and #*#Chapter XI.M2, "Water Chemistry"
Stainless steel	Reactor coolant		Chapter XI.M9, "BWR Vessel Internals" for lower plenum, and #*#Chapter XI.M2, "Water Chemistry"
	Reactor coolant and neutron flux	Cracking #*#due to stress corrosion cracking, intergranular stress corrosion cracking, irradiation- assisted stress corrosion cracking	Chapter XI.M9, "BWR Vessel Internals" for lower plenum, and #*#Chapter XI.M2, "Water Chemistry"

High-strength,			
low-alloy steel;	Air with reactor	Cracking #*#due to	
stainless steel	coolant leakage		Chapter XI.M18, "Bolting Integrity"
		Loss of preload #*#due	
		to thermal effects,	
Low-alloy steel,	Air (with reactor	gasket creep, and self-	
stainless steel	coolant leakage)	loosening	Chapter XI.M18, "Bolting Integrity"
		looooning	
Steel (with stainless steel or nickel-alloy cladding)	Treated borated water	Cumulative fatigue damage #*#due to fatigue	Fatigue is a time-limited aging analysis (TLAA) to be evaluated for the period of extended operation. See the SRP, Section 4.3 "Metal Fatigue," for acceptable methods for meeting the requirements of 10 CFR 54.21(c)(1).
Stainless steel	Reactor coolant	Cracking #*#due to stress corrosion cracking, intergranular stress corrosion cracking	Chapter XI.M1, "ASME Section XI Inservice Inspection, Subsections IWB, IWC, and IWD" for Class 1 components, and #*#Chapter XI.M2, "Water Chemistry" #*#The AMP in Chapter XI.M1 is to be augmented to detect cracking due to stress corrosion cracking and verification of the program's effectiveness is necessary to ensure that significant degradation is not occurring and the component intended function will be maintained during the extended period of operation. An acceptable verification program includes temperature and radioactivity monitoring of the shell side water, and eddy current testing of tubes.
Steel	Air with borated water leakage	Loss of material #*#due to boric acid corrosion	Chapter XI.M10, "Boric Acid Corrosion"
	Air with borated	Loss of material #*#due	
Steel	water leakage	to boric acid corrosion	Chapter XI.M10, "Boric Acid Corrosion"
Steel	Air with borated water leakage	Loss of material #*#due to boric acid corrosion	Chapter XI.M10, "Boric Acid Corrosion"
Otest	Air with borated	Loss of material #*#due	Obersten VI M40 "Designation of the Second Second
Steel	water leakage	to boric acid corrosion	Chapter XI.M10, "Boric Acid Corrosion"
Steel; stainless steel	System temperature up to 340°C (644°F)	Cumulative fatigue damage #*#due to fatigue	Fatigue is a time-limited aging analysis (TLAA) to be evaluated for the period of extended operation. See the SRP, Section 4.3 "Metal Fatigue," for acceptable methods for meeting the requirements of 10 CFR 54.21(c)(1).

Steel; stainless steel	Air with metal temperature up to 288°C (550°F)	Cracking #*#due to cyclic loading	Chapter XI.M1, "ASME Section XI Inservice Inspection, Subsections IWB, IWC, and IWD" for Class 1 components
Stainless steel	Reactor coolant	Cracking #*#due to stress corrosion cracking, intergranular stress corrosion cracking	Chapter XI.M7, "BWR Stress Corrosion Cracking," and #*#Chapter XI.M2, "Water Chemistry"
Nickel alloy	Reactor coolant	Cracking #*#due to stress corrosion cracking, intergranular stress corrosion cracking	Chapter XI.M7, "BWR Stress Corrosion Cracking," and #*#Chapter XI.M2, "Water Chemistry" Chapter XI.M1, "ASME Section XI
Stainless steel	Reactor coolant	Cracking #*#due to stress corrosion cracking	Inservice Inspection, Subsections IWB, IWC, and IWD" for Class 1 components, and #*#Chapter XI.M2,
Steel (with or without nickel- alloy or stainless steel cladding); stainless steel; nickel alloy	Reactor coolant	Cumulative fatigue damage #*#due to fatigue	Fatigue is a TLAA evaluated for the period of extended operation, and for Class 1 components environmental effects on fatigue are to be addressed. (See SRP, Sec 4.3 "Metal Fatigue," for acceptable methods to comply with 10 CFR 54.21(c)(1))
Steel (with or without nickel- alloy or stainless steel cladding); stainless steel; nickel alloy	Reactor coolant	Cumulative fatigue damage #*#due to fatigue	Fatigue is a TLAA evaluated for the period of extended operation, and for Class 1 components environmental effects on fatigue are to be addressed. (See SRP, Sec 4.3 "Metal Fatigue," for acceptable methods to comply with 10 CFR 54.21(c)(1))
Steel (with or without nickel- alloy or stainless steel cladding); stainless steel; nickel alloy	Reactor coolant	Cumulative fatigue damage #*#due to fatigue	Fatigue is a TLAA evaluated for the period of extended operation, and for Class 1 components environmental effects on fatigue are to be addressed. (See SRP, Sec 4.3 "Metal Fatigue," for acceptable methods to comply with 10 CFR 54.21(c)(1))
Steel (with or without nickel- alloy or stainless steel cladding); stainless steel; nickel alloy	Reactor coolant	Cumulative fatigue damage #*#due to fatigue	Fatigue is a TLAA evaluated for the period of extended operation, and for Class 1 components environmental effects on fatigue are to be addressed. (See SRP, Sec 4.3 "Metal Fatigue," for acceptable methods to comply with 10 CFR 54.21(c)(1))

Steel (with or without nickel- alloy or stainless steel cladding); stainless steel; nickel alloy	Reactor coolant	Cumulative fatigue damage #*#due to fatigue	Fatigue is a TLAA evaluated for the period of extended operation, and for Class 1 components environmental effects on fatigue are to be addressed. (See SRP, Sec 4.3 "Metal Fatigue," for acceptable methods to comply with 10 CFR 54.21(c)(1))
, in the second s		Ŭ	
Steel; stainless		Cracking #*#due to	Chapter XI.M1, "ASME Section XI Inservice Inspection, Subsections IWB, IWC, and IWD" for Class 1 components #*#The AMP in Chapter XI.M1 is to be augmented to detect cracking due to cyclic loading and verification of the program's effectiveness is necessary to ensure that significant degradation is not occurring and the component intended function will be maintained during the extended period of operation. An acceptable verification program includes temperature and radioactivity monitoring of the shell side water, and
steel	Reactor coolant	cyclic loading	eddy current testing of tubes.
Nickel alloy	Secondary feedwater or steam	Changes in dimension ("denting") #*#due to corrosion of carbon steel tube support plate	Chapter XI.M19, "Steam Generators," and #*#Chapter XI.M2, "Water Chemistry"
		Wall thinning #*#due to flow-accelerated	Chapter XI.M17, "Flow-Accelerated
Steel	Reactor coolant	corrosion	Corrosion"
Steel (with stainless steel or nickel-alloy cladding); stainless steel	Reactor coolant	Cracking #*#due to stress corrosion cracking, primary water stress corrosion cracking	Chapter XI.M1, "ASME Section XI Inservice Inspection, Subsections IWB, IWC, and IWD" for Class 1 components, and #*#Chapter XI.M2, "Water Chemistry"
Steel (with			Chapter XI.M1, "ASME Section XI Inservice Inspection, Subsections IWB,
stainless steel			IWC, and IWD" for Class 1
cladding); stainless steel	Reactor coolant	Cracking #*#due to stress corrosion cracking	components, and #*#Chapter XI.M2, "Water Chemistry"
Stall ness steel	Reactor coolant Air with leaking	Suess convision cracking	
	secondary-side water and/or	Loss of material #*#due	Chapter XI.M1, "ASME Section XI Inservice Inspection, Subsections IWB,
Steel	steam	to erosion	IWC, and IWD" for Class 2 components

Steel	Secondary feedwater or steam	Cumulative fatigue damage #*#due to fatigue	Fatigue is a time-limited aging analysis (TLAA) to be evaluated for the period of extended operation. See the SRP, Section 4.3 "Metal Fatigue," for acceptable methods for meeting the requirements of 10 CFR 54.21(c)(1).
Steel	Secondary feedwater or steam	Cumulative fatigue damage #*#due to fatigue	Fatigue is a time-limited aging analysis (TLAA) to be evaluated for the period of extended operation. See the SRP, Section 4.3 "Metal Fatigue," for acceptable methods for meeting the requirements of 10 CFR 54.21(c)(1).
Nickel alloy	Secondary feedwater or steam	Cracking #*#due to stress corrosion cracking	Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M32, "One-Time Inspection," or #*#Chapter XI.M1, "ASME Section XI Inservice Inspection, Subsections IWB, IWC, and IWD."
Steel	Secondary feedwater or steam	Wall thinning #*#due to flow-accelerated corrosion	Chapter XI.M17, "Flow-Accelerated Corrosion"
Steel	Secondary feedwater or steam	Wall thinning #*#due to flow-accelerated corrosion	Chapter XI.M17, "Flow-Accelerated Corrosion"
Steel	Secondary feedwater	Loss of material #*#due to erosion	A plant-specific aging management program is to be evaluated
Nickel alloy	Reactor coolant	Cracking #*#due to primary water stress corrosion cracking Cracking #*#due to	Chapter XI.M19, "Steam Generators," and #*#Chapter XI.M2, "Water Chemistry" Chapter XI.M19, "Steam Generators,"
Nickel alloy	Reactor coolant Secondary feedwater or	primary water stress corrosion cracking Ligament cracking #*#due to corrosion	and #*#Chapter XI.M2, "Water Chemistry" Chapter XI.M19, "Steam Generators," and #*#Chapter XI.M2, "Water Chemistry"
Steel Steel	steam Secondary feedwater or steam	#*#due to corrosion Ligament cracking #*#due to corrosion	Chemistry" Chapter XI.M19, "Steam Generators," and #*#Chapter XI.M2, "Water Chemistry"

Nickel alloy	Secondary feedwater or steam	Changes in dimension ("denting") #*#due to corrosion of carbon steel tube support plate Cracking #*#due to	Chapter XI.M19, "Steam Generators," and #*#Chapter XI.M2, "Water Chemistry" Chapter XI.M19, "Steam Generators,"
Nickel alloy	Reactor coolant	primary water stress corrosion cracking Cracking #*#due to	and #*#Chapter XI.M2, "Water Chemistry" Chapter XI.M19, "Steam Generators,"
Nickel alloy	Reactor coolant	primary water stress corrosion cracking	and #*#Chapter XI.M2, "Water Chemistry"
Nickel alloy	Reactor coolant and secondary feedwater/steam	Cumulative fatigue damage #*#due to fatigue	Fatigue is a time-limited aging analysis (TLAA) to be evaluated for the period of extended operation. See the SRP, Section 4.3 "Metal Fatigue," for acceptable methods for meeting the requirements of 10 CFR 54.21(c)(1).
	Reactor coolant and secondary	Cumulative fatigue damage #*#due to	Fatigue is a time-limited aging analysis (TLAA) to be evaluated for the period of extended operation. See the SRP, Section 4.3 "Metal Fatigue," for acceptable methods for meeting the
Nickel alloy	feedwater/steam	fatigue	requirements of 10 CFR 54.21(c)(1).
	Secondary	Cracking #*#due to outer	Chapter XI.M19, "Steam Generators,"
	feedwater or	diameter stress	and #*#Chapter XI.M2, "Water
Nickel alloy	steam	corrosion cracking	Chemistry"
	Secondary	-	Chapter XI.M19, "Steam Generators,"
Niekol allov	feedwater or steam	diameter stress	and #*#Chapter XI.M2, "Water
Nickel alloy	Secondary	corrosion cracking	Chemistry" Chapter XI.M19, "Steam Generators,"
	feedwater or	Cracking #*#due to	and #*#Chapter XI.M2, "Water
Nickel alloy	steam	intergranular attack	Chemistry"
Nickel alloy	Secondary feedwater or steam	Cracking #*#due to intergranular attack	Chapter XI.M19, "Steam Generators," and #*#Chapter XI.M2, "Water Chemistry"
Nickel alloy	Secondary feedwater or steam	Loss of material #*#due to wastage and pitting corrosion	Chapter XI.M19, "Steam Generators," and #*#Chapter XI.M2, "Water Chemistry"
Cast austenitic stainless steel	Reactor coolant >250°C (>482°F)	Loss of fracture toughness #*#due to thermal aging embrittlement	Chapter XI.M12, "Thermal Aging Embrittlement of Cast Austenitic Stainless Steel (CASS)"
Cast austenitic stainless steel	Reactor coolant >250°C (>482°F)	Loss of fracture toughness #*#due to thermal aging embrittlement	Chapter XI.M12, "Thermal Aging Embrittlement of Cast Austenitic Stainless Steel (CASS)"

Stainless steel; nickel alloy	Reactor coolant	Cumulative fatigue damage #*#due to fatigue	Fatigue is a time-limited aging analysis (TLAA) to be evaluated for the period of extended operation. See the SRP, Section 4.3 "Metal Fatigue," for acceptable methods for meeting the requirements of 10 CFR 54.21(c)(1).
Stainless steel; nickel alloy	Reactor coolant and neutron flux	Cumulative fatigue damage #*#due to fatigue	Fatigue is a time-limited aging analysis (TLAA) to be evaluated for the period of extended operation. See the SRP, Section 4.3 "Metal Fatigue," for acceptable methods for meeting the requirements of 10 CFR 54.21(c)(1).
Steel (with stainless steel cladding); stainless steel	Reactor coolant	Cracking #*#due to cyclic loading	Chapter XI.M1, "ASME Section XI Inservice Inspection, Subsections IWB, IWC, and IWD" for Class 1 components
Steel (with stainless steel or nickel-alloy cladding); stainless steel	Reactor coolant	Cracking #*#due to cyclic loading	Chapter XI.M1, "ASME Section XI Inservice Inspection, Subsections IWB, IWC, and IWD" for Class 1 components, and #*#Chapter XI.M2, "Water Chemistry" #*#Cracks in the pressurizer cladding could propagate from cyclic loading into the ferrite base metal and weld metal. However, because the weld metal between the surge nozzle and the vessel lower head is subjected to the maximum stress cycles and the area is periodically inspected as part of the ISI program, the existing AMP is adequate for managing the effect of pressurizer clad cracking.
Stainless steel; nickel alloy	Air with reactor coolant leakage (Internal); or reactor coolant	Cracking #*#due to stress corrosion cracking, intergranular	A plant-specific aging management program is to be evaluated because existing programs may not be capable of mitigating or detecting crack initiation and growth due to SCC in the vessel flange leak detection line

Steel (with or without stainless steel cladding)	Reactor coolant and neutron flux	Loss of fracture toughness #*#due to neutron irradiation embrittlement	Neutron irradiation embrittlement is a time-dependent aging mechanism evaluated for extended operation for all ferritic materials that have a neutron fluence >1E17 n/cm2 (E >1 MeV) at the end of the period of extended operation. Aspects may involve a TLAA. #*#In accordance with approved BWRVIP-74, the TLAA evaluates the impact of neutron embrittlement on: (a) adjusted reference temperature values used for calculation of the plant's pressure-temperature limits, (b) need for inservice inspection of circumferential welds, and (c) Charpy upper shelf energy or the equivalent margins analyses performed in accordance with 10 CFR Part 50, Appendix G. Additionally, the applicant is to monitor axial beltline weld embrittlement. One acceptable method is to determine that the mean RTNDT of the axial beltline welds at the end of the extended period of operation is less than the value specified by the staff in its March 7, 2000 letter (ADAMS ML031430372). See the Standard Review Plan, Section 4.2 "Reactor Vessel Neutron Embrittlement" for acceptable methods for meeting the requirements of 10 CFR 54.21(c).
ciadulity)			54.2 I(C).
Stainless steel; nickel alloy	Reactor coolant	Cracking #*#due to stress corrosion cracking, intergranular stress corrosion cracking	Chapter XI.M4, "BWR Vessel ID Attachment Welds," and #*#Chapter XI.M2, "Water Chemistry"
Steel (with or without stainless steel cladding)	Reactor coolant	Cracking #*#due to cyclic loading	Chapter XI.M5, "BWR Feedwater Nozzle"
Steel (with or without stainless steel cladding)	Reactor coolant	Cracking #*#due to cyclic loading	Chapter XI.M6, "BWR Control Rod Drive Return Line Nozzle"

Steel	Reactor coolant and neutron flux	Loss of fracture toughness #*#due to neutron irradiation embrittlement	Neutron irradiation embrittlement is a time-limited aging analysis (TLAA) to be evaluated for the period of extended operation for all ferritic materials that have a neutron fluence greater than 1E17 n/cm2 (E >1 MeV) at the end of the period of extended operation. In accordance with approved BWRVIP-74, the TLAA is to evaluate the impact of neutron embrittlement on: (a) the adjusted reference temperature values used for calculation of the plant's pressure-temperature limits, (b) the need for inservice inspection of circumferential welds, and (c) the Charpy upper shelf energy or the equivalent margins analyses performed in accordance with 10 CFR Part 50, Appendix G The applicant may choose to demonstrate that the materials of the nozzles are not controlling for the TLAA evaluations. See the Standard Review Plan, Section 4.2 "Reactor Vessel Neutron Embrittlement" for acceptable methods for meeting the requirements of 10 CFR 54.21(c).
Stainless steel; nickel alloy	Reactor coolant	Cracking #*#due to stress corrosion cracking, intergranular stress corrosion cracking	Chapter XI.M7, "BWR Stress Corrosion Cracking," and #*#Chapter XI.M2,
Steel	Air – indoor, uncontrolled	Cumulative fatigue damage #*#due to fatigue	Fatigue is a time-limited aging analysis (TLAA) to be evaluated for the period of extended operation. See the SRP, Section 4.3 "Metal Fatigue," for acceptable methods for meeting the requirements of 10 CFR 54.21(c)(1).
Steel	Air – indoor, uncontrolled	Cumulative fatigue damage #*#due to fatigue	Fatigue is a time-limited aging analysis (TLAA) to be evaluated for the period of extended operation. See the SRP, Section 4.3 "Metal Fatigue," for acceptable methods for meeting the requirements of 10 CFR 54.21(c)(1).

Stainless steel	Air with reactor coolant leakage (Internal); or reactor coolant	Cracking #*#due to stress corrosion cracking Loss of fracture	A plant-specific aging management program is to be evaluated because existing programs may not be capable of mitigating or detecting crack initiation and growth due to SCC in the vessel flange leak detection line
Cast austenitic stainless steel	Reactor coolant >250°C (>482°F)	toughness #*#due to thermal aging embrittlement	Chapter XI.M12, "Thermal Aging Embrittlement of Cast Austenitic Stainless Steel (CASS)"
Stainless steel	Air with reactor coolant leakage	Cracking #*#due to stress corrosion cracking	Chapter XI.M18, "Bolting Integrity"
Stainless steel	Air with reactor coolant leakage	Loss of material #*#due to wear	Chapter XI.M18, "Bolting Integrity"
Stainless steel	Air (with reactor coolant leakage)	Loss of preload #*#due to thermal effects, gasket creep, and self- loosening	Chapter XI.M18, "Bolting Integrity"
Steel (with		Loss of fracture	Neutron irradiation embrittlement is a TLAA evaluated for extended operation for all ferritic materials with a neutron fluence greater than 1E17 n/cm2 (E >1 MeV) at the end of the period of extended operation.#*#The TLAA is to evaluate the impact of neutron embrittlement on: (a) the RTPTS value based on the requirements in 10 CFR 50.61, (b) the adjusted reference temperature values used for calculation of the plant's pressure-temperature limits, and (c) the Charpy upper shelf energy or the equivalent margins analyses performed in accordance with 10 CFR Part 50, Appendix G requirements. The applicant may choose to demonstrate that the
Steel (with stainless steel or nickel-alloy	Reactor coolant	Loss of fracture toughness #*#due to neutron irradiation	choose to demonstrate that the materials in the inlet, outlet, and safety injection nozzles are not controlling for
cladding)	and neutron flux	embrittlement	the TLAA evaluations.

Steel (with stainless steel or nickel-alloy	Reactor coolant	Loss of fracture toughness #*#due to neutron irradiation	Neutron irradiation embrittlement is a TLAA evaluated for extended operation for all ferritic materials with a neutron fluence greater than 1E17 n/cm2 (E >1 MeV) at the end of the period of extended operation. The TLAA is to evaluate the impact of neutron embrittlement on: (a) the RTPTS value based on the requirements in 10 CFR 50.61, (b) the adjusted reference temperature values used for calculation of the plant's pressure-temperature limits, and (c) the Charpy upper shelf energy or the equivalent margins analyses performed in accordance with 10 CFR Part 50, Appendix G requirements. See the Standard Review Plan, Section 4.2 "Reactor Vessel Neutron Embrittlement" for acceptable methods for meeting the
	and neutron flux	embrittlement	
cladding)		embrilliement	requirements of 10 CFR 54.21(c).
SA508-CI 2 forgings clad (with stainless steel) using a high-heat-input welding process	Reactor coolant	Crack growth #*#due to cyclic loading	Growth of intergranular separations (underclad cracks) in low-alloy steel forging heat affected zone under austenitic stainless steel cladding is a time-limited aging analysis (TLAA) to be evaluated for the period of extended operation for all the SA 508-Cl 2 forgings where the cladding was deposited with a high heat input welding process. The methodology for evaluating an underclad flaw is in accordance with the current well- established flaw evaluation procedure and criterion in the ASME Section XI Code. See the Standard Review Plan, Section 4.7, "Other Plant-Specific Time- Limited Aging Analysis," for generic guidance for meeting the requirements of 10 CFR 54.21(c).
Steel	Reactor coolant	Loss of material #*#due to wear	Chapter XI.M1, "ASME Section XI Inservice Inspection, Subsections IWB, IWC, and IWD" for Class 1 components

Nickel alloy	Reactor coolant	Cracking #*#due to primary water stress corrosion cracking	#M#Chapter XI.M1, "ASME Section XI Inservice Inspection, Subsections IWB, IWC, and IWD" for Class 1 components, and #*#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M11B, "Cracking of Nickel-Alloy Components and Loss of Material Due to Boric Acid-Induced Corrosion in RCPB Components (PWRs Only)"#M#
Stainless steel	Reactor coolant and neutron flux	Cracking #*#due to stress corrosion cracking, intergranular stress corrosion cracking, irradiation- assisted stress corrosion cracking	Chapter XI.M9, "BWR Vessel Internals" for core shroud, and #*#Chapter XI.M2, "Water Chemistry"
Stainless steel	Reactor coolant and neutron flux	Cracking #*#due to stress corrosion cracking, intergranular stress corrosion cracking, irradiation- assisted stress corrosion cracking	Chapter XI.M9, "BWR Vessel Internals" for core plate, and #*#Chapter XI.M2, "Water Chemistry"
Nickel alloy	Reactor coolant and neutron flux	Cracking #*#due to stress corrosion cracking, intergranular stress corrosion cracking, irradiation- assisted stress corrosion cracking	Chapter XI.M1, "ASME Section XI Inservice Inspection, Subsections IWB, IWC, and IWD" for Class 1 components, and #*#Chapter XI.M2, "Water Chemistry" #*#Because cracking initiated in crevice regions is not amenable to visual inspection, for BWRs with a crevice in the access hole covers, an augmented inspection is to include ultrasonic testing (UT) or other demonstrated acceptable inspection of cover welds.
Nickel alloy	Reactor coolant and neutron flux	Cracking #*#due to stress corrosion cracking, intergranular stress corrosion cracking, irradiation- assisted stress corrosion cracking	Chapter XI.M1, "ASME Section XI Inservice Inspection, Subsections IWB, IWC, and IWD" for Class 1 components, and #*#Chapter XI.M2, "Water Chemistry"
Nickel alloy	Reactor coolant and neutron flux	Cracking #*#due to stress corrosion cracking, intergranular stress corrosion cracking, irradiation-	Chapter XI.M9, "BWR Vessel Internals" for shroud support, and #*#Chapter XI.M2, "Water Chemistry"

		Cracking #*#due to	
		stress corrosion	
		cracking, intergranular	
		stress corrosion	
		cracking, irradiation-	Chapter XI.M9, "BWR Vessel Internals"
	Reactor coolant	assisted stress corrosion	for the LPCI coupling, and #*#Chapter
Stainless steel	and neutron flux	cracking	XI.M2, "Water Chemistry"
		Cracking #*#due to	,
		stress corrosion	
		cracking, intergranular	
		stress corrosion	
		cracking, irradiation-	Chapter XI.M9, "BWR Vessel Internals"
	Reactor coolant		for top guide, and #*#Chapter XI.M2,
Stainless steel	and neutron flux	cracking	"Water Chemistry"
		Cracking #*#due to	
		stress corrosion	
		cracking, intergranular	
		stress corrosion	
		cracking, irradiation-	Chapter XI.M9, "BWR Vessel Internals"
	Reactor coolant	assisted stress corrosion	for core spray internals, and #*#Chapter
Stainless steel	and neutron flux	cracking	XI.M2, "Water Chemistry"
	Air – indoor,		
	uncontrolled		
Nickel alloy	(External)	None	None
NICKEI AllOy	Air – indoor,	None	None
	uncontrolled	Name	News
Stainless steel	(External)	None	None
	Air with borated		
Stainless steel	water leakage	None	None
Stainless steel	Concrete	None	None
Stainless steel	Gas	None	None
Copper alloy			
(>15% Zn or	Closed-cycle	Loss of material #*#due	
>8% AI)	cooling water	to selective leaching	Chapter XI.M33, "Selective Leaching"
,			
	Secondary	Loss of material #*#due	Chapter XI.M2, "Water Chemistry," and
	feedwater or	to general, pitting, and	#*#Chapter XI.M32, "One-Time
Steel		crevice corrosion	
Sieel	steam		Inspection"
		Cracking #*#due to	A plant-specific aging management
Stainless steel	Reactor coolant		program is to be evaluated
		-	#M#Chapter XI.M9, "BWR Vessel
Stainless steel	Reactor coolant	induced vibration	Internals" for steam dryer#M#

Nickel alloy	Reactor coolant or steam	Cracking #*#due to primary water stress corrosion cracking	#M#Chapter XI.M1, "ASME Section XI Inservice Inspection, Subsections IWB, IWC, and IWD" for Class 1 components, and #*#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M11B, "Cracking of Nickel-Alloy Components and Loss of Material Due to Boric Acid-Induced Corrosion in RCPB Components (PWRs Only)"#M#
Steel (with			
stainless steel			
or nickel-alloy		l and of motorial #*#dua	#M#Chanter XLM2 "Motor Chemistry"
cladding); stainless steel;		Loss of material #*#due to pitting and crevice	#M#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M32, "One-Time
nickel alloy	Reactor coolant	corrosion	Inspection"#M#
Steel (with			
stainless steel or nickel-alloy			
cladding);		Loss of material #*#due	#M#Chapter XI.M2, "Water Chemistry,"
stainless steel;		to pitting and crevice	and #*#Chapter XI.M32, "One-Time
nickel alloy	Reactor coolant	corrosion	Inspection"#M#
Nickel alloy	Reactor coolant or steam	Cracking #*#due to primary water stress corrosion cracking	#M#Chapter XI.M1, "ASME Section XI Inservice Inspection, Subsections IWB, IWC, and IWD" for Class 1 components, and #*#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M11B, "Cracking of Nickel-Alloy Components and Loss of Material Due to Boric Acid-Induced Corrosion in RCPB Components (PWRs Only)"#M#
Steel	Secondary feedwater or steam	Loss of material #*#due to erosion, general, pitting, and crevice corrosion	Chapter XI.M19, "Steam Generators," and #*#Chapter XI.M2, "Water Chemistry"
	Secondary feedwater or	Loss of material #*#due to erosion, general, pitting, and crevice	Chapter XI.M19, "Steam Generators," and #*#Chapter XI.M2, "Water
Steel	steam	corrosion	Chemistry"
High-strength, low-alloy steel	Air with reactor coolant leakage	Loss of material #*#due to general, pitting, and crevice corrosion, or wear	Chapter XI.M3, "Reactor Head Closure Stud Bolting"
Steel	Air – indoor, uncontrolled	Loss of material #*#due to general, pitting, and crevice corrosion	Chapter XI.M18, "Bolting Integrity"
Steel	Air with borated water leakage	Loss of material #*#due to boric acid corrosion	Chapter XI.M10, "Boric Acid Corrosion"

		Cracking #*#due to	
Stainless steel	Reactor coolant		Chapter XI.M2, "Water Chemistry"
PH martensitic		, , , , , , , , , , , , , , , , , , ,	
stainless steel			
(17-4PH and 15-	-		
5PH);			
martensitic		Loss of fracture	
stainless steel	Reactor coolant	toughness #*#due to	
(SS 403, 410,	>250°C (>482°F)	thermal aging, neutron	
431, etc.)	and neutron flux	irradiation embrittlement	Chapter XI.M9, "BWR Vessel Internals"
			#M#Chapter XI.M1, "ASME Section XI
			Inservice Inspection, Subsections IWB,
			IWC, and IWD" for Class 1
			components, and #*#Chapter XI.M2,
			"Water Chemistry," and #*#Chapter
			XI.M11B, "Cracking of Nickel-Alloy
		Cracking #*#due to	Components and Loss of Material Due
		primary water stress	to Boric Acid-Induced Corrosion in
Nickel alloy	Reactor coolant	corrosion cracking	RCPB Components (PWRs Only)"#M#
		Loss of fracture	
		toughness #*#due to	
	Reactor coolant	neutron irradiation	
X-750 alloy	and neutron flux	embrittlement	Chapter XI.M9, "BWR Vessel Internals"
			Estimus is a time limited animal such size
			Fatigue is a time-limited aging analysis (TLAA) to be evaluated for the period of
			extended operation. See the SRP,
		Cumulative fatigue	Section 4.3 "Metal Fatigue," for
High-strength,	Air with reactor	damage #*#due to	acceptable methods for meeting the
low-alloy steel	coolant leakage	fatigue	requirements of 10 CFR 54.21(c)(1).
	coolant leakage		
		Loss of fracture	
	Reactor coolant	toughness #*#due to	
Cast austenitic	>250°C (>482°F)	thermal aging, neutron	#M#Chapter XI.M9, "BWR Vessel
stainless steel	and neutron flux	• •	Internals"#M#
		Loss of fracture	
	Reactor coolant	toughness #*#due to	
Cast austenitic	>250°C (>482°F)	thermal aging, neutron	#M#Chapter XI.M9, "BWR Vessel
stainless steel	and neutron flux	irradiation embrittlement	Internals"#M#
		Loss of material #*#due	
			#M#Chanter XLM21A "Closed Treated
	Closed-cycle	to general, pitting, and	#M#Chapter XI.M21A, "Closed Treated
Steel	Closed-cycle cooling water	to general, pitting, and crevice corrosion	Water Systems"#M#
Steel	-	crevice corrosion	
Steel	cooling water	crevice corrosion	Water Systems"#M#
Steel Copper alloy	-	crevice corrosion	

0		
-		
		#M#Chapter XI.M19, "Steam
steam	#*#due to tretting#M#	Generators"#M#
	#M#Loss of material	
Secondary	#*#due to general (steel	Chapter XI.M19, "Steam Generators,"
feedwater or	only), pitting, and crevice	and #*#Chapter XI.M2, "Water
steam	corrosion#M#	Chemistry"
Reactor coolant	Loss of fracture toughness #*#due to neutron irradiation	Chapter XI.M31, "Reactor Vessel
and neutron flux	embrittlement	Surveillance"
Reactor coolant and neutron flux	Loss of fracture toughness #*#due to neutron irradiation embrittlement	Chapter XI.M31, "Reactor Vessel Surveillance"
Reactor coolant and neutron flux	Loss of fracture toughness #*#due to neutron irradiation embrittlement	Chapter XI.M31, "Reactor Vessel Surveillance"
Reactor coolant	Loss of material #*#due to pitting and crevice corrosion	Chapter XI.M2, "Water Chemistry"
Reactor coolant	#M#Cracking #*#due to stress corrosion cracking, intergranular stress corrosion cracking (for stainless steel only), and thermal, mechanical, and vibratory loading#M#	Chapter XI.M1, "ASME Section XI Inservice Inspection, Subsections IWB, IWC, and IWD" for Class 1 components, #*#Chapter XI.M2, "Water Chemistry," and #*#XI.M35, "One-Time Inspection of ASME Code Class 1 Small- bore Piping"
Treated borated water >60°C (>140°F)	Cracking #*#due to stress corrosion cracking	
Reactor coolant	Cracking #*#due to stress corrosion cracking	Chapter XI.M1, "ASME Section XI Inservice Inspection, Subsections IWB, IWC, and IWD" for Class 1 components, and #*#Chapter XI.M2, "Water Chemistry"
	feedwater or steam Reactor coolant and neutron flux Reactor coolant and neutron flux Reactor coolant and neutron flux Reactor coolant Treated borated water >60°C	feedwater or steam#M#Loss of material #*#due to fretting#M#Secondary feedwater or steam#M#Loss of material #*#due to general (steel only), pitting, and crevice corrosion#M#Reactor coolant and neutron fluxLoss of fracture toughness #*#due to neutron irradiation embrittlementReactor coolant and neutron fluxLoss of material #*#due to pitting and crevice corrosionReactor coolant and neutron fluxLoss of material #*#due to neutron irradiation embrittlementReactor coolantKoss of material #*#due to stress corrosion cracking, intergranular stress corrosion cracking (for stainless steel only), and thermal, mechanical, and vibratory loading#M#Treated borated water >60°C (>140°F)Cracking #*#due to stress corrosion cracking (cracking #*#due to stress corrosion cracking

	Secondary		
	feedwater or	Loss of material #*#due	#M#Chapter XI.M19, "Steam
Nickel alloy	steam	to fretting and wear	Generators"#M#
	Secondary		
	feedwater or	Loss of material #*#due	#M#Chapter XI.M19, "Steam
Nickel alloy	steam	to fretting and wear	Generators"#M#
			#M#Chapter XI.M1, "ASME Section XI
			Inservice Inspection, Subsections IWB,
			IWC, and IWD" for Class 1
			components, and #*#Chapter XI.M2,
			"Water Chemistry," and #*#Chapter
			XI.M11B, "Cracking of Nickel-Alloy
Stainless steel;		Cracking #*#due to	Components and Loss of Material Due
nickel alloy		stress corrosion	to Boric Acid-Induced Corrosion in
welds and/or	Deaster ecolori	cracking, primary water	RCPB Components (PWRs Only)" for
buttering	Reactor coolant	stress corrosion cracking	nickel alloy components#M#
		#M#Cracking #*#due to	
		stress corrosion	Chapter XI.M1, "ASME Section XI
		cracking, intergranular	Inservice Inspection, Subsections IWB,
		stress corrosion cracking	
Stainless steel;		(for stainless steel only),	components, #*#Chapter XI.M2, "Water
steel with		and thermal,	Chemistry," and #*#XI.M35, "One-Time
stainless steel		mechanical, and	Inspection of ASME Code Class 1 Small
cladding	Reactor coolant	vibratory loading#M#	bore Piping"
			Chapter XI.M2, "Water Chemistry" and
			#*#Chapter XI.M16A, "PWR Vessel
			Internals" #*#Note: Components with no
			additional measures are not uniquely
		Cracking #*#due to	identifies in GALL tables - Components with no additional measures are defined
		stress corrosion	in Section 3.3.1 of MRP-227, "Materials
		cracking, and irradiation-	Reliability Program: Pressurized Water
Stainless steel;	Reactor coolant	assisted stress corrosion	Reactor Internals Inspection and
nickel alloy	and neutron flux	cracking	Evaluation Guidelines"
,			
		Loss of fracture	
		toughness #*#due to	Chapter XI.M16A, "PWR Vessel
		neutron irradiation	Internals" #*#Note: Components with
		embrittlement;	no additional measures are not uniquely
		#*#change in dimension	identified in GALL tables - Components
		#*#due to void swelling;	with no additional measures are defined
		#*#loss of preload	in Section 3.3.1 of MRP-227, "Materials
Otoinlage start	Depatencestant	#*#due to stress	Reliability Program: Pressurized Water
Stainless steel;	Reactor coolant	relaxation; #*#loss of	Reactor Internals Inspection and
nickel alloy	and neutron flux	material #*#due to wear	Evaluation Guidelines"

Stainless steel; nickel alloy	Reactor coolant and neutron flux	Cracking #*#due to stress corrosion cracking, and irradiation- assisted stress corrosion cracking	Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M16A, "PWR Vessel Internals"
		Loss of fracture toughness #*#due to neutron irradiation embrittlement; #*#change in dimension #*#due to void swelling; #*#loss of preload #*#due to stress	
Stainless steel; nickel alloy	Reactor coolant and neutron flux	relaxation; #*#loss of material #*#due to wear	Chapter XI.M16A, "PWR Vessel Internals"
Stainless steel; nickel alloy	Reactor coolant and neutron flux	Loss of material #*#due to pitting and crevice corrosion Loss of material #*#due	Chapter XI.M2, "Water Chemistry"
Stainless steel; nickel alloy	Reactor coolant and neutron flux	to pitting and crevice corrosion	Chapter XI.M2, "Water Chemistry"
Stainless steel; nickel alloy	Reactor coolant and neutron flux	Loss of material #*#due to pitting and crevice corrosion	Chapter XI.M2, "Water Chemistry"
Stainless steel	Reactor coolant and neutron flux		Chapter XI.M16A, "PWR Vessel Internals." #*#Primary components (identified in the "Structure and Components" column) #*# (for Expansion components see AMR Line Item IV.B4.RP-243.)
Stainless steel	Reactor coolant and neutron flux	Cracking #*#due to stress corrosion cracking, irradiation- assisted stress corrosion cracking	Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M16A, "PWR Vessel Internals" #*#Primary Components (identified in the "Structure and Components" column) #*#(for Expansion components see AMR Line Items IV.B4.RP-244 and IV.B4.RP-375)

Cast austenitic stainless steel	Reactor coolant and neutron flux	Loss of fracture toughness #*#due to thermal aging embrittlement	Chapter XI.M16A, "PWR Vessel Internals" #*#Expansion components (identified in the "Structure and Components" column) #*# (for Primary components see AMR Line Items IV.B4.RP-253 and IV.B4.RP-258)
Stainless steel	Reactor coolant and neutron flux	-	Chapter XI.M16A, "PWR Vessel Internals" #*#Expansion components (identified in the "Structure and Components" column) #*#(for Primary components see AMR Line Item IV.B4.RP-240)
Stainless steel	Reactor coolant and neutron flux	Cracking #*#due to irradiation-assisted stress corrosion cracking	Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M16A, "PWR Vessel Internals" #*#Expansion components (identified in the "Structure and Components" column) #*#(for Primary components see AMR Line Item IV.B4.RP-241)
Stainless steel; nickel alloy	Reactor coolant and neutron flux	Cracking #*#due to stress corrosion cracking	Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M16A, "PWR Vessel Internals" #*#Expansion components (identified in the "Structure and Components" column) #*#(for Primary components see AMR Line Items IV.B4.RP-247 and IV.B4.RP-248)
Stainless steel; nickel alloy	Reactor coolant and neutron flux	Cracking #*#due to stress corrosion cracking	'Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M16A, "PWR Vessel Internals" #*#Expansion components (identified in the "Structure and Components" column) #*#(for Primary components see AMR Line Items IV.B4.RP-247 and IV.B4.RP-248)
Stainless steel; nickel alloy	Reactor coolant and neutron flux	Cracking #*#due to stress corrosion cracking	Chapter XI.M2, "Water Chemistry," and Chapter XI.M16A, "PWR Vessel Internals" #*#Primary components (identified in the "Structure and Components" column) #*#(for Expansion components see AMR Line Items IV.B4.RP-245, IV.B4.RP-246, IV.B4.RP-254, and IV.B4.RP-256)

			Chapter VI M2 "Mater Chemistry" and
			Chapter XI.M2, "Water Chemistry," and
			Chapter XI.M16A, "PWR Vessel
			Internals" #*#Primary components
			(identified in the "Structure and
			Components" column) #*#(for
			Expansion components see AMR Line
			Items IV.B4.RP-245, IV.B4.RP-246,
Stainless steel;	Reactor coolant	Cracking #*#due to	IV.B4.RP-254, IV.B4.RP-247, and
nickel alloy	and neutron flux	stress corrosion cracking	
			Chapter XI.M16A, "PWR Vessel
			Internals" #*#Primary components
		Loss of fracture	(identified in the "Structure and
		toughness #*#due to	Components" column) #*#(for
	Reactor coolant	neutron irradiation	Expansion components see AMR Line
Stainless steel	and neutron flux	embrittlement	Item IV.B4.RP-250)
			Chapter XI.M16A, "PWR Vessel
			Internals" #*#Expansion components
		Loss of fracture	(identified in the "Structure and
		toughness #*#due to	Components" column) #*#(for Primary
	Reactor coolant	neutron irradiation	components see AMR Line Item
Stainless steel	and neutron flux	embrittlement	IV.B4.RP-249)
			Chapter XI.M16A, "PWR Vessel
			Internals" #*#Primary component
			(identified in the "Structure and
	Reactor coolant	Loss of material #*#due	Components" column) #*#No
Stainless steel	and neutron flux	to wear	Expansion components
			Chapter XI.M16A, "PWR Vessel
		Loss of fracture	Internals" #*#Primary components
		toughness #*#due to	(identified in the "Structure and
	Reactor coolant	thermal aging	Components" column) #*#No
Stainless steel	and neutron flux	embrittlement	Expansion components
			Chapter XI.M16A, "PWR Vessel
			Internals" #*#Primary components
		Loss of fracture	(identified in the "Structure and
		toughness #*#due to	Components" column) #*#(for
Cast austenitic	Reactor coolant	thermal aging	Expansion components see ARM Line
stainless steel	and neutron flux	embrittlement	Item IV.B4.RP-242)
			Chapter XI.M2, "Water Chemistry," and
			#*#Chapter XI.M16A, "PWR Vessel
			Internals," Expansion components
			(identified in the "Structure and
			Components" column) #*#(for Primary
	Reactor coolant	Cracking #*#due to	components see ARM Line Items
Nickel alloy	and neutron flux	stress corrosion cracking	IV.B4.RP-247 and IV.B4.RP-248)

Stainless steel; nickel alloy	Reactor coolant and neutron flux	Cracking #*#due to stress corrosion cracking	
Cast austenitic stainless steel	Reactor coolant and neutron flux	Loss of fracture toughness #*#due to thermal aging, neutron irradiation embrittlement	Chapter XI.M16A, "PWR Vessel Internals" #*#Primary components (identified in the "Structure and Components" column) #*#(for Expansion components see Line Item IV.B4.RP-242)
Stainless steel; nickel alloy	Reactor coolant and neutron flux	Loss of fracture toughness #*#due to thermal aging, neutron irradiation embrittlement	Chapter XI.M16A, "PWR Vessel Internals" #*#Primary components (identified in the "Structure and Components" column) #*#(for Expansion components see Line Item IV.B4.RP-260) Chapter XI.M1, "ASME Section XI
Stainless steel; nickel alloy	Reactor coolant	Loss of material #*#due to pitting and crevice corrosion	Inservice Inspection, Subsections IWB, IWC, and IWD" for Class 1 components, and #*#Chapter XI.M2, "Water Chemistry"
Stainless steel; nickel alloy	Reactor coolant and neutron flux	Loss of fracture toughness #*#due to neutron irradiation embrittlement	Chapter XI.M16A, "PWR Vessel Internals" #*#Expansion components (identified in the "Structure and Components" column) #*#(for Primary components see AMR Line Item IV.B4.RP-259)
Nickel alloy	Reactor coolant and neutron flux	Cracking #*#due to stress corrosion cracking	Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M16A, "PWR Vessel Internals" #*#Primary components (identified in the "Structure and Components" column) #*#(for Expansion components see AMR Line Item IV.B4.RP-262 and IV.B4.RP-352)
Nickel alloy	Reactor coolant and neutron flux	Cracking #*#due to stress corrosion cracking	Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M16A, "PWR Vessel Internals" #*#Expansion components (identified in the "Structure and Components" column) #*#(for Primary components see AMR Line Item IV.B4.RP-261)

Reactor coolant and neutron flux		Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M16A, "PWR Vessel Internals" #*#Note: Components with no additional measures are not uniquely identified in GALL tables - Components with no additional measures are defined in Section 3.3.1 of MRP-227, "Materials Reliability Program: Pressurized Water Reactor Internals Inspection and Evaluation Guidelines"
Reactor coolant and neutron flux	Loss of fracture toughness #*#due to neutron irradiation embrittlement; #*#change in dimension #*#due to void swelling; #*#loss of preload #*#due to stress relaxation; #*#loss of material #*#due to wear	Chapter XI.M16A, "PWR Vessel Internals" #*#Note: Components with no additional measures are not uniquely identified in GALL tables - Components with no additional measures are defined in Section 3.3.1 of MRP-227, "Materials Reliability Program: Pressurized Water Reactor Internals Inspection and Evaluation Guidelines"
Reactor coolant and neutron flux	assisted stress corrosion	Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M16A, "PWR Vessel Internals"
Reactor coolant	Loss of fracture toughness #*#due to neutron irradiation embrittlement; #*#change in dimension #*#due to void swelling; #*#loss of preload #*#due to stress relaxation; #*#loss of	Chapter XI.M16A, "PWR Vessel
Reactor coolant	Change in dimension	Internals" Chapter XI.M16A, "PWR Vessel Internals" #*# Primary components (identified in the "Structure and Components" column) #*#no Expansion components
	Reactor coolant and neutron flux Reactor coolant and neutron flux	Reactor coolant and neutron fluxstress corrosion cracking, and irradiation- assisted stress corrosion crackingReactor coolant and neutron fluxLoss of fracture toughness #*#due to neutron irradiation embrittlement; #*#change in dimension #*#due to void swelling; #*#loss of preload #*#due to stress relaxation; #*#loss of material #*#due to wearReactor coolant and neutron fluxCracking #*#due to stress corrosion cracking, and irradiation- assisted stress corrosion crackingReactor coolant and neutron fluxCracking #*#due to stress corrosion cracking, and irradiation- assisted stress corrosion crackingReactor coolant and neutron fluxLoss of fracture toughness #*#due to neutron irradiation embrittlement; #*#change in dimension #*#due to void swelling; #*#loss of preload #*#due to stress relaxation; #*#loss of material #*#due to wearReactor coolant and neutron fluxComplexity and irradiation- assisted stress corrosion crackingReactor coolant and neutron fluxComplexity and irradiation- embrittlement; #*#due to void swelling; #*#due to void swelling; #*#due to void swelling; #*#due to void swelling; #*#due to stress relaxation; #*#loss of material #*#due to wearReactor coolant and neutron fluxChange in dimension

Stainless steel	Reactor coolant and neutron flux	Cracking #*#due to irradiation-assisted stress corrosion cracking and fatigue	Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M16A, "PWR Vessel Internals" #*#Primary components (identified in the "Structure and Components" column) #*#(for Expansion components see AMR Line Items IV.B2.RP-273 and IV.B2.RP-286)
	Reactor coolant	Loss of fracture toughness #*#due to neutron irradiation embrittlement; #*#change in dimension #*#due to void swelling; #*#loss of preload #*#due to stress	Chapter XI.M16A, "PWR Vessel Internals" #*# Primary components (identified in the "Structure and Components" column) #*#(for Expansion components see AMR Line
Stainless steel	and neutron flux Reactor coolant and neutron flux	relaxation Cracking #*#due to irradiation-assisted stress corrosion cracking and fatigue	Items IV.B2.RP-274 and IV.B2.RP-287) Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M16A, "PWR Vessel Internals" #*#Expansion components (identified in the "Structure and Components" column) #*#(for Primary components see AMR Line Item IV.B2.RP-271)
Stainless steel	Reactor coolant and neutron flux	Loss of fracture toughness #*#due to neutron irradiation embrittlement; #*#change in dimension #*#due to void swelling; #*#loss of preload #*#due to stress relaxation	Chapter XI.M16A, "PWR Vessel Internals" #*# Expansion components (identified in the "Structure and Components" column) #*#(for Primary components see AMR Line Item IV.B2.RP-272)
Stainless steel	Reactor coolant and neutron flux	Cracking #*#due to irradiation-assisted stress corrosion cracking and fatigue	Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M16A, "PWR Vessel Internals" #*#Primary components (identified in the "Structure and
Stainless steel	Reactor coolant and neutron flux	and irradiation-assisted	Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M16A, "PWR Vessel Internals" #*#Primary components (identified in the "Structure and Components" column) #*#(for Expansion components see AMR Line Items IV.B2.RP-278, IV.B2.RP-280, IV.B2.RP-282, and IV.B2.RP-294, IV.B2.RP-295, and IV. B4.RP-281)

			Chapter XI.M2, "Water Chemistry," and
			#*#Chapter XI.M16A, "PWR Vessel
			Internals" #*#Expansion component
			(identified in the "Structure and
	Desidencestant	Cracking #*#due to	Components" column) #*#(for Primary
	Reactor coolant	stress corrosion cracking	•
Stainless steel	and neutron flux	and fatigue	IV.B2.RP-276)
Steel (with			
stainless steel			
or nickel-alloy			
cladding);		Loss of material #*#due	
stainless steel;		to pitting and crevice	
nickel alloy	Reactor coolant	corrosion	Chapter XI.M2, "Water Chemistry"
			Chapter XI.M2, "Water Chemistry," and
			#*#Chapter XI.M16A, "PWR Vessel
			Internals" #*#Expansion component
		Cracking #*#due to	(identified in the "Structure and
		stress corrosion cracking	
	Reactor coolant	and irradiation-assisted	components see AMR Line Item
Stainless steel	and neutron flux	stress corrosion cracking	
			Chapter XI.M16A, "PWR Vessel
			Internals" #*# Expansion Components
		Loss of fracture	(identified in the "Structure and
		toughness #*#due to	Components" column) #*#(for Primary
	Reactor coolant	neutron irradiation	components see AMR Line Item
Stainless steel	and neutron flux	embrittlement	IV.B2.RP-276)
			Chapter XI.M2, "Water Chemistry," and
			#*#Chapter XI.M16A, "PWR Vessel
			Internals" #*#Expansion components
			(identified in the "Structure and
		Cracking #*#due to	Components" column) #*#(for Primary
	Reactor coolant	stress corrosion cracking	
Stainless steel	and neutron flux	.	IV.B2.RP-276)
Stamless steel		and fatigue	IV.BZ.RP-270)
			Chapter XI M16A "DWD Vessel
			Chapter XI.M16A, "PWR Vessel
			Internals" #*# Existing Program
			components (identified in the "Structure
Stainless steel	Depeter coolers!	loop of motorial #*#+1	and Components" column) #*#No
(with or without	Reactor coolant	Loss of material #*#due	expansion components; and #*#Chapter
chrome plating)	and neutron flux	to wear	XI.M37, "Flux Thimble Tube Inspection"
			Chapter XI.M16A, "PWR Vessel
			Internals" #*# Existing Program
			components (identified in the "Structure
	Reactor coolant	Loss of material #*#due	and Components" column) #*#no
Nickel alloy	and neutron flux	to wear	Expansion components
			Chapter XI.M2, "Water Chemistry," and
			#*#Chapter XI.M16A, "PWR Vessel
			Internals" #*#Expansion components
		Cracking #*#due to	(identified in the "Structure and
		irradiation-assisted	Components" column) #*#(for Primary
Stainless steel;	Reactor coolant	stress corrosion cracking	components see AMR Line Item
nickel alloy	and neutron flux	and fatigue	IV.B2.RP-271)
,			···· =··/

		Loss of fracture	Chapter XI.M16A, "PWR Vessel
		toughness #*#due to	Internals" #*# Expansion component
		neutron irradiation	(identified in the "Structure and
		embrittlement; #*#loss of	Components" column) #*#(for Primary
Stainless steel;	Reactor coolant	preload #*#due to stress	components see AMR Line Item
nickel alloy	and neutron flux	relaxation	IV.B2.RP-272)
			1V.DZ.N(-Z/Z)
		Loss of fracture	Chapter XI.M16A, "PWR Vessel
		toughness #*#due to	Internals" #*# Existing Program
		neutron irradiation	components (identified in the "Structure
	Reactor coolant		and Components" column) #*#no
Stainless steel	and neutron flux	material #*#due to wear	Expansion components
			'Chapter XI.M2, "Water Chemistry," and
			#*#Chapter XI.M16A, "PWR Vessel
		Cracking #*#due to	Internals" #*#Existing Program
		irradiation-assisted	components (identified in the "Structure
	Reactor coolant	stress corrosion	and Components" column) #*#no
Stainless steel	and neutron flux	cracking, and fatigue	Expansion components
			Chapter XI.M16A, "PWR Vessel
		Loss of fracture	Internals" #*# Expansion components
		toughness #*#due to	(identified in the "Structure and
		thermal aging and	Components" column)#*#(for Primary
Cast austenitic	Reactor coolant	neutron irradiation	components see AMR Line Item
stainless steel	and neutron flux	embrittlement	IV.B2.RP-297)
			Chapter XI.M2, "Water Chemistry," and
			#*#Chapter XI.M16A, "PWR Vessel
			Internals" #*#Expansion components
			(identified in the "Structure and
Cost sustanitie	Depater ecolorit	Cracking #*#due to	Components" column)#*#(for Primary
Cast austenitic stainless steel	Reactor coolant and neutron flux	irradiation-assisted	components see AMR Line Item
Stall liess steel		stress corrosion cracking	Chapter XI.M16A, "PWR Vessel
			Internals" #*# Expansion components
		Loss of fracture	(identified in the "Structure and
		toughness #*#due to	Components" column) #*#(for Primary
	Reactor coolant	neutron irradiation	components see AMR Line Item
Stainless steel	and neutron flux	embrittlement	IV.B2.RP-297)
			Chapter XI.M2, "Water Chemistry," and
			#*#Chapter XI.M16A, "PWR Vessel
			Internals" #*#Expansion components
			(identified in the "Structure and
			Components" column)#*#(for Primary
	Reactor coolant	Cracking #*#due to	components see AMR Line Item
Stainless steel	and neutron flux	fatigue	IV.B2.RP-298)
			Chapter XI.M2, "Water Chemistry," and
			#*#Chapter XI.M16A, "PWR Vessel
			Internals" #*#Expansion components
			(identified in the "Structure and
		Cracking #*#due to	Components" column) #*#(for Primary
	Reactor coolant	irradiation-assisted	components see AMR Line Item
Stainless steel	and neutron flux	stress corrosion cracking	IV.B2.RP-276)

			Chapter XI.M16A, "PWR Vessel
			Internals" #*# Expansion Components
		Loss of fracture	(identified in the "Structure and
		toughness #*#due to	Components" column) #*#(for Primary
	Reactor coolant	neutron irradiation	components see AMR Line Item
Stainless steel	and neutron flux	embrittlement	IV.B2.RP-276)
			Chapter XI.M16A, "PWR Vessel
			Internals" #*# Primary Components
			(identified in the "Structure and
	Reactor coolant	Loss of material #*#due	Components" column) #*#no Expansion
Stainless steel	and neutron flux	to wear	components
			Chapter XI.M16A, "PWR Vessel
		Loss of fracture	Internals" #*# Primary components
		toughness #*#due to	(identified in the "Structure and
		thermal aging and	Components" column) #*#(for
	Reactor coolant	neutron irradiation	Expansion components see AMR Line
Stainless steel	and neutron flux	embrittlement	Items IV.B2.RP-290 and IV.B2.RP-292)
			Chapter XI.M2, "Water Chemistry," and
			#*#Chapter XI.M16A, "PWR Vessel
			Internals" #*#Primary components
			(identified in the "Structure and
		Cracking #*#due to	Components" column)#*#(for Expansion
	Reactor coolant	stress corrosion cracking	components see AMR Line Items
Stainless steel	and neutron flux	and fatigue	IV.B2.RP-291 and IV.B2.RP-293)
			Chapter XI.M16A, "PWR Vessel
			Internals" #*#Existing Program
			components (identified in the "Structure
	Reactor coolant	Loss of material #*#due	and Components" column) #*#no
Stainless steel	and neutron flux	to wear	Expansion components
		Loss of preload #*#due	Chapter XI.M16A, "PWR Vessel
		to irradiation enhanced	Internals" #*# Primary components
	Desites exclant		(identified in the "Structure and
	Reactor coolant	of material #*#due to	Components" column) #*#no Expansion
Stainless steel	and neutron flux	wear	components
			'Chapter XI.M2, "Water Chemistry," and
			#*#Chapter XI.M16A, "PWR Vessel
			Internals" #*#Existing Program
			components (identified in the "Structure
	Reactor coolant	Cracking #*#due to	and Components" column) #*#no
Stainless steel	and neutron flux	stress corrosion cracking	·
			Chapter XI.M16A, "PWR Vessel
			Internals" #*# Primary components
		Cracking #*#due to	(identified in the "Structure and
	Reactor coolant	fatigue; #*#loss of	Components" column) #*#no Expansion
Stainless steel	and neutron flux	material #*#due to wear	components
		indication in made to wear	pononto

Stainless steel; nickel alloy	Reactor coolant and neutron flux	Cumulative fatigue damage #*#due to fatigue	Fatigue is a time-limited aging analysis (TLAA) to be evaluated for the period of extended operation. See the SRP, Section 4.3 "Metal Fatigue," for acceptable methods for meeting the requirements of 10 CFR 54.21(c)(1).
Stainless steel; nickel alloy	Reactor coolant and neutron flux	cracking, and irradiation-	Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M16A, "PWR Vessel Internals" #*#Note: Components with no additional measures are not uniquely identified in GALL tables - Components with no additional measures are defined in Section 3.3.1 of MRP-227, "Materials Reliability Program: Pressurized Water Reactor Internals Inspection and Evaluation Guidelines"
Stainless steel; nickel alloy	Reactor coolant and neutron flux	Loss of fracture toughness #*#due to neutron irradiation embrittlement; #*#change in dimension #*#due to void swelling; #*#loss of preload #*#due to irradiation enhanced stress relaxation; #*#loss of material #*#due to wear	Chapter XI.M16A, "PWR Vessel Internals" #*#Note: Components with no additional measures are not uniquely identified in GALL tables - Components with no additional measures are defined in Section 3.3.1 of MRP-227, "Materials Reliability Program: Pressurized Water Reactor Internals Inspection and Evaluation Guidelines"
Stainless steel; nickel alloy	Reactor coolant and neutron flux		Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M16A, "PWR Vessel Internals"
Stainless steel; nickel alloy	Reactor coolant and neutron flux	Loss of fracture toughness #*#due to neutron irradiation embrittlement; #*#change in dimension #*#due to void swelling; #*#loss of preload #*#due to stress relaxation; #*#loss of material #*#due to wear	Chapter XI.M16A, "PWR Vessel Internals"

			Chapter XI.M2, "Water Chemistry," and
			· · · · ·
			#*#Chapter XI.M16A, "PWR Vessel
			Internals" #*#Primary components
			(identified in the "Structure and
		Cracking #*#due to	Components" column) #*#(for
	Reactor coolant	stress corrosion cracking	Expansion components see AMR Line
Stainless steel	and neutron flux	and fatigue	Item IV.B3.RP-313)
			Chapter XI.M2, "Water Chemistry," and
			#*#Chapter XI.M16A, "PWR Vessel
			Internals" #*#Expansion components
			(identified in the "Structure and
		Cracking #*#due to	Components" column) #*#(for Primary
	Reactor coolant	-	components see AMR Line Item
Stainless steel	and neutron flux	and fatigue	IV.B3.RP-312)
			Chapter XI.M2, "Water Chemistry," and
			#*#Chapter XI.M16A, "PWR Vessel
			Internals" #*#Primary components
			(identified in the "Structure and
		Creeking #*#due to	•
		Cracking #*#due to	Components" column) #*#(for
	Desistant	irradiation-assisted	Expansion components see AMR Line
	Reactor coolant	-	Items IV.B3.RP-316, IV.B3.RP-330, and
Stainless steel	and neutron flux	and fatigue	IV.B3.RP-358)
		Loss of preload #*#due	
		to irradiation enhanced	
			Chapter XI.M16A, "PWR Vessel
		of fracture toughness	Internals," Primary components
		#*#due to neutron	(identified in the "Structure and
		irradiation embrittlement;	x ·
	Depater coolant		Components" column) #*# (for
	Reactor coolant	#*# change in dimension	Expansion components see AMR Line
Stainless steel	and neutron flux	#*#due to void swelling	Items IV.B3.RP-317, and IV.B3.RP-331)
			Chapter XI.M2, "Water Chemistry," and
			#*#Chapter XI.M16A, "PWR Vessel
			Internals" #*#Expansion components
			(identified in the "Structure and
		Cracking #*#due to	Components" column) #*#(for Primary
	Reactor coolant	irradiation-assisted	components see AMR Line Item
Stainless steel	and neutron flux	stress corrosion cracking	IV.B3.RP-314)
		Loss of preload #*#due	Chapter XI.M16A, "PWR Vessel
		to irradiation enhanced	Internals" #*#Expansion components
			(identified in the "Structure and
		of fracture toughness	Components" column) #*#(for Primary
Stainless steel;	Reactor coolant	#*#due to neutron	components see AMR Line Item
nickel alloy	and neutron flux	irradiation embrittlement	IV.B3.RP-315)

Stainless steel	Reactor coolant and neutron flux	Loss of fracture toughness #*#due to neutron irradiation embrittlement; #*#change in dimension #*#due to void swelling	Chapter XI.M16A, "PWR Vessel Internals" #*#Primary components (identified in the "Structure and Components" column) #*#no Expansion components
Stainless steel	Reactor coolant and neutron flux	Loss of material #*#due to wear; #*#Loss of preload #*#due to irradiation enhanced stress relaxation	Chapter XI.M16A, "PWR Vessel Internals" #*#Existing Program components (identified in the "Structure and Components" column) #*#no Expansion components
Stainless steel	Reactor coolant and neutron flux	Cracking #*#due to fatigue	'Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M16A, "PWR Vessel Internals" #*#Existing Program components (identified in the "Structure and Components" column) #*#no Expansion components
			Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M16A, "PWR Vessel
Stainless steel	Reactor coolant and neutron flux	Cracking #*#due to irradiation-assisted stress corrosion cracking	Internals" #*#Primary components (identified in the "Structure and Components" column) #*#(for Expansion components see AMR Line Item IV.B3.RP-323)
			Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M16A, "PWR Vessel Internals" #*#Expansion components (identified in the "Structure and
Stainless steel	Reactor coolant and neutron flux	Cracking #*#due to irradiation-assisted stress corrosion cracking	Components" column) #*#(for Primary components see AMR Line Item IV.B3.RP-322)

			Chapter VI M2 "Mater Chamietry" and
			Chapter XI.M2, "Water Chemistry," and
			#*#Chapter XI.M16A, "PWR Vessel
			Internals" #*#Primary components
			(identified in the "Structure and
	Desidencestant	Cracking #*#due to	Components" column) #*#(for
	Reactor coolant	irradiation-assisted	Expansion components see AMR Line
Stainless steel	and neutron flux	stress corrosion cracking	
			Chapter XI.M2, "Water Chemistry," and
			#*#Chapter XI.M16A, "PWR Vessel
			Internals" #*#Expansion components
			(identified in the "Structure and
		Cracking #*#due to	Components" column) #*#(for Primary
	Reactor coolant	irradiation-assisted	components see AMR Line Item
Stainless steel	and neutron flux	stress corrosion cracking	,
			Chapter XI.M16A, "PWR Vessel
			Internals" #*#Primary components
			(identified in the "Structure and
	Reactor coolant	Change in dimension	Components" column) #*#no Expansion
Stainless steel	and neutron flux	#*#due to void swelling	components
			Chapter XI.M2, "Water Chemistry," and
			#*#Chapter XI.M16A, "PWR Vessel
			Internals" #*#Primary components
			(identified in the "Structure and
			Components" column) #*#(for
			Expansion components see AMR Line
			Items IV.B3.RP-329, IV.B3.RP-335,
	Reactor coolant	Cracking #*#due to	IV.B3.RP-362, IV.B3.RP-363,
Stainless steel	and neutron flux	stress corrosion cracking	
			Chapter XI.M2, "Water Chemistry," and
			#*#Chapter XI.M16A, "PWR Vessel
			Internals" #*#Primary components
		Cracking #*#due to	(identified in the "Structure and
	Reactor coolant	-	Components" column) #*#no Expansion
Stainless steel	and neutron flux	and fatigue	components
			Chapter XI.M2, "Water Chemistry," and
			#*#Chapter XI.M16A, "PWR Vessel
			Internals" #*#Expansion components
			(identified in the "Structure and
			Components" column) #*#(for Primary
	Reactor coolant	Cracking #*#due to	components see AMR Line Item
Stainless steel	and neutron flux	stress corrosion cracking	
			Chapter XI.M2, "Water Chemistry," and
			#*#Chapter XI.M16A, "PWR Vessel
			Internals" #*#Expansion components
		Cracking #*#due to	(identified in the "Structure and
		irradiation-assisted	Components" column) #*#(for Primary
	Reactor coolant	stress corrosion cracking	components see AMR Line Item
Stainless steel	and neutron flux	and fatigue	'IV.B3.RP-314)

			Chapter XI.M16A, "PWR Vessel
Stainless steel	Reactor coolant and neutron flux	Loss of fracture toughness #*#due to neutron irradiation embrittlement	Internals" #*#Expansion components (identified in the "Structure and Components" column) #*#(for Primary components see AMR Line Item 'IV.B3.RP-315)
Stainless steel	Reactor coolant and neutron flux	Loss of material #*#due to wear	Chapter XI.M16A, "PWR Vessel Internals" #*#Existing Program components (identified in the "Structure and Components" column) #*#no Expansion components
Stainless steel	Reactor coolant and neutron flux	Cracking #*#due to fatigue	TLAA, or #*#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M16A, "PWR Vessel Internals" #*#Primary components (identified in the "Structure and Components" column) #*#no Expansion components
Stainless steel	Reactor coolant and neutron flux	Cracking #*#due to irradiation-assisted stress corrosion cracking and fatigue	Expansion components
Stainless steel	Reactor coolant and neutron flux	Cracking #*#due to stress corrosion cracking, irradiation- assisted stress corrosion cracking, and fatigue	Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M16A, "PWR Vessel Internals" #*#Expansion components (identified in the "Structure and Components" column) #*#(for Primary components see AMR Line Item IV.B3.RP-327)
Stainless steel	Reactor coolant and neutron flux	Loss of material #*#due to wear; #*#loss of fracture toughness #*#due to neutron irradiation embrittlement; loss of preload #*#due to irradiation enhanced stress relaxation	Chapter XI.M16A, "PWR Vessel Internals" #*#Existing Program components (identified in the "Structure and Components" column) #*#no Expansion components
Stainless steel	Reactor coolant and neutron flux	Cracking #*#due to fatigue	'Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M16A, "PWR Vessel Internals" #*#Primary components (identified in the "Structure and Components" column) #*#no Expansion components

		Cumulative fatigue	Fatigue is a time-limited aging analysis (TLAA) to be evaluated for the period of extended operation. See the SRP, Section 4.3 "Metal Fatigue," for
Stainless steel;	Reactor coolant	damage #*#due to	acceptable methods for meeting the
nickel alloy	and neutron flux	fatigue	requirements of 10 CFR 54.21(c)(1).
Stainless steel	Reactor coolant and neutron flux	Cracking #*#due to stress corrosion cracking, irradiation- assisted stress corrosion cracking, and fatigue	Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M16A, "PWR Vessel Internals" #*#Primary components (identified in the "Structure and Components" column) #*#no Expansion components
Stainless steel	Reactor coolant and neutron flux	Cracking #*#due to fatigue	Chapter XI.M2, "Water Chemistry", and #*#Chapter XI.M16A, "PWR Vessel Internals" #*#Primary components (identified in the "Structure and Components" column) #*#no Expansion components
Stall liess steel		laligue	Chapter XI.M1, "ASME Section XI
Stainless steel; steel with stainless steel		Cracking #*#due to	Inservice Inspection, Subsections IWB, IWC, and IWD" for Class 1 components, and #*#Chapter XI.M2,
cladding	Reactor coolant	stress corrosion cracking	"Water Chemistry"
Stainless steel	Reactor coolant and neutron flux	Loss of material #*#due to wear	Chapter XI.M16A, "PWR Vessel Internals" #*# Existing Program components (identified in the "Structure and Components" column)#*#no Expansion components
Stainlass staal	Reactor coolant	.	'Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M16A, "PWR Vessel Internals" #*#Existing Program components (identified in the "Structure and Components" column) #*#no
Stainless steel	and neutron flux	and fatigue	Expansion components Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M16A, "PWR Vessel Internals" #*#Expansion components (identified in the "Structure and Components" column) #*#(for Primary
Nickel alloy	Reactor coolant and neutron flux	Cracking #*#due to stress corrosion cracking	components see AMR Line Item IV.B4.RP-261)
Steel	Concrete	None	#M#None, provided #*#1) attributes of the concrete are consistent with ACI 318 or ACI 349 (low water-to-cement ratio, low permeability, and adequate air entrainment) as cited in NUREG-1557, and #*#2) plant OE indicates no degradation of the concrete#M#
	Concrete	None	

		Loss of fracture	
		toughness #*#due to neutron irradiation	
		embrittlement;	
		#*#change in dimension	Chapter XI.M16A, "PWR Vessel
		#*#due to void swelling;	Internals" #*#Primary components
		#*#loss of preload	(identified in the "Structure and
	Reactor coolant	#*#due to stress	Components" column) #*#no Expansion
Stainless steel	and neutron flux	relaxation	components
		Cracking #*#due to	
	Reactor coolant		A plant-specific aging management
Nickel alloy	and neutron flux	and fatigue	program is to be evaluated
	Reactor coolant	Loss of material #*#due	A plant-specific aging management
Nickel alloy	and neutron flux	to wear	program is to be evaluated
	Reactor coolant	Loss of material #*#due	A plant-specific aging management
Zircaloy-4	and neutron flux	to wear	program is to be evaluated
			Chapter XI.M2, "Water Chemistry," and
			#*#Chapter XI.M16A, "PWR Vessel
			Internals" #*#Expansion components
			(identified in the "Structure and
	Depatencestant	Cracking #*#due to	Components" column) #*#(for Primary
Otainlaga ataal	Reactor coolant	irradiation-assisted	component see AMR Line Item
Stainless steel	and neutron flux	stress corrosion cracking	IV.B3.RP-314)
		Loss of fracture	
		toughness #*#due to	Chapter XI.M16A, "PWR Vessel
		neutron irradiation	Internals," Primary components
		embrittlement;	(identified in the "Structure and
	Reactor coolant	#*#change in dimension	Components" column) #*# no
Stainless steel	and neutron flux	#*#due to void swelling	Expansion components
			#M#Chapter XI.M1, "ASME Section XI
			Inservice Inspection, Subsections IWB,
			IWC, and IWD" for Class 1
			components, and #*#Chapter XI.M2,
			"Water Chemistry," and #*#Chapter
Steel (with			XI.M11B, "Cracking of Nickel-Alloy
nickel-alloy		Cracking #*#due to	Components and Loss of Material Due
cladding); nickel		primary water stress	to Boric Acid-Induced Corrosion in
alloy	Reactor coolant	corrosion cracking	RCPB Components (PWRs Only)"#M#
			#M#Chapter XI M1 "ASME Section XI
			#M#Chapter XI.M1, "ASME Section XI Inservice Inspection, Subsections IWB,
			IWC, and IWD" for Class 1
			components, and #*#Chapter XI.M2,
			"Water Chemistry," and #*#Chapter
Steel (with			XI.M11B, "Cracking of Nickel-Alloy
nickel-alloy		Cracking #*#due to	Components and Loss of Material Due
cladding); nickel		primary water stress	to Boric Acid-Induced Corrosion in
alloy	Reactor coolant	corrosion cracking	RCPB Components (PWRs Only)"#M#
anoj	i touotor boolant	concolori oradiang	

			Chapter XI.M16A, "PWR Vessel
			Internals" #*#Primary components
		Loss of fracture	(identified in the "Structure and
		toughness #*#due to	Components" column) #*#(for
	Reactor coolant	neutron irradiation	Expansion components see AMR Line
Stainless steel	and neutron flux	embrittlement	Items IV.B3.RP-361)
			Chapter XI.M16A, "PWR Vessel
			Internals" #*#Expansion components
		Loss of fracture	(identified in the "Structure and
		toughness #*#due to	Components" column) #*#(for Primary
	Reactor coolant	neutron irradiation	components see AMR Line Items
Stainless steel	and neutron flux	embrittlement	IV.B3.RP-360)
			Chapter XI.M16A, "PWR Vessel
			Internals" #*#Expansion components
		Loss of fracture	(identified in the "Structure and
		toughness #*#due to	Components" column) #*#(for Primary
	Reactor coolant	neutron irradiation	components see AMR Line Items
Stainless steel	and neutron flux	embrittlement	IV.B3.RP-327)
Otali liess steel		embridement	Chapter XI.M16A, "PWR Vessel
			Internals" #*#Expansion components
		Loss of fracture	(identified in the "Structure and
	Deceter coolent	toughness #*#due to	Components" column) #*#(for Primary
	Reactor coolant	neutron irradiation	components see AMR Line Items
Stainless steel	and neutron flux	embrittlement	IV.B3RP-327)
			Chapter XI.M16A, "PWR Vessel
			Internals" #*#Expansion components
		Loss of fracture	(identified in the "Structure and
		toughness #*#due to	Components" column) #*#(for Primary
Cast austenitic	Reactor coolant	neutron irradiation and	components see AMR Line Items
stainless steel	and neutron flux	thermal embrittlement	IV.B3RP-327)
			Chapter XI.M16A, "PWR Vessel
		Loss of fracture	Internals" #*#Primary component
		toughness #*#due to	(identified in the "Structure and
	Reactor coolant	neutron irradiation	Components" column) #*# no
Stainless steel	and neutron flux	embrittlement	Expansion components
			Chapter XI.M16A, "PWR Vessel
		Loss of fracture	Internals" #*#Primary components
		toughness #*#due to	(identified in the "Structure and
	Reactor coolant	neutron irradiation	Components" column) #*#no Expansion
Stainless steel	and neutron flux	embrittlement	components
			#M#Chapter XI.M2, "Water Chemistry"
			#*#For nickel alloy divider plate
			assemblies and associated welds made
Steel (with			of Alloy 600, effectiveness of the
nickel-alloy		Cracking #*#due to	chemistry control program should be
cladding); nickel		primary water stress	verified to ensure that cracking due to
alloy	Reactor coolant	corrosion cracking	PWSCC is not occurring.#M#
	i salete. secondrit	een een en alonning	

Steel	Secondary feedwater or	Loss of material #*#due to general, pitting, and	#M#Chapter XI.M1, "ASME Section XI Inservice Inspection, Subsections IWB, IWC, and IWD" for Class 2 components, and #*#Chapter XI.M2, "Water Chemistry" #*#As noted in NRC IN 90-04, if general and pitting corrosion of the shell exists, Chapter XI.M1 methods may not be sufficient to detect general and pitting corrosion (and the resulting corrosion-fatigue cracking), and additional inspection procedures are to be developed. This issue is limited to Westinghouse Model 44 and 51 Steam Generators where a high stress region exists at the shell to transition cone weld. The new transition is only applicable to replacement
Steel	steam	crevice corrosion	recirculating steam generators.#M#
Stainless steel; nickel alloy	Reactor coolant	Cracking #*#due to stress corrosion cracking, intergranular stress corrosion cracking, cyclic loading	Chapter XI.M8, "BWR Penetrations," and #*#Chapter XI.M2, "Water Chemistry"
Nickel alloy; nickel-alloy cladding	Reactor coolant	Cracking #*#due to primary water stress corrosion cracking	#M#Chapter XI.M1, "ASME Section XI Inservice Inspection, Subsections IWB, IWC, and IWD" for Class 1 components, and #*#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M11B, "Cracking of Nickel-Alloy Components and Loss of Material Due to Boric Acid-Induced Corrosion in RCPB Components (PWRs Only)"#M#
Stainless steel; nickel alloy	Reactor coolant	Cracking #*#due to stress corrosion cracking, intergranular stress corrosion cracking, cyclic loading	#M#Chapter XI.M1, "ASME Section XI Inservice Inspection, Subsections IWB, IWC, and IWD," and #*#Chapter XI.M2, "Water Chemistry"#M#
Steel	Secondary feedwater or steam	Loss of material #*#due to general, pitting, and crevice corrosion	Chapter XI.M2, "Water Chemistry" and #*#Chapter XI.M32, "One-Time Inspection"

			Chapter XI.M2, "Water Chemistry," and
			#*#Chapter XI.M16A, "PWR Vessel
			Internals" #*#Expansion components
			(identified in the "Structure and
	Desistencestant		Components" column) #*#(for Primary
	Reactor coolant	Cracking #*#due to	components see AMR Line Item
Stainless steel	and neutron flux	fatigue	IV.B4.RP-241)
Stainless steel; nickel alloy	Reactor coolant and neutron flux	Reduction in ductility and fracture toughness #*#due to neutron irradiation	Ductility - Reduction in Fracture Toughness is a TLAA (BAW-2248A) to be evaluated for the period of extended operation. See the SRP, Section 4.7, "Other Plant-Specific TLAAs," for acceptable methods for meeting the requirements of 10 CFR 54.21(c)(1).
		Loss of material #*#due	
Stainless steel	Reactor coolant	to wear	Chapter XI.M9, "BWR Vessel Internals"
			Chapter XI.MB, DWK Vesser Internals
	Air with borated		
Nickel alloy	water leakage	None	None
· · · · · · · · · · · · · · · · · · ·			
			#M#Chapter XI.M10, "Boric Acid
			Corrosion," and #*#Chapter XI.M11B,
			"Cracking of Nickel-Alloy Components
			and Loss of Material Due to Boric Acid-
	Air with borated	Loss of material #*#due	Induced Corrosion in RCPB
Steel	water leakage	to boric acid corrosion	Components (PWRs Only)"#M#
			#M#Chapter XI.M10, "Boric Acid
			Corrosion," and #*#Chapter XI.M11B,
			"Cracking of Nickel-Alloy Components
			and Loss of Material Due to Boric Acid-
	Air with borated	Loss of material #*#due	Induced Corrosion in RCPB
Steel	water leakage	to boric acid corrosion	Components (PWRs Only)"#M#
		Cracking #*#due to	Chapter XI.M9, "BWR Vessel Internals"
	Reactor coolant	intergranular stress	for core plate, and #*#Chapter XI.M2,
X-750 alloy	and neutron flux	corrosion cracking	"Water Chemistry"
#M#Stainless			
steel; nickel			
alloy; cast			
austenitic		#M#Cracking, or	Chapter XI.M1, "ASME Section XI
stainless	Reactor coolant	#*#Loss of material	Inservice Inspection, Subsections IWB,
steel#M#	and neutron flux	#*#due to wear#M#	IWC, and IWD"
#M#Stainless			
steel; nickel			
alloy; cast			
austenitic		#M#Cracking, or	Chapter XI.M1, "ASME Section XI
stainless	Reactor coolant	#*#Loss of material	Inservice Inspection, Subsections IWB,
steel#M#	and neutron flux	#*#due to wear#M#	IWC, and IWD"

#M#Stainless			
steel; nickel			
alloy; cast			
austenitic		#M#Cracking, or	Chapter XI.M1, "ASME Section XI
stainless	Reactor coolant	#*#Loss of material	Inservice Inspection, Subsections IWB,
steel#M#	and neutron flux	#*#due to wear#M#	IWC, and IWD"
SIECI#IVI#			
Ctainlaga ataolu			
Stainless steel;			
steel with	Treated borated	_	Chapter XI.M2, "Water Chemistry," and
stainless steel	water >60°C	Cracking #*#due to	#*#Chapter XI.M32, "One-Time
cladding	(>140°F)	stress corrosion cracking	Inspection"
#M#Steel;			
chrome plated		#M#Cracking #*#due to	
steel; stainless	Secondary	stress corrosion cracking	Chapter XI.M19, "Steam Generators,"
steel; nickel	feedwater or	or other	
			and #*#Chapter XI.M2, "Water
alloy#M#	steam	mechanism(s)#M#	Chemistry"
			#M#Chapter XI.M2, "Water Chemistry"
			#*#For nickel alloy divider plate
			assemblies and associated welds made
			of Alloy 600, effectiveness of the
		Cracking #*#due to	chemistry control program should be
		-	
		primary water stress	verified to ensure that cracking due to
Nickel alloy	Reactor coolant	corrosion cracking	PWSCC is not occurring.#M#
			Chapter XI.M16A, "PWR Vessel
			Internals" #*#Expansion components
			(identified in the "Structure and
			Components" column) are only the
			· · · · · ·
			components associated with a primary
			component that exceeded the
			acceptance limit. #*#(for Primary
	Reactor coolant	Loss of material #*#due	components see AMR Line Item
Stainless steel	and neutron flux	to wear	IV.B2.RP-296)
			Chapter XI.M2, "Water Chemistry," and
			#*#Chapter XI.M16A, "PWR Vessel
		Cracking #*#due to	Internals" #*#Expansion components
			(identified in the "Structure and
		stress corrosion	X .
		cracking, and irradiation-	Components" column) #*#(for Primary
	Reactor coolant	assisted stress corrosion	components see AMR Line Item
Stainless steel	and neutron flux	cracking	IV.B2.RP-276)
			Chapter XI.M16A, "PWR Vessel
			Internals" #*#Expansion components
		Loss of fracture	(identified in the "Structure and
		toughness #*#due to	Components" column) #*#(for Primary
	Depeter coolent	-	
	Reactor coolant	neutron irradiation	components see AMR Line Item
Stainless steel	and neutron flux	embrittlement	IV.B2.RP-276)
		Loss of material #*#due	#M#Chapter XI.M1, "ASME Section XI
		to general (steel only),	Inservice Inspection, Subsections IWB,
Steel; stainless		pitting, and crevice	IWC, and IWD," and #*#Chapter XI.M2,
steel	Reactor coolant	corrosion	"Water Chemistry"#M#
01001		0011001011	

		Creaking #*#due to	
		Cracking #*#due to stress corrosion	#M#Chapter XI.M2, "Water Chemistry,"
#M#Nickel		cracking, primary water	and #*#Chapter XI.M32, "One-Time
alloy#M#	Reactor coolant	stress corrosion cracking	
allOy#IVI#		#M#Cracking #*#due to	Chapter XI.M2, "Water Chemistry," and
#M#Stainless		stress corrosion	#*#Chapter XI.M32, "One-Time
Steel#M#	Reactor coolant	cracking#M#	Inspection"
Steel#IVI#			
		#M#Loss of material	
#M#Steel;	#M#Air with	#*#due to general (steel	
stainless	reactor coolant	only), pitting, and crevice	
steel#M#	leakage#M#	corrosion or wear#M#	Chapter XI.M18, "Bolting Integrity"
51001#1VI#		Loss of preload #*#due	Chapter XI.W10, Dotting integrity
#M#Steel;		to thermal effects,	
stainless		gasket creep, and self-	
steel#M#	#M#Air#M#	loosening	Chapter XI.M18, "Bolting Integrity"
Steelminim			Chapter XI.W10, Doning integrity
			Fatigue is a TLAA evaluated for the
			period of extended operation; check
			ASME Code limits for allowable cycles
			(less than 7000 cycles) of thermal
#M#Steel;	System	Cumulative fatigue	stress range. (SRP Sec 4.3 "Metal
stainless	temperature up to	damage #*#due to	Fatigue," for acceptable methods to
steel#M#	288°C (550°F)	fatigue	comply with 10 CFR 54.21(c)(1))
Steelminim	200 C (330 T)	Loss of preload #*#due	
#M#Steel;	#M#Air – indoor,	to thermal effects,	
stainless	uncontrolled	gasket creep, and self-	
steel#M#	(External)#M#	loosening	Chapter XI.M18, "Bolting Integrity"
		Loss of preload #*#due	
#M#Steel;	#M#Air – indoor,	to thermal effects,	
stainless	uncontrolled	gasket creep, and self-	
steel#M#	(External)#M#	loosening	Chapter XI.M18, "Bolting Integrity"
			#M#Chapter XI.M1, "ASME Section XI
Steel (with		Cracking #*#due to	Inservice Inspection, Subsections IWB,
stainless steel		stress corrosion	IWC, and IWD" for Class 1
or nickel-alloy		cracking, primary water	components, and #*#Chapter XI.M2,
cladding)	Reactor coolant	stress corrosion cracking	
		ŭ	
		#M#Wall thinning #*#due	
	Secondary	to flow-accelerated	#M#Chapter XI.M19, "Steam
	feedwater or	corrosion and general	Generators," and #*#Chapter XI.M2,
Steel	steam	corrosion#M#	"Water Chemistry"#M#
	Secondary	Wall thinning #*#due to	#M#Chapter XI.M19, "Steam
	feedwater or	flow-accelerated	Generators," and #*#Chapter XI.M2,
Steel	steam	corrosion	"Water Chemistry"#M#
		Loss of material #*#due	#M#Chapter XI.M2, "Water Chemistry,"
		to general, pitting, and	and #*#Chapter XI.M32, "One-Time
Steel	Reactor coolant	crevice corrosion	Inspection"#M#

		Cracking #*#due to	
#M#High-		stress corrosion	
strength, low-	Air with reactor	cracking, intergranular	Chapter XI.M3, "Reactor Head Closure
alloy steel#M#	coolant leakage	stress corrosion cracking	
#M#High-			
strength, low-	Air with reactor	Cracking #*#due to	Chapter XI.M3, "Reactor Head Closure
alloy steel#M#	coolant leakage	stress corrosion cracking	Stud Bolting"
		#M#Loss of material	
#M#High-		#*#due to general,	
strength, low-	Air with reactor	pitting, and crevice	Chapter XI.M3, "Reactor Head Closure
alloy steel#M#	coolant leakage	corrosion, or wear#M#	Stud Bolting"
			Entiry of the limited point analysis
			Fatigue is a time-limited aging analysis
			(TLAA) to be evaluated for the period of extended operation. See the SRP,
#M#High-		Cumulative fatigue	Section 4.3 "Metal Fatigue," for
strength, low-	Air with reactor	damage #*#due to	acceptable methods for meeting the
alloy steel#M#	coolant leakage	fatigue	requirements of 10 CFR 54.21(c)(1).
	ocolum loukugo		#M#Chapter XI.M1, "ASME Section XI
		Cracking #*#due to	Inservice Inspection, Subsections IWB,
		stress corrosion	IWC, and IWD" for Class 1
Stainless steel;		cracking, primary water	components, and #*#Chapter XI.M2,
nickel alloy	Reactor coolant	stress corrosion cracking	
		<u> </u>	
			#M#Chapter XI.M1, "ASME Section XI
			Inservice Inspection, Subsections IWB,
			IWC, and IWD" for Class 1
			components, and #*#Chapter XI.M2,
			"Water Chemistry," and #*#Chapter
			XI.M11B, "Cracking of Nickel-Alloy
		Cracking #*#due to	Components and Loss of Material Due
		primary water stress	to Boric Acid-Induced Corrosion in
Nickel alloy	Reactor coolant	corrosion cracking	RCPB Components (PWRs Only)"#M#
			#M#Chapter XI.M1, "ASME Section XI
			Inservice Inspection, Subsections IWB,
			IWC, and IWD" for Class 1 components, and #*#Chapter XI.M2,
			"Water Chemistry," and #*#Chapter
			XI.M11B, "Cracking of Nickel-Alloy
		Cracking #*#due to	Components and Loss of Material Due
		primary water stress	to Boric Acid-Induced Corrosion in
Nickel alloy	Reactor coolant	corrosion cracking	RCPB Components (PWRs Only)"#M#
. Honor anoy		concolor ordoning	
			A plant-specific aging management
			program is to be evaluated for pitting
			and crevice corrosion of tank bottom
		Loss of material #*#due	because moisture and water can egress
		to pitting and crevice	under the tank due to cracking of the
Stainless steel	Raw water	corrosion	perimeter seal from weathering.

	Air with steam or	Loss of material #*#due	
Steel	water leakage	to general corrosion	Chapter XI.M18, "Bolting Integrity"
		Cracking #*#due to	Chapter XI.W10, Dotting integrity
Steel, high-	Air with steam or	cyclic loading, stress	
strength	water leakage	corrosion cracking	Chapter XI.M18, "Bolting Integrity"
ouongui	Hater realitage	Wall thinning #*#due to	
		flow-accelerated	Chapter XI.M17, "Flow-Accelerated
Steel	Steam	corrosion	Corrosion"
		Wall thinning #*#due to	
		flow-accelerated	Chapter XI.M17, "Flow-Accelerated
Steel	Treated water	corrosion	Corrosion"
Steel	Treated water	Cumulative fatigue damage #*#due to fatigue	Fatigue is a time-limited aging analysis (TLAA) to be evaluated for the period of extended operation. See the SRP, Section 4.3 "Metal Fatigue," for acceptable methods for meeting the requirements of 10 CFR 54.21(c)(1).
		Loss of fracture	
		toughness #*#due to	Chapter XI.M12, "Thermal Aging
Cast austenitic	Treated water	thermal aging	Embrittlement of Cast Austenitic
stainless steel	>250°C (>482°F)	embrittlement	Stainless Steel (CASS)"
	Treated water		
	(borated) >60°C	Cracking #*#due to	
Stainless steel	(>140°F)	-	Chapter XI.M2, "Water Chemistry"
	Treated water		
	(borated) >60°C	Cracking #*#due to	
Stainless steel	(>140°F)	stress corrosion cracking	Chapter XI.M2, "Water Chemistry"
Stainless steel	Treated water (borated)	Cumulative fatigue damage #*#due to fatigue Reduction of heat	Fatigue is a time-limited aging analysis (TLAA) to be evaluated for the period of extended operation. See the SRP, Section 4.3 "Metal Fatigue," for acceptable methods for meeting the requirements of 10 CFR 54.21(c)(1).
		transfer #*#due to	Chapter XI.M20, "Open-Cycle Cooling
Stainless steel	Raw water	fouling	Water System"
Stainless steel	Raw water	Reduction of heat transfer #*#due to fouling	Chapter XI.M20, "Open-Cycle Cooling Water System"
		Reduction of heat	
		transfer #*#due to	#M#Chapter XI.M20, "Open-Cycle
Stainless steel	Raw water	fouling	Cooling Water System"#M#
		#M#Loss of material	
		#*#due to general,	
		pitting, crevice, and	
		microbiologically-	
		influenced corrosion;	Chapter XI M20, "Open Quelo Casting
Stool	Pow water	fouling that leads to	Chapter XI.M20, "Open-Cycle Cooling
Steel	Raw water	corrosion#M#	Water System"

		Reduction of heat	
		transfer #*#due to	Chapter XI.M20, "Open-Cycle Cooling
Steel	Raw water	fouling	Water System"
			A plant-specific aging management
			program is to be evaluated for erosion
			of the orifice due to extended use of the
	The stad wester		centrifugal HPSI pump for normal
	Treated water	Loss of material #*#due	charging. See LER 50-275/94-023 for
Stainless steel	(borated)	to erosion	evidence of erosion.
	Air – indoor,		Chapter XI.M38, "Inspection of Internal
o	uncontrolled	Loss of material #*#due	Surfaces in Miscellaneous Piping and
Steel	(Internal)	to general corrosion	Ducting Components"
	Air – indoor,		
	uncontrolled	Loss of material #*#due	Chapter XI.M36, "External Surfaces
Steel	(External)	to general corrosion	Monitoring of Mechanical Components"
	Air – indoor,		
	uncontrolled	Loss of material #*#due	Chapter XI.M36, "External Surfaces
Steel	(External)	to general corrosion	Monitoring of Mechanical Components"
	Air – indoor,		
	uncontrolled	Loss of material #*#due	Chapter XI.M36, "External Surfaces
Steel	(External)	to general corrosion	Monitoring of Mechanical Components"
		Loss of material #*#due	Chapter XI.M38, "Inspection of Internal
	Condensation	to general, pitting, and	Surfaces in Miscellaneous Piping and
Steel	(Internal)	crevice corrosion	Ducting Components"
	Air with borated	Loss of material #*#due	
Steel	water leakage	to boric acid corrosion	Chapter XI.M10, "Boric Acid Corrosion"
	Air with borated	Loss of material #*#due	
Steel	water leakage	to boric acid corrosion	Chapter XI.M10, "Boric Acid Corrosion"
	Air with borated	Loss of material #*#due	
Steel	water leakage	to boric acid corrosion	Chapter XI.M10, "Boric Acid Corrosion"
	Air – indoor,		Chapter XI.M38, "Inspection of Internal
	uncontrolled	Loss of material #*#due	Surfaces in Miscellaneous Piping and
Steel	(Internal)	to general corrosion	Ducting Components"
	Air – indoor,		Chapter XI.M38, "Inspection of Internal
	uncontrolled	Loss of material #*#due	Surfaces in Miscellaneous Piping and
Steel	(Internal)	to general corrosion	Ducting Components"
	Condensation	Loss of material #*#due	Chapter XI.M36, "External Surfaces
Steel	(External)	to general corrosion	Monitoring of Mechanical Components"
		#M#Loss of material	
		#*#due to pitting,	
		crevice, and	
		microbiologically-	
		influenced corrosion;	
		fouling that leads to	Chapter XI.M20, "Open-Cycle Cooling
Stainlosa atacl	Pow water	-	
Stainless steel	Raw water	corrosion#M#	Water System"

	Air – indoor,		Obserter VI MOC IIF stored Overfaces
	uncontrolled	Loss of material #*#due	Chapter XI.M36, "External Surfaces
Steel	(External)	to general corrosion	Monitoring of Mechanical Components"
		-	
		Cracking #*#due to	
		stress corrosion	Chapter XI.M7, "BWR Stress Corrosion
	Treated water	cracking, intergranular	Cracking," and #*#Chapter XI.M2,
Stainless steel	>60°C (>140°F)	stress corrosion cracking	"Water Chemistry"
Steel (with			
stainless steel	Treated water		
or nickel-alloy	(borated) >60°C	Cracking #*#due to	
cladding)	(>140°F)	stress corrosion cracking	Chapter XI.M2, "Water Chemistry"
oladanig)	Air – indoor,		
	uncontrolled	Loss of material #*#due	Chapter XI.M36, "External Surfaces
Steel			Monitoring of Mechanical Components"
Sleel	(External)	to general corrosion	
	A in with the number of		
o	Air with borated	Loss of material #*#due	
Steel	water leakage	to boric acid corrosion	Chapter XI.M10, "Boric Acid Corrosion"
		Loss of material #*#due	
Gray cast iron	Treated water	to selective leaching	Chapter XI.M33, "Selective Leaching"
		Loss of material #*#due	
Gray cast iron	Treated water	to selective leaching	Chapter XI.M33, "Selective Leaching"
	Air – indoor,		
	uncontrolled	Loss of material #*#due	Chapter XI.M36, "External Surfaces
Steel	(External)	to general corrosion	Monitoring of Mechanical Components"
	Air – outdoor	Loss of material #*#due	Chapter XI.M36, "External Surfaces
Steel	(External)	to general corrosion	Monitoring of Mechanical Components"
	Condensation	Loss of material #*#due	Chapter XI.M36, "External Surfaces
Steel	(External)	to general corrosion	Monitoring of Mechanical Components"
01661		Loss of fracture	
	Treated water	toughness #*#due to	Chapter XI.M12, "Thermal Aging
Cost sustanitie		-	
Cast austenitic	(borated) >250°C	thermal aging	Embrittlement of Cast Austenitic
stainless steel	(>482°F)	embrittlement	Stainless Steel (CASS)"
	Air – indoor,		
	uncontrolled		
Copper alloy	(External)	None	None
		Reduction of heat	
	Closed-cycle	transfer #*#due to	#M#Chapter XI.M21A, "Closed Treated
Copper alloy	cooling water	fouling	Water Systems"#M#
	Air with borated	Loss of material #*#due	
Aluminum	water leakage	to boric acid corrosion	Chapter XI.M10, "Boric Acid Corrosion"
		Cracking #*#due to	Chapter XI.M36, "External Surfaces
Stainless steel	Air – outdoor	stress corrosion cracking	Monitoring of Mechanical Components"
		i i i i i i i i i i i i i i i i i i i	

Stainless steel	Air – outdoor	Cracking #*#due to stress corrosion cracking	Chapter XI.M36, "External Surfaces Monitoring of Mechanical Components"
Stainless steel	Air – outdoor	Cracking #*#due to	Chapter XI.M36, "External Surfaces Monitoring of Mechanical Components"
Stainless steel	Air – outdoor	Cracking #*#due to stress corrosion cracking	Chapter XI.M36, "External Surfaces Monitoring of Mechanical Components"
Stainless steel	Air – outdoor	Loss of material #*#due to pitting and crevice corrosion	Chapter XI.M36, "External Surfaces Monitoring of Mechanical Components"
		Loss of material #*#due	
Stainless steel	Air – outdoor	to pitting and crevice corrosion	Chapter XI.M36, "External Surfaces Monitoring of Mechanical Components"
		Loss of material #*#due	
Ctainless steel	Air outdoor	to pitting and crevice	Chapter XI.M36, "External Surfaces
Stainless steel	Air – outdoor		Monitoring of Mechanical Components"
Stainless steel	Air – outdoor	Loss of material #*#due to pitting and crevice corrosion	Chapter XI.M36, "External Surfaces Monitoring of Mechanical Components"
		Loss of material #*#due to general, pitting,	
#M#Steel (with coating or		crevice, and microbiologically-	#M#Chapter XI.M41, "Buried and
wrapping)#M#	Soil	influenced corrosion	Underground Piping and Tanks"#M#
			#M#None, provided #*#1) attributes of the concrete are consistent with ACI 318 or ACI 349 (low water-to-cement
			ratio, low permeability, and adequate air entrainment) as cited in NUREG-1557, and #*#2) plant OE indicates no
Steel	Concrete	None #M#Loss of material	degradation of the concrete#M#
	Air – indoor, uncontrolled	#*#due to general corrosion; fouling that	A plant-specific aging management
Steel	(Internal)	leads to corrosion#M# Loss of material #*#due	program is to be evaluated
		to pitting and crevice	Chapter XI.M36, "External Surfaces
Aluminum	Air - outdoor	corrosion	Monitoring of Mechanical Components"
Nickel alloy	Air with borated water leakage	None	None

		l and of prolond #*#due	
		Loss of preload #*#due	
		to thermal effects,	
	A	gasket creep, and self-	
Copper alloy	Any environment	loosening	Chapter XI.M18, "Bolting Integrity"
		Loss of preload #*#due	
		to thermal effects,	
N 10 10 10		gasket creep, and self-	
Nickel alloy	Any environment	loosening	Chapter XI.M18, "Bolting Integrity"
		Loss of preload #*#due	
		to thermal effects,	
Steel; stainless	Air – outdoor	gasket creep, and self-	
steel	(External)	loosening	Chapter XI.M18, "Bolting Integrity"
		Loss of preload #*#due	
		to thermal effects,	
Steel; stainless		gasket creep, and self-	
steel	Raw water	loosening	Chapter XI.M18, "Bolting Integrity"
Copper alloy			
(≤15% Zn and	Air with borated		
≤8% AI)	water leakage	None	None
		Loss of preload #*#due	
		to thermal effects,	
	Treated borated	gasket creep, and self-	
Stainless steel	water	loosening	Chapter XI.M18, "Bolting Integrity"
		Loss of preload #*#due	
		to thermal effects,	
Steel; stainless		gasket creep, and self-	
steel	Fuel oil	loosening	Chapter XI.M18, "Bolting Integrity"
		Loss of preload #*#due	
		to thermal effects,	
Steel; stainless		gasket creep, and self-	
steel	Treated water	loosening	Chapter XI.M18, "Bolting Integrity"
.	Air – indoor,		
Galvanized	controlled		
steel	(External)	None	None
	Air – indoor,		
0	uncontrolled		News
Glass	(External)	None	None
Class	Lubrighting - 1	None	Neze
Glass	Lubricating oil	None	None
	Air – indoor,		
	uncontrolled	None	Nene
Nickel alloy	(External)	None	None
	Air – indoor,		
Otaliala a start	uncontrolled	Nama	Nega
Stainless steel	(External)	None	None
	Air with borated		News
Otaliala di t			
Stainless steel	water leakage	None	None
Stainless steel	water leakage	None	None
Stainless steel	water leakage Concrete	None	None

Stainless steel	Gas	None	None
Copper alloy	000		
(>15% Zn or	Closed-cycle	Loss of material #*#due	
>8% AI)	cooling water	to selective leaching	Chapter XI.M33, "Selective Leaching"
Copper alloy			
(>15% Zn or	Closed-cycle	Loss of material #*#due	
>8% AI)	cooling water	to selective leaching	Chapter XI.M33, "Selective Leaching"
Copper alloy			Chapter XI.M33, Selective Leaching
(>15% Zn or	Closed-cycle	Loss of material #*#due	
>8% AI)	cooling water	to selective leaching	Chapter XI.M33, "Selective Leaching"
Copper alloy			
(>15% Zn or	Closed-cycle	Loss of material #*#due	
>8% AI)	cooling water	to selective leaching	Chapter XI.M33, "Selective Leaching"
>070 Al)			Chapter XI.M33, Selective Leaching
Glass	Raw water	None	None
01833			None
Glass	Treated water	None	None
01033			
	Air – indoor,		
	uncontrolled		
Aluminum	(Internal/External)	None	None
Aluminum	Treated water		None
Glass	(borated)	None	None
Copper alloy			None
(>15% Zn or	Closed-cycle	Loss of material #*#due	
>8% AI)	cooling water	to selective leaching	Chapter XI.M33, "Selective Leaching"
Copper alloy			
(>15% Zn or	Closed-cycle	Loss of material #*#due	
>8% AI)	cooling water	to selective leaching	Chapter XI.M33, "Selective Leaching"
Copper alloy			
(>15% Zn or	Closed-cycle	Loss of material #*#due	
>8% AI)	cooling water	to selective leaching	Chapter XI.M33, "Selective Leaching"
Copper alloy		to ocicotive readming	Chapter Minioo, Gelective Leaching
(>15% Zn or	Closed-cycle	Loss of material #*#due	
>8% AI)	cooling water	to selective leaching	Chapter XI.M33, "Selective Leaching"
Copper alloy			Chapter Annoo, Ocioente Ecdening
(>15% Zn or	Air with borated	Loss of material #*#due	
>8% AI)	water leakage	to boric acid corrosion	Chapter XI.M10, "Boric Acid Corrosion"
3 /07 (1)	Air – indoor,		
	controlled		
Steel	(External)	None	None
		Loss of material #*#due	
	Treated water	to pitting and crevice	
Stainless steel	(borated)	corrosion	Chapter XI.M2, "Water Chemistry"
		Loss of material #*#due	Chapter Manie, Water Chemistry
	Treated water	to pitting and crevice	
Stainless steel	(borated)	corrosion	Chapter XI.M2, "Water Chemistry"
Stamless Steel	(Duraleu)	011051011	

	Air – indoor,	Loss of material #*#due	Chapter XI.M38, "Inspection of Internal
	uncontrolled	to general, pitting, and	Surfaces in Miscellaneous Piping and
Steel	(Internal)	crevice corrosion	Ducting Components"
		Loss of material #*#due	
	Air with borated	to general, pitting,	Chapter XI.M38, "Inspection of Internal
	water leakage	crevice, and boric acid	Surfaces in Miscellaneous Piping and
Steel	(Internal)	corrosion	Ducting Components"
			A plant-specific aging management
			program is to be evaluated
			#*#Reference NRC Information Notice
Steel (with stainless steel	Treated water	Loss of material #*#due	94-63, "Boric Acid Corrosion of
cladding)	(borated)	to cladding breach	Charging Pump Casings Caused by Cladding Cracks."
ciadulity)	(Dorated)		
	Closed-cycle	Loss of material #*#due	
Gray cast iron	cooling water	to selective leaching	Chapter XI.M33, "Selective Leaching"
		Loss of material #*#due	
Gray cast iron	Soil	to selective leaching	Chapter XI.M33, "Selective Leaching"
		Loss of material #*#due	
Gray cast iron	Soil	to selective leaching	Chapter XI.M33, "Selective Leaching"
	0.1	Loss of material #*#due	
Gray cast iron	Soil	to selective leaching	Chapter XI.M33, "Selective Leaching"
		Loss of material #*#due	
		to pitting, crevice, and	
		microbiologically-	Chapter XI.M20, "Open-Cycle Cooling
Stainless steel	Raw water	influenced corrosion	Water System"
	Air – indoor,	Hardening and loss of	#M#Chapter XI.M38, "Inspection of
	uncontrolled	strength #*#due to	Internal Surfaces in Miscellaneous
Elastomers	(Internal)	elastomer degradation	Piping and Ducting Components"#M#
	Air – indoor,	Hardening and loss of	#M#Chapter XI.M36, "External Surfaces
	uncontrolled	strength #*#due to	Monitoring of Mechanical
Elastomers	(External)	elastomer degradation	Components"#M#
Stool	Troated water		
Sieel	Treated water		
		Loss of material #*#due	#M#Chapter XI M38 "Inspection of
	Condensation		
Stainless steel			
	(
		Loss of material #*#due	#M#Chapter XI.M2, "Water Chemistry,"
		to general, pitting, and	and #*#Chapter XI.M32, "One-Time
		to general, pitting, and	and π π onapter π . π one-nine
Elastomers Steel Stainless steel	(External) Treated water Condensation (Internal)	Loss of material #*#due to general, pitting, and crevice corrosion Loss of material #*#due to pitting and crevice corrosion Loss of material #*#due	#M#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M32, "One-Time Inspection"#M# #M#Chapter XI.M38, "Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components"#M# #M#Chapter XI.M2, "Water Chemistry,"

		Loss of material #*#due	#M#Chapter XI.M2, "Water Chemistry,"
		to pitting and crevice	and #*#Chapter XI.M32, "One-Time
Stainless steel	Treated water	corrosion	Inspection [*] #M#
		#M#Loss of material	
#M#Steel;		#*#due to general (steel	
stainless	Air – outdoor	only), pitting, and crevice	
steel#M#	(External)	corrosion#M#	Chapter XI M18 "Polting Integrity"
Sleei#IVI#	Air with borated		Chapter XI.M18, "Bolting Integrity"
Glass	water leakage	None	None
Glass	walei ieakaye	None	NONE
	Condensation		
Glass	(Internal/External)	Nono	None
01855		None	None
Glass	Gas	None	None
Glass	Closed-cycle	None	NONE
Glass	cooling water	None	None
Glass	cooling water		INDITE
#M#Steel;	Air – indoor,	Loss of preload #*#due to thermal effects.	
stainless	uncontrolled	gasket creep, and self-	
steel#M#	(External)		Chapter XI M18 "Polting Integrity"
Sleei#IVI#		loosening	Chapter XI.M18, "Bolting Integrity"
Steel	Gas	None	None
31661	Gas	#M#Loss of material	NONE
#M#Steel;	Air – indoor,		
	uncontrolled	#*#due to general (steel	
stainless		only), pitting, and crevice corrosion#M#	Chapter XI M18 "Polting Integrity"
steel#M#	(External)	Loss of material #*#due	Chapter XI.M18, "Bolting Integrity" #M#Chapter XI.M2, "Water Chemistry,"
	Tracted water	to pitting and crevice	and #*#Chapter XI.M32, "One-Time
Aluminum	Treated water	corrosion	Inspection"#M#
		Loss of material #*#due	#N#Chapter XI N441 "Duried and
Otainlaga ataol	Coll	to pitting and crevice	#M#Chapter XI.M41, "Buried and
Stainless steel	Soil	corrosion	Underground Piping and Tanks"#M#
		Loss of material #*#due	#M#Chapter VI M41 "Duried and
Stainlage steel	Soil	to pitting and crevice	#M#Chapter XI.M41, "Buried and
Stainless steel	Soil	corrosion Loss of material #*#due	Underground Piping and Tanks"#M# #M#Chapter XI.M2, "Water Chemistry,"
Stainless steel	Treated water	to pitting and crevice corrosion	and #*#Chapter XI.M32, "One-Time Inspection"#M#
Stamless steel	Treated water	Reduction of heat	#M#Chapter XI.M2, "Water Chemistry,"
Stainless steel	Troated water	transfer #*#due to	and #*#Chapter XI.M32, "One-Time
Stamless steel	Treated water	fouling Reduction of heat	Inspection"#M# #M#Chapter XI.M2, "Water Chemistry,"
		transfer #*#due to	
Stainlage steel	Troated water		and #*#Chapter XI.M32, "One-Time
Stainless steel	Treated water	fouling Reduction of heat	Inspection"#M# #M#Chapter XI M20. "In ubrighting Oil
			#M#Chapter XI.M39, "Lubricating Oil
Steel		transfer #*#due to	Analysis," and #*#Chapter XI.M32, "One-
Steel	Lubricating oil	fouling	Time Inspection"#M#
		Reduction of heat	#M#Chapter XI.M39, "Lubricating Oil
Ctool		transfer #*#due to	Analysis," and #*#Chapter XI.M32, "One
Steel	Lubricating oil	fouling	Time Inspection"#M#

	Reduction of heat	#M#Chapter XI.M39, "Lubricating Oil
		Analysis," and #*#Chapter XI.M32, "One
Lubricating oil		Time Inspection"#M#
		#M#Chapter XI.M39, "Lubricating Oil
		Analysis," and #*#Chapter XI.M32, "One-
Lubricating oil		Time Inspection"#M#
		#M#Chapter XI.M39, "Lubricating Oil
		Analysis," and #*#Chapter XI.M32, "One
Lubricating ail		Time Inspection "#M#
		#M#Chapter XI.M39, "Lubricating Oil
		Analysis," and #*#Chapter XI.M32, "One
Lubricating ail		Time Inspection"#M#
	COTOSION	
	Loss of material #*#due	#M#Chapter XI M30 "Lubricating Oil
		#M#Chapter XI.M39, "Lubricating Oil
Lubrication all		Analysis," and #*#Chapter XI.M32, "One-
		Time Inspection"#M#
	Loss of material #*#due	#M#Chapter XI M20 "Lubrighting Oil
		#M#Chapter XI.M39, "Lubricating Oil Analysis," and #*#Chapter XI.M32, "One-
Ludenia atina at all		
Lubricating oil	crevice corrosion	Time Inspection"#M#
		#M#Chapter XI.M39, "Lubricating Oil
		Analysis," and #*#Chapter XI.M32, "One
Lubricating oil		Time Inspection"#M#
		#M#Chapter XI.M39, "Lubricating Oil
		Analysis," and #*#Chapter XI.M32, "One
Lubricating oil	, , , , , , , , , , , , , , , , , , ,	Time Inspection"#M#
		#M#Chapter XI.M39, "Lubricating Oil
		Analysis," and #*#Chapter XI.M32, "One
Lubricating oil		Time Inspection"#M#
		#M#Chapter XI.M39, "Lubricating Oil
		Analysis," and #*#Chapter XI.M32, "One-
Lubricating oil	· · · · · · · · · · · · · · · · · · ·	Time Inspection"#M#
		#M#Chapter XI.M39, "Lubricating Oil
		Analysis," and #*#Chapter XI.M32, "One
Lubricating oil		Time Inspection"#M#
		#M#Chapter XI.M39, "Lubricating Oil
		Analysis," and #*#Chapter XI.M32, "One
Lubricating oil		Time Inspection"#M#
		#M#Chapter XI.M39, "Lubricating Oil
	transfer #*#due to	Analysis," and #*#Chapter XI.M32, "One-
Lubricating oil	fouling	Time Inspection"#M#
	Loss of material #*#due	#M#Chapter XI.M39, "Lubricating Oil
	to pitting and crevice	Analysis," and #*#Chapter XI.M32, "One-
Lubricating oil	corrosion	Time Inspection"#M#
	Loop of motorial #*#duo	#M#Obastas VI MOO Illease ation of
	Loss of material #*#due	#M#Chapter XI.M38, "Inspection of
Condensation	to pitting and crevice	Internal Surfaces in Miscellaneous
	Lubricating oil	Loss of material #*#due to pitting and crevice corrosion Lubricating oil Corrosion Lubricating oil Crevice corrosion Reduction of heat transfer #*#due to Lubricating oil Lubricating oil fouling Reduction of heat transfer #*#due to Lubricating oil Lubricating oil fouling Reduction of heat transfer #*#due to Lubricating oil Lubricating oil fouling Reduction of heat transfer #*#due to Lubricating oil Lubricating oil fouling Reduction of heat transfer #*#due to

		Loss of material #*#due	#M#Chapter XI.M38, "Inspection of
	Condensation	to pitting and crevice	Internal Surfaces in Miscellaneous
Stainless steel	(Internal)	corrosion	Piping and Ducting Components"#M#
	Air – indoor,		i iping and buoking components mun
	uncontrolled		
Stainless steel	(Internal)	None	None
Glass	Air – outdoor	None	None
Copper alloy	Gas	None	None
		#M#Loss of material	
		#*#due to general,	
		pitting, crevice, and	
		microbiologically-	
		influenced corrosion;	
		fouling that leads to	Chapter XI.M20, "Open-Cycle Cooling
Steel	Raw water	corrosion#M#	Water System"
		#M#Loss of material	
		#*#due to general,	
		pitting, crevice, and	
		microbiologically-	
		influenced corrosion;	
		fouling that leads to	Chapter XI.M20, "Open-Cycle Cooling
Steel	Raw water	corrosion#M#	Water System"
		#M#Loss of material	
		#*#due to general,	
		pitting, crevice, and	
		microbiologically-	
		influenced corrosion;	
		fouling that leads to	Chapter XI.M20, "Open-Cycle Cooling
Steel	Raw water	corrosion#M#	Water System"
		#M#Loss of material	
		#*#due to pitting,	
		crevice, and	
		microbiologically-	
		influenced corrosion;	
		fouling that leads to	Chapter XI.M20, "Open-Cycle Cooling
Stainless steel	Raw water	corrosion#M#	Water System"
		#M#Loss of material	
		#*#due to pitting,	
		crevice, and	
		microbiologically-	
		influenced corrosion;	
		fouling that leads to	Chapter XI.M20, "Open-Cycle Cooling
Stainless steel	Raw water	corrosion#M#	Water System"

		#NA#L and of motorial	
		#M#Loss of material	
		#*#due to pitting,	
		crevice, and	
		microbiologically-	
		influenced corrosion;	
		fouling that leads to	Chapter XI.M20, "Open-Cycle Cooling
Stainless steel	Raw water	corrosion#M#	Water System"
		Loss of material #*#due	
		to general, pitting,	
	Closed-cycle	crevice, and galvanic	#M#Chapter XI.M21A, "Closed Treated
Steel	cooling water	corrosion	Water Systems"#M#
		Loss of material #*#due	
		to general, pitting,	
	Closed-cycle	crevice, and galvanic	#M#Chapter XI.M21A, "Closed Treated
Steel	cooling water	corrosion	Water Systems"#M#
		Loss of material #*#due	
		to general, pitting,	
	Closed-cycle	crevice, and galvanic	#M#Chapter XI.M21A, "Closed Treated
Steel	cooling water	corrosion	Water Systems"#M#
		Loss of material #*#due	
	Closed-cycle	to pitting and crevice	#M#Chapter XI.M21A, "Closed Treated
Stainless steel	cooling water	corrosion	Water Systems"#M#
		Loss of material #*#due	
	Closed-cycle	to pitting and crevice	#M#Chapter XI.M21A, "Closed Treated
Stainless steel	cooling water	corrosion	Water Systems"#M#
		Loss of material #*#due	
	Closed-cycle	to pitting and crevice	#M#Chapter XI.M21A, "Closed Treated
Stainless steel	cooling water	corrosion	Water Systems"#M#
		Loss of material #*#due	
	Closed-cycle	to pitting, crevice, and	#M#Chapter XI.M21A, "Closed Treated
Copper alloy	cooling water	galvanic corrosion	Water Systems"#M#
		Loss of material #*#due	
	Closed-cycle	to pitting, crevice, and	#M#Chapter XI.M21A, "Closed Treated
Copper alloy	cooling water	galvanic corrosion	Water Systems"#M#
		Loss of material #*#due	
	Closed-cycle	to pitting, crevice, and	#M#Chapter XI.M21A, "Closed Treated
Copper alloy	cooling water	galvanic corrosion	Water Systems"#M#
		Loss of material #*#due	
	Closed-cycle	to pitting and crevice	#M#Chapter XI.M21A, "Closed Treated
Stainless steel	cooling water	corrosion	Water Systems"#M#
		Loss of material #*#due	
	Closed-cycle	to pitting and crevice	#M#Chapter XI.M21A, "Closed Treated
Stainless steel	cooling water	corrosion	Water Systems"#M#
		Loss of material #*#due	
	Closed-cycle	to pitting and crevice	#M#Chapter XI.M21A, "Closed Treated
Stainless steel	cooling water	corrosion	Water Systems"#M#
5 turne 33 31001		Loss of material #*#due	
	Closed-cycle	to pitting and crevice	#M#Chapter XI.M21A, "Closed Treated
Stainless steel	cooling water	corrosion	Water Systems"#M#
Stanness Steel	cooling water	CONUSION	water Systems #IVI#

		Reduction of heat	
	Closed-cycle	transfer #*#due to	#M#Chapter XI.M21A, "Closed Treated
Stainless steel	cooling water	fouling	Water Systems"#M#
		Reduction of heat	
	Closed-cycle	transfer #*#due to	#M#Chapter XI.M21A, "Closed Treated
Stainless steel	cooling water	fouling	Water Systems"#M#
		Reduction of heat	
	Closed-cycle	transfer #*#due to	#M#Chapter XI.M21A, "Closed Treated
Stainless steel	cooling water	fouling	Water Systems"#M#
		Loss of material #*#due	
	Closed-cycle	to pitting, crevice, and	#M#Chapter XI.M21A, "Closed Treated
Copper alloy	cooling water	galvanic corrosion	Water Systems"#M#
		Loss of material #*#due	
	Closed-cycle	to pitting, crevice, and	#M#Chapter XI.M21A, "Closed Treated
Copper alloy	cooling water	galvanic corrosion	Water Systems"#M#
		Loss of material #*#due	
	Closed-cycle	to pitting, crevice, and	#M#Chapter XI.M21A, "Closed Treated
Copper alloy	cooling water	galvanic corrosion	Water Systems"#M#
		<u>j</u>	
		Loss of material #*#due	
	Closed-cycle	to pitting, crevice, and	#M#Chapter XI.M21A, "Closed Treated
Copper alloy	cooling water	galvanic corrosion	Water Systems"#M#
	Closed-cycle		
	cooling water	Cracking #*#due to	#M#Chapter XI.M21A, "Closed Treated
Stainless steel	>60°C (>140°F)	stress corrosion cracking	
	Closed-cycle		
	cooling water	Cracking #*#due to	#M#Chapter XI.M21A, "Closed Treated
Stainless steel	>60°C (>140°F)	stress corrosion cracking	Water Systems"#M#
	Closed-cycle		
	cooling water	Cracking #*#due to	#M#Chapter XI.M21A, "Closed Treated
Stainless steel	>60°C (>140°F)	stress corrosion cracking	
	Closed-cycle		
	cooling water	Cracking #*#due to	#M#Chapter XI.M21A, "Closed Treated
Stainless steel	>60°C (>140°F)	stress corrosion cracking	Water Systems"#M#
		Loss of material #*#due	
	Closed-cycle	to general, pitting, and	#M#Chapter XI.M21A, "Closed Treated
Steel	cooling water	crevice corrosion	Water Systems"#M#

			FO is a first limited as is a succession
			EQ is a time-limited aging analysis (TLAA) to be evaluated for the period of
			extended operation. See the Standard
			•
			Review Plan, Section 4.4,
			"Environmental Qualification (EQ) of
			Electrical Equipment," for acceptable
			methods for meeting the requirements
	Adverse localized		of 10 CFR 54.21(c)(1)(i) and (ii). #*#
Mariana	environment	#M#Various aging	#*#See Chapter X.E1, "Environmental
Various	caused by heat,	effects#*#due to various	Qualification (EQ) of Electric
polymeric and	/ 50 /	mechanisms in	Components," of this report for meeting
metallic	moisture, or		the requirements of 10 CFR
materials	voltage	50.49#M#	54.21(c)(1)(iii).
		#M#Increased	
		resistance of connection	
		#*#due to chemical	
		contamination,	
		corrosion, and oxidation	
		(in an air, indoor	
		controlled environment,	
		increased resistance of	
		connection due to	
		chemical contamination,	
#M#Various		corrosion and oxidation	
metals used for		do not apply); #*#fatigue	
electrical		#*#due to ohmic heating,	
	#M#Air – indoor,	thermal cycling,	
#	uncontrolled#M#	electrical transients#M#	Chapter XI.E5, "Fuse Holders"
Insulation			
material:			
bakelite;			
phenolic			
melamine or			
ceramic;			
molded	#M#Air – indoor,		
polycarbonate;	controlled or		
other	uncontrolled#M#	None	None
#M#Various		#M#Increased	
metals used for		resistance of connection	
electrical bus	#M#Air – indoor,	#*#due to the loosening	
and	controlled or	of bolts caused by	
connections#M		thermal cycling and	
#	 – outdoor#M# 	ohmic heating#M#	Chapter XI.E4, "Metal Enclosed Bus"

Porcelain; xenoy; thermo- plastic organic polymers	#M#Air – indoor, controlled or uncontrolled or Air – outdoor#M#	#M#Reduced insulation resistance #*#due to thermal/thermoxidative degradation of organics/thermoplastics, radiation-induced oxidation, moisture/debris intrusion, and ohmic heating#M#	Chapter XI.E4, "Metal Enclosed Bus"
Porcelain; malleable iron; aluminum; galvanized steel; cement	Air – outdoor	#M#Reduced insulation resistance #*#due to presence of salt deposits or surface contamination#M#	A plant-specific aging management program is to be evaluated for plants located such that the potential exists for salt deposits or surface contamination (e.g., in the vicinity of salt water bodies or industrial pollution)
Elastomers	#M#Air – indoor, controlled or uncontrolled or Air – outdoor#M#	#M#Surface cracking, crazing, scuffing, dimensional change (e.g. "ballooning" and "necking"), shrinkage, discoloration, hardening and loss of strength#*# #*#due to elastomer degradation#M#	#M#Chapter XI.E4, "Metal Enclosed Bus," or #*#Chapter XI.M38, "Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components"#M#
Various metals used for electrical contacts	#M#Air – indoor, controlled or uncontrolled or Air – outdoor#M#	#M#Increased resistance of connection #*#due to thermal cycling, ohmic heating, electrical transients, vibration, chemical contamination, corrosion, and oxidation#M#	Chapter XI.E6, "Electrical Cable Connections Not Subject to 10 CFR 50.49 Environmental Qualification Requirements"
Various metals used for electrical connections	Air – indoor, controlled		Chapter XI.E5, "Fuse Holders" #*#No aging management program is required for those applicants who can demonstrate these fuse holders are located in an environment that does not subject them to environmental aging mechanisms or fatigue caused by frequent manipulation or vibration

Porcelain; malleable iron; aluminum; galvanized steel; cement	Air – outdoor	#M#Loss of material #*#due to mechanical wear caused by wind blowing on transmission conductors#M#	A plant-specific aging management program is to be evaluated
Various organic polymers (e.g., EPR, SR, EPDM, XLPE)	#M#Adverse localized environment caused by heat, radiation, or moisture#M#	#M#Reduced insulation resistance #*#due to thermal/thermoxidative degradation of organics, radiolysis, and photolysis (UV sensitive materials only) of organics; #*#radiation-induced oxidation; #*#moisture intrusion#M#	#M#Chapter XI.E1, "Insulation Material for Electrical Cables and Connections Not Subject to 10 CFR 50.49 Environmental Qualification Requirements"#M#
Various organic polymers (e.g., EPR, SR, EPDM, XLPE)	#M#Adverse localized environment caused by heat, radiation, or moisture#M#	#M#Reduced insulation resistance #*#due to thermal/thermoxidative degradation of organics, radiolysis, and photolysis (UV sensitive materials only) of organics; #*#radiation-induced oxidation; #*#moisture intrusion#M#	#M#Chapter XI.E2, "Insulation Material for Electrical Cables and Connections Not Subject to 10 CFR 50.49 Environmental Qualification Requirements Used in Instrumentation Circuits"#M#
Various organic polymers (e.g., EPR, SR, EPDM, XLPE)	#M#Adverse localized environment caused by significant moisture#M#	#M#Reduced insulation resistance #*#due to moisture#M#	#M#Chapter XI.E3, "Inaccessible Power Cables Not Subject to 10 CFR 50.49 Environmental Qualification Requirements"#M#
Various metals used for electrical contacts	Air with borated water leakage	#M#Increased resistance of connection #*#due to corrosion of connector contact surfaces caused by intrusion of borated water#M# #M#Loss of conductor strength #*#due to	Chapter XI.M10, "Boric Acid Corrosion" #M#A plant-specific aging management program is to be evaluated for
Aluminum; steel	Air – outdoor	corrosion#M#	ACSR#M#

		#M#Loss of material	
		#*#due to wind-induced	
Aluminum;		abrasion; #*#Increased	
copper; bronze;		resistance of connection	
stainless steel;		#*#due to oxidation or	A plant-specific aging management
galvanized steel	Air – outdoor	loss of pre-load#M#	program is to be evaluated
	Air – indoor,		
Galvanized	controlled or		
steel; aluminum	uncontrolled	None	None
		Loss of material #*#due	Chapter XI.E4, "Metal Enclosed Bus," or
Galvanized		to pitting and crevice	#*#Chapter XI.S6, "Structures
steel; aluminum	Air – outdoor	corrosion	Monitoring"
	Air – indoor,	Loss of material #*#due	Chapter XI.E4, "Metal Enclosed Bus," or
		to general, pitting, and	#*#Chapter XI.S6, "Structures
Steel	– outdoor	crevice corrosion	Monitoring"
	Air – indoor,		
Steel	controlled	None	None
		Loss of conductor	
		strength #*#due to	None - for Aluminum Conductor
Aluminum	Air – outdoor	corrosion	Aluminum Alloy Reinforced (ACAR)
			A plant-specific aging management
Aluminum;		Loss of material #*#due	program is to be evaluated for ACAR
Steel	Air – outdoor	to wind-induced abrasion	and ACSR
		#N A#Us ava a a a d	
		#M#Increased	
		resistance of connection	A plant apositio oping management
Aluminum: stool	Air outdoor	#*#due to oxidation or	A plant-specific aging management
Aluminum; steel		loss of pre-load#M#	program is to be evaluated
		Loss of material #*#due	
Gray cast iron	Soil	to selective leaching	Chapter XI.M33, "Selective Leaching"
Gray Cast IION	301	to selective leaching	Chapter Alimos, Selective Leaching
		Loss of material #*#due	
Gray cast iron	Soil	to selective leaching	Chapter XI.M33, "Selective Leaching"
		to colocitio lodoning	Chapter Minioo, Colocity Leading
		Loss of material #*#due	
Gray cast iron	Soil	to selective leaching	Chapter XI.M33, "Selective Leaching"
stay odotnon		te etterne iouoning	concerve Ecoloring
		Loss of material #*#due	
Gray cast iron	Soil	to selective leaching	Chapter XI.M33, "Selective Leaching"
		Loss of material #*#due	
Gray cast iron	Soil	to selective leaching	Chapter XI.M33, "Selective Leaching"
	Air with steam or	Loss of material #*#due	
Steel	water leakage	to general corrosion	Chapter XI.M18, "Bolting Integrity"
		V	,

		Cracking #*#due to	
Steel, high-	Air with steam or	stress corrosion	
strength	water leakage	cracking; cyclic loading	Chapter XI.M18, "Bolting Integrity"
U	- 0 -	0, , , , , , , , , , , , , , , , , , ,	Chapter XI.M23, "Inspection of
	Air – indoor,		Overhead Heavy Load and Light Load
	uncontrolled	Loss of material #*#due	(Related to Refueling) Handling
Steel	(External)	to wear	Systems"
			Entique in a time limited aging and win
			Fatigue is a time-limited aging analysis (TLAA) to be evaluated for the period of
			extended operation for structural girders
			of cranes that fall within the scope of 10
			CFR 54 (Standard Review Plan, Section
			4.7, "Other Plant-Specific Time-Limited
	Air – indoor,	Cumulative fatigue	Aging Analyses," for generic guidance
	uncontrolled	damage #*#due to	for meeting the requirements of 10 CFR
Steel	(External)	fatigue	54.21(c)(1))
	Air – indoor,		Chapter XI.M23, "Inspection of Overhead Heavy Load and Light Load
	uncontrolled	Loss of material #*#due	(Related to Refueling) Handling
Steel	(External)	to general corrosion	Systems"
	(
		Loss of material #*#due	
		to general, pitting,	
		crevice, and (for drip	
	O and a soft as	pans and drain lines)	Chapter XI.M38, "Inspection of Internal
Steel	Condensation (Internal)	microbiologically- influenced corrosion	Surfaces in Miscellaneous Piping and Ducting Components"
Steel	(internal)		
		Loss of material #*#due	
		to general, pitting,	
		crevice, and (for drip	
		pans and drain lines)	Chapter XI.M38, "Inspection of Internal
Otest	Condensation	microbiologically-	Surfaces in Miscellaneous Piping and
Steel	(Internal)	influenced corrosion	Ducting Components"
		Loss of material #*#due	
		to general, pitting,	
		crevice, and (for drip	
		pans and drain lines)	Chapter XI.M38, "Inspection of Internal
	Condensation	microbiologically-	Surfaces in Miscellaneous Piping and
Steel	(Internal)	influenced corrosion	Ducting Components"
		Loss of material #*#due	
		to general, pitting,	
		crevice, and (for drip	
		pans and drain lines)	Chapter XI.M38, "Inspection of Internal
	Condensation	microbiologically-	Surfaces in Miscellaneous Piping and
Steel	(Internal)	influenced corrosion	Ducting Components"

	Air indeer		
	Air – indoor,	loop of motorial #*#due	Chapter VI M26 "External Curfaces
Chaol		Loss of material #*#due	Chapter XI.M36, "External Surfaces
Steel	(External)	to general corrosion	Monitoring of Mechanical Components"
	Air – indoor,	Loss of material #*#due	Charter VI M2C "External Curfaces
Otest	uncontrolled		Chapter XI.M36, "External Surfaces
Steel	(External)	to general corrosion	Monitoring of Mechanical Components"
	Air – indoor,		Charter VI M2C "External Curferes
Chaol		Loss of material #*#due	Chapter XI.M36, "External Surfaces
Steel	(External)	to general corrosion	Monitoring of Mechanical Components"
	Air – indoor,	Loss of material #*#due	Chapter VI M26 "External Surfaces
Stool			Chapter XI.M36, "External Surfaces
Steel	(External)	to general corrosion	Monitoring of Mechanical Components"
Stainless steel	Treated borated water	Cumulative fatigue damage #*#due to fatigue	Fatigue is a time-limited aging analysis (TLAA) to be evaluated for the period of extended operation. See the SRP, Section 4.3 "Metal Fatigue," for acceptable methods for meeting the requirements of 10 CFR 54.21(c)(1).
	Air with borated	Loss of material #*#due	
Steel	water leakage	to boric acid corrosion	Chapter XI.M10, "Boric Acid Corrosion"
	Air – indoor,		
	uncontrolled	Loss of material #*#due	Chapter XI.M36, "External Surfaces
Steel	(External)	to general corrosion	Monitoring of Mechanical Components"
	Air – indoor,		
	uncontrolled	Loss of material #*#due	Chapter XI.M36, "External Surfaces
Steel	(External)	to general corrosion	Monitoring of Mechanical Components"
	Air – indoor,		
	uncontrolled	Loss of material #*#due	Chapter XI.M36, "External Surfaces
Steel	(External)	to general corrosion	Monitoring of Mechanical Components"
	Air – indoor,		
	uncontrolled	Loss of material #*#due	Chapter XI.M36, "External Surfaces
Steel	(External)	to general corrosion	Monitoring of Mechanical Components"
	Air – indoor,		
Otest	uncontrolled	Loss of material #*#due	Chapter XI.M36, "External Surfaces
Steel	(External)	to general corrosion	Monitoring of Mechanical Components"
Elastomers	Air - indoor, uncontrolled	Increased hardness; shrinkage; loss of strength #*#due to weathering	Chapter XI.M26, "Fire Protection"
		Increased hardness;	
		shrinkage; loss of	
		strength #*#due to	
Elastomers	Air – outdoor	weathering	Chapter XI.M26, "Fire Protection"
	Air - indoor,	Loss of material #*#due	
Steel	uncontrolled	to wear	Chapter XI.M26, "Fire Protection"
		Loss of material #*#due	
Steel	Air – outdoor	to wear	Chapter XI.M26, "Fire Protection"
0.001			

	Moist air or condensation	Loss of material #*#due	Chapter XI.M38, "Inspection of Internal
Steel	(Internal)	to general, pitting, and crevice corrosion	Surfaces in Miscellaneous Piping and Ducting Components"
Steel	Moist air or condensation	Loss of material #*#due to general, pitting, and	Chapter XI.M38, "Inspection of Internal Surfaces in Miscellaneous Piping and
Steel	(Internal)	crevice corrosion	Ducting Components"
Steel	Air – outdoor (External)	Loss of material #*#due to general, pitting, and crevice corrosion	Chapter XI.M36, "External Surfaces Monitoring of Mechanical Components"
Steel	Condensation	Loss of material #*#due to general and pitting	Chapter XI.M24, "Compressed Air
Steel	(Internal) Raw water	corrosion #M#Loss of material #*#due to general, pitting, crevice, and microbiologically- influenced corrosion; fouling that leads to corrosion#M#	Monitoring" Chapter XI.M27, "Fire Water System"
Steel	Air - indoor, uncontrolled	Cumulative fatigue damage #*#due to fatigue	Fatigue is a time-limited aging analysis (TLAA) to be evaluated for the period of extended operation. See the SRP, Section 4.3 "Metal Fatigue," for acceptable methods for meeting the requirements of 10 CFR 54.21(c)(1).
Steel	Air - indoor, uncontrolled	Cumulative fatigue damage #*#due to fatigue	Fatigue is a time-limited aging analysis (TLAA) to be evaluated for the period of extended operation. See the SRP, Section 4.3 "Metal Fatigue," for acceptable methods for meeting the requirements of 10 CFR 54.21(c)(1).
Copper alloy (>15% Zn or >8% Al)	Raw water	Loss of material #*#due to selective leaching	Chapter XI.M33, "Selective Leaching"
Copper alloy (>15% Zn or >8% Al)	Raw water	Loss of material #*#due to selective leaching	Chapter XI.M33, "Selective Leaching"
Copper alloy (>15% Zn or >8% Al)	Raw water	Loss of material #*#due to selective leaching	Chapter XI.M33, "Selective Leaching"
Copper alloy (>15% Zn or >8% Al)	Raw water	Loss of material #*#due to selective leaching	Chapter XI.M33, "Selective Leaching"
Gray cast iron	Closed-cycle cooling water	Loss of material #*#due to selective leaching	Chapter XI.M33, "Selective Leaching"

	Closed-cycle	Loss of material #*#due	
Gray cast iron	cooling water	to selective leaching	Chapter XI.M33, "Selective Leaching"
			Chapter XI.W00, "Delective Leaching
		Loss of material #*#due	
Gray cast iron	Raw water	to selective leaching	Chapter XI.M33, "Selective Leaching"
		Loss of material #*#due	
Gray cast iron	Raw water	to selective leaching	Chapter XI.M33, "Selective Leaching"
		Loss of material #*#due	
Gray cast iron	Raw water	to selective leaching	Chapter XI.M33, "Selective Leaching"
		Loss of material #*#due	
Gray cast iron	Raw water	to selective leaching	Chapter XI.M33, "Selective Leaching"
		Loss of material #*#due	
	Closed-cycle	to pitting and crevice	#M#Chapter XI.M21A, "Closed Treated
Stainless steel	cooling water	corrosion	Water Systems#M#"
		Loss of material #*#due	Oberter VI MOD HOrer Ovela Castier
Ctainlana ataol	Deursten	to pitting and crevice	Chapter XI.M20, "Open-Cycle Cooling
Stainless steel	Raw water	corrosion	Water System"
		Loss of material #*#due	
		to pitting and crevice	
		corrosion; fouling that	Chapter XI.M20, "Open-Cycle Cooling
Stainless steel	Raw water	leads to corrosion	Water System"
		#M#Loss of material	
		#*#due to pitting and	
		crevice corrosion; fouling	
		that leads to	
Stainless steel	Raw water	corrosion#M#	Chapter XI.M27, "Fire Water System"
Steel (with			
stainless steel	Treated borated		
or nickel-alloy	water >60°C	Cracking #*#due to	
cladding)	(>140°F)	stress corrosion cracking	Chapter XI.M2, "Water Chemistry"
			Fatigue is a time-limited aging analysis
			(TLAA) to be evaluated for the period of
			extended operation. See the SRP,
	Transford I.	Cumulative fatigue	Section 4.3 "Metal Fatigue," for
Otainland	Treated borated	damage #*#due to	acceptable methods for meeting the
Stainless steel	water	fatigue	requirements of 10 CFR 54.21(c)(1).
	Troated water	Cracking #*#duc to	Chapter XI.M7, "BWR Stress Corrosion
Stainless steel	Treated water >60°C (>140°F)	Cracking #*#due to stress corrosion cracking	Cracking," and #*#Chapter XI.M2, "Water Chemistry"
Stamless steel	-00 C (>140 F)	Suess convision cracking	
			Fatigue is a time-limited aging analysis
			(TLAA) to be evaluated for the period of
			extended operation. See the SRP,
		Cumulative fatigue	Section 4.3 "Metal Fatigue," for
		damage #*#due to	acceptable methods for meeting the
Stainless steel	Treated water	fatigue	requirements of 10 CFR 54.21(c)(1).

Stainless steel Copper alloy	Treated water	Cumulative fatigue damage #*#due to fatigue Loss of material #*#due	Fatigue is a time-limited aging analysis (TLAA) to be evaluated for the period of extended operation. See the SRP, Section 4.3 "Metal Fatigue," for acceptable methods for meeting the requirements of 10 CFR 54.21(c)(1).
(>15% Zn or	Devusion		Oberster VI MOD "Oplastical spaking"
>8% AI)	Raw water	to selective leaching	Chapter XI.M33, "Selective Leaching"
	Treated borated water >60°C	Cracking #*#due to stress corrosion	Chapter XI.M2, "Water Chemistry." #*#The AMP is to be augmented by verifying the absence of cracking due to stress corrosion cracking and cyclic loading. An acceptable verification program is to include temperature and radioactivity monitoring of the shell side
Stainless steel	(>140°F)	cracking; cyclic loading	water, and eddy current testing of tubes.
Copper alloy	Raw water	Reduction of heat transfer #*#due to fouling	Chapter XI.M20, "Open-Cycle Cooling Water System"
Steel	Air – indoor, uncontrolled (External)	Loss of material #*#due to general corrosion	Chapter XI.M36, "External Surfaces Monitoring of Mechanical Components"
Steel	Air – outdoor (External)	Loss of material #*#due to general corrosion	Chapter XI.M36, "External Surfaces Monitoring of Mechanical Components"
Steel	Air with borated water leakage	Loss of material #*#due to boric acid corrosion	Chapter XI.M10, "Boric Acid Corrosion"
Steel	Air with borated water leakage	Loss of material #*#due to boric acid corrosion	Chapter XI.M10, "Boric Acid Corrosion"
Steel	Air with borated water leakage Air – indoor,	Loss of material #*#due to boric acid corrosion	Chapter XI.M10, "Boric Acid Corrosion"
Steel	uncontrolled (External)	Loss of material #*#due to general corrosion	Chapter XI.M36, "External Surfaces Monitoring of Mechanical Components"
Steel	Condensation (External)	Loss of material #*#due to general corrosion	Chapter XI.M36, "External Surfaces Monitoring of Mechanical Components"
Boraflex	Treated borated water	Reduction of neutron- absorbing capacity #*#due to boraflex degradation	Chapter XI.M22, "Boraflex Monitoring"
Boraflex	Treated water	Reduction of neutron- absorbing capacity #*#due to boraflex degradation	Chapter XI.M22, "Boraflex Monitoring"
Doranox		augradation	onapter Almizz, Doranex monitoring

		Concrete creaking and	
		Concrete cracking and	
		spalling #*#due to	Chapter XI MOC "Fire Drote stien" and
Deinfersed	Air indeen	aggressive chemical	Chapter XI.M26, "Fire Protection," and
Reinforced	Air - indoor,	attack, and reaction with	#*#Chapter XI.S6, "Structures
concrete	uncontrolled	aggregates	Monitoring"
		Loss of material #*#due	Chapter XI.M26, "Fire Protection," and
Reinforced	Air - indoor,	to corrosion of	#*#Chapter XI.S6, "Structures
concrete	uncontrolled	embedded steel	Monitoring"
		Cracking, loss of	
		material #*#due to	
		freeze-thaw, aggressive	Chapter XI.M26, "Fire Protection," and
Reinforced		chemical attack, and	#*#Chapter XI.S6, "Structures
concrete	Air – outdoor	reaction with aggregates	Monitoring"
		Loss of material #*#due	Chapter XI.M26, "Fire Protection," and
Reinforced		to corrosion of	#*#Chapter XI.S6, "Structures
concrete	Air – outdoor	embedded steel	Monitoring"
	Air – indoor,	Loss of material #*#due	
	uncontrolled	to general, pitting, and	
Steel	(External)	crevice corrosion	Chapter XI.S6, "Structures Monitoring"
		Loss of material #*#due	
	Air – outdoor	to general, pitting, and	Chapter XI.M29, "Aboveground Metallic
Steel	(External)	crevice corrosion	Tanks"
	Treated water	Cracking #*#due to	
Stainless steel	>60°C (>140°F)	stress corrosion cracking	Chapter XI.M2, "Water Chemistry"
	Treated borated		
	water >60°C	Cracking #*#due to	
Stainless steel	(>140°F)	-	Chapter XI.M2, "Water Chemistry"
	Air with borated	Loss of material #*#due	
Aluminum	water leakage	to boric acid corrosion	Chapter XI.M10, "Boric Acid Corrosion"
	Ŭ		
	Air with borated	Loss of material #*#due	
Aluminum	water leakage	to boric acid corrosion	Chapter XI.M10, "Boric Acid Corrosion"
	Ŭ		
		Hardening and loss of	#M#Chapter XI.M38, "Inspection of
	Treated borated	strength #*#due to	Internal Surfaces in Miscellaneous
Elastomers	water	elastomer degradation	Piping and Ducting Components"#M#
		Hardening and loss of	#M#Chapter XI.M38, "Inspection of
		strength #*#due to	Internal Surfaces in Miscellaneous
Elastomers	Treated water	elastomer degradation	Piping and Ducting Components"#M#
	Air – indoor,	Hardening and loss of	#M#Chapter XI.M36, "External Surfaces
	uncontrolled	strength #*#due to	Monitoring of Mechanical
Elastomers	(Internal/External)	elastomer degradation	Components"#M#
Liaotomoro			

Elastomers	Air – indoor, uncontrolled (Internal/External)	Hardening and loss of strength #*#due to elastomer degradation	#M#Chapter XI.M36, "External Surfaces Monitoring of Mechanical Components"#M#
Elastomers	Air – indoor, uncontrolled (Internal/External)	Hardening and loss of strength #*#due to elastomer degradation	#M#Chapter XI.M36, "External Surfaces Monitoring of Mechanical Components"#M#
Elastomers	Air – indoor, uncontrolled (Internal/External)	Hardening and loss of strength #*#due to elastomer degradation	#M#Chapter XI.M36, "External Surfaces Monitoring of Mechanical Components"#M#
Elastomers	Air – indoor, uncontrolled (Internal)	Loss of material #*#due to wear	#M#Chapter XI.M38, "Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components"#M#
Elastomers	Air – indoor, uncontrolled (Internal)	Loss of material #*#due to wear	#M#Chapter XI.M38, "Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components"#M#
Elastomers	Air – indoor, uncontrolled (Internal)	Loss of material #*#due to wear	#M#Chapter XI.M38, "Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components"#M#
Elastomers	Air – indoor, uncontrolled (Internal)	Loss of material #*#due to wear	#M#Chapter XI.M38, "Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components"#M#
Steel; stainless steel	Diesel exhaust	Loss of material #*#due to general (steel only), pitting, and crevice corrosion	Chapter XI.M38, "Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components"
Steel	Fuel oil	#M#Loss of material #*#due to general, pitting, crevice, and microbiologically- influenced corrosion; fouling that leads to corrosion#M#	Chapter XI.M30, "Fuel Oil Chemistry," and #*#Chapter XI.M32, "One-Time Inspection"
Steel	Fuel oil	#M#Loss of material #*#due to general, pitting, crevice, and microbiologically- influenced corrosion; fouling that leads to corrosion#M#	Chapter XI.M30, "Fuel Oil Chemistry," and #*#Chapter XI.M32, "One-Time Inspection"
Steel	Treated water	Loss of material #*#due to general, pitting, and crevice corrosion	#M#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M32, "One-Time Inspection"#M#

Steel	Treated water	Loss of material #*#due to general, pitting, and crevice corrosion	#M#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M32, "One-Time Inspection"#M#
Steel (with elastomer lining)	Treated water	Loss of material #*#due to pitting and crevice corrosion (only for steel after lining/cladding degradation)	#M#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M32, "One-Time Inspection"#M#
Steel (with elastomer lining or stainless steel cladding)	Treated water	Loss of material #*#due to pitting and crevice corrosion (only for steel after lining/cladding degradation)	#M#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M32, "One-Time Inspection"#M#
Copper alloy	Condensation (External)	Loss of material #*#due to general, pitting, and crevice corrosion	#M#Chapter XI.M36, "External Surfaces Monitoring of Mechanical Components"#M#
Copper alloy	Condensation (External)	Loss of material #*#due to general, pitting, and crevice corrosion	#M#Chapter XI.M36, "External Surfaces Monitoring of Mechanical Components"#M#
Copper alloy	Condensation (External)	Loss of material #*#due to general, pitting, and crevice corrosion	#M#Chapter XI.M36, "External Surfaces Monitoring of Mechanical Components"#M#
Copper alloy	Condensation (External)	Loss of material #*#due to general, pitting, and crevice corrosion	#M#Chapter XI.M36, "External Surfaces Monitoring of Mechanical Components"#M#
Copper alloy (≤15% Zn and ≤8% Al)	Air with borated water leakage	None	None
Stainless steel	Treated water	Loss of material #*#due to pitting and crevice corrosion Loss of material #*#due	#M#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M32, "One-Time Inspection"#M# #M#Chapter XI.M2, "Water Chemistry,"
Stainless steel	Treated water	to pitting and crevice corrosion Loss of material #*#due	and #*#Chapter XI.M32, "One-Time Inspection"#M# #M#Chapter XI.M2, "Water Chemistry,"
Stainless steel Stainless steel;	Treated water	to pitting and crevice corrosion	and #*#Chapter XI.M32, "One-Time Inspection"#M#
steel with stainless steel cladding	Treated water	Loss of material #*#due to pitting and crevice corrosion	#M#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M32, "One-Time Inspection"#M#
Stainless steel; steel with stainless steel cladding	Treated water >60°C (>140°F)	Cracking #*#due to stress corrosion cracking	#M#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M32, "One-Time Inspection"#M#

	Air indeer		#M#Chapter VI M26 "External Surfaces
	Air – indoor,	Loop of motorial #*#dua	#M#Chapter XI.M36, "External Surfaces
	uncontrolled	Loss of material #*#due	Monitoring of Mechanical
Elastomers	(External)	to wear	Components"#M#
	Air – indoor,		#M#Chapter XI.M36, "External Surfaces
	uncontrolled	Loss of material #*#due	Monitoring of Mechanical
Elastomers	(External)	to wear	Components"#M#
	Air – indoor,		#M#Chapter XI.M36, "External Surfaces
	uncontrolled	Loss of material #*#due	Monitoring of Mechanical
Elastomers	(External)	to wear	Components"#M#
	Air – indoor,		#M#Chapter XI.M36, "External Surfaces
	uncontrolled	Loss of material #*#due	Monitoring of Mechanical
Elastomers	(External)	to wear	Components"#M#
	Treated borated		#M#Chapter XI.M2, "Water Chemistry,"
	water >60°C	Cracking #*#due to	and #*#Chapter XI.M32, "One-Time
Stainless steel	(>140°F)	stress corrosion cracking	•
			Chapter XI.M1, "ASME Section XI
	Treated borated	Cracking #*#due to	Inservice Inspection, Subsections IWB,
Stainless steel	water	cyclic loading	IWC, and IWD"
		Loss of material #*#due	#M#Chapter XI.M39, "Lubricating Oil
		to general, pitting, and	Analysis," and #*#Chapter XI.M32, "One
Steel	Lubricating oil	crevice corrosion	Time Inspection"#M#
		Loss of material #*#due	#M#Chapter XI.M39, "Lubricating Oil
		to general, pitting, and	Analysis," and #*#Chapter XI.M32, "One
Steel	Lubricating oil	crevice corrosion	Time Inspection"#M#
	Treated borated		#M#Chapter XI.M2, "Water Chemistry,"
	water >60°C	Cracking #*#due to	and #*#Chapter XI.M32, "One-Time
Stainless steel	(>140°F)	stress corrosion cracking	Inspection"#M#
	Treated borated		Chapter XI.M1, "ASME Section XI
	water >60°C	Cracking #*#due to	Inservice Inspection, Subsections IWB,
Stainless steel	(>140°F)	cyclic loading	IWC,and IWD"
			#M#Chapter XI.M2, "Water Chemistry,"
	Treated water	Cracking #*#due to	and #*#Chapter XI.M32, "One-Time
Stainless steel	>60°C (>140°F)	stress corrosion cracking	Inspection"#M#
		Loss of material #*#due	
		to general (steel only),	
Steel; stainless		pitting, and crevice	
steel	Condensation	corrosion	Chapter XI.M18, "Bolting Integrity"
		Cracking #*#due to	
Steel, high-	Air with steam or	stress corrosion	#M#Chapter XI.M18, "Bolting
strength	water leakage	cracking; cyclic loading	Integrity"#M#
	Air – indoor,		
	uncontrolled		
Stainless steel	(Internal/External)	None	None
		Loss of preload #*#due	
	Air – indoor,	to thermal effects,	
Steel; stainless	uncontrolled	gasket creep, and self-	
steel	(External)	loosening	Chapter XI.M18, "Bolting Integrity"

		Loss of material #*#due	
	Air – indoor,	to general (steel only),	
Steel; stainless	uncontrolled	pitting, and crevice	
steel	(External)	corrosion	Chapter XI.M18, "Bolting Integrity"
		Loss of material #*#due	
		to general (steel only),	
Steel; stainless	Air – outdoor	pitting, and crevice	
steel	(External)	corrosion	Chapter XI.M18, "Bolting Integrity"
Steel	Lubricating oil	Loss of material #*#due to general, pitting, and crevice corrosion	#M#Chapter XI.M39, "Lubricating Oil Analysis," and #*#Chapter XI.M32, "One- Time Inspection"#M#
Steel	Lubricating oil	Loss of material #*#due to general, pitting, and crevice corrosion	#M#Chapter XI.M39, "Lubricating Oil Analysis," and #*#Chapter XI.M32, "One Time Inspection"#M#
Steel	Lubricating oil	Loss of material #*#due to general, pitting, and crevice corrosion	#M#Chapter XI.M39, "Lubricating Oil Analysis," and #*#Chapter XI.M32, "One Time Inspection"#M#
Steel	Lubricating oil	Loss of material #*#due to general, pitting, and crevice corrosion	#M#Chapter XI.M39, "Lubricating Oil Analysis," and #*#Chapter XI.M32, "One- Time Inspection"#M#
Steel	Lubricating oil	Loss of material #*#due to general, pitting, and crevice corrosion	#M#Chapter XI.M39, "Lubricating Oil Analysis," and #*#Chapter XI.M32, "One- Time Inspection"#M#
Steel	Lubricating oil	Loss of material #*#due to general, pitting, and crevice corrosion	#M#Chapter XI.M39, "Lubricating Oil Analysis," and #*#Chapter XI.M32, "One- Time Inspection"#M#
Steel	Lubricating oil	Loss of material #*#due to general, pitting, and crevice corrosion	#M#Chapter XI.M39, "Lubricating Oil Analysis," and #*#Chapter XI.M32, "One- Time Inspection"#M#
Steel	Lubricating oil	Loss of material #*#due to general, pitting, and crevice corrosion	#M#Chapter XI.M39, "Lubricating Oil Analysis," and #*#Chapter XI.M32, "One- Time Inspection"#M#
Steel	Lubricating oil	Loss of material #*#due to general, pitting, and crevice corrosion	#M#Chapter XI.M39, "Lubricating Oil Analysis," and #*#Chapter XI.M32, "One- Time Inspection"#M#
Steel	Lubricating oil	Loss of material #*#due to general, pitting, and crevice corrosion	#M#Chapter XI.M39, "Lubricating Oil Analysis," and #*#Chapter XI.M32, "One- Time Inspection"#M#
Stainless steel	Diesel exhaust	Cracking #*#due to stress corrosion cracking	Chapter XI.M38, "Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components"

		Loss of material #*#due	Oberster VI MOO "Evel O" Obersister"
		to pitting, crevice, and microbiologically-	Chapter XI.M30, "Fuel Oil Chemistry," and #*#Chapter XI.M32, "One-Time
Aluminum	Fuel oil	influenced corrosion	Inspection"
		Loss of material #*#due	
		to pitting, crevice, and	Chapter XI.M30, "Fuel Oil Chemistry,"
Aluminum	Fuel ail	microbiologically- influenced corrosion	and #*#Chapter XI.M32, "One-Time
Aluminum	Fuel oil		Inspection"
Galvanized	Air - indoor,		
steel	uncontrolled	None	None
		Loss of material #*#due to pitting and crevice	#M#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M32, "One-Time
Aluminum	Treated water	corrosion	Inspection"#M#
		Loss of material #*#due	#M#Chapter XI.M2, "Water Chemistry,"
Aluminum	Tracted water	to pitting and crevice corrosion	and #*#Chapter XI.M32, "One-Time
Aluminum	Treated water	Loss of material #*#due	Inspection"#M# #M#Chapter XI.M2, "Water Chemistry,"
		to pitting and crevice	and #*#Chapter XI.M32, "One-Time
Aluminum	Treated water	corrosion	Inspection"#M#
		#M#Loss of material #*#due to general,	
		pitting, crevice, and	
		microbiologically-	
		influenced corrosion;	#M#Chapter XI.M39, "Lubricating Oil
Steel	Lubricating ail	fouling that leads to corrosion#M#	Analysis," and #*#Chapter XI.M32, "One Time Inspection"#M#
51661	Lubricating oil	Loss of material #*#due	
		to general, pitting,	
		crevice, and	Chapter XI.M30, "Fuel Oil Chemistry,"
Copper alloy	Fuel oil	microbiologically-	and #*#Chapter XI.M32, "One-Time
		Loss of material #*#due	
		to general, pitting,	
Copper allov	Fuel oil		
		Loss of material #*#due	
		to general, pitting,	
Copper allov	Fuel oil	č ,	
- spper and		Loss of material #*#due	#M#Chapter XI.M39, "Lubricating Oil
		to pitting and crevice	Analysis," and #*#Chapter XI.M32, "One
Copper alloy	Lubricating oil		
Copper alloy	Lubricating oil	corrosion	Time Inspection"#M#
Copper alloy Copper alloy Copper alloy Copper alloy	Fuel oil Fuel oil Lubricating oil	influenced corrosion Loss of material #*#due to general, pitting, crevice, and microbiologically- influenced corrosion Loss of material #*#due to general, pitting, crevice, and microbiologically- influenced corrosion Loss of material #*#due to pitting and crevice corrosion Loss of material #*#due to pitting and crevice	Inspection" Chapter XI.M30, "Fuel Oil Chemistry," and #*#Chapter XI.M32, "One-Time Inspection" Chapter XI.M30, "Fuel Oil Chemistry," and #*#Chapter XI.M32, "One-Time Inspection" #M#Chapter XI.M39, "Lubricating Oil Analysis," and #*#Chapter XI.M32, "On Time Inspection"#M# #M#Chapter XI.M39, "Lubricating Oil Analysis," and #*#Chapter XI.M32, "On

		Loss of material #*#due	#M#Chapter XI.M39, "Lubricating Oil
		to pitting and crevice	Analysis," and #*#Chapter XI.M32, "One
Coppor allow	Lubricating ail	corrosion	Time Inspection"#M#
Copper alloy	Lubricating oil	Loss of material #*#due	#M#Chapter XI.M39, "Lubricating Oil
			Analysis," and #*#Chapter XI.M32, "One
Connor allow	Lubricating ail	to pitting and crevice corrosion	Time Inspection"#M#
Copper alloy	Lubricating oil	Loss of material #*#due	#M#Chapter XI.M39, "Lubricating Oil
Copper alloy	Lubricating ail	to pitting and crevice corrosion	Analysis," and #*#Chapter XI.M32, "One Time Inspection"#M#
	Lubricating oil	Loss of material #*#due	#M#Chapter XI.M39, "Lubricating Oil
		to pitting and crevice	Analysis," and #*#Chapter XI.M32, "One
Connor allow	Lubriccting oil	corrosion	Time Inspection"#M#
Copper alloy	Lubricating oil		
	Air – dry		
Aluminum	(Internal/External)	Nono	None
Aluminum		none	none
	Air indoor		
	Air – indoor, uncontrolled		
Aluminum	(Internal/External)	Nono	None
Aluminum		INOTIE	None
		Loss of material #*#due	
		to pitting, crevice, and	Chapter XI.M30, "Fuel Oil Chemistry,"
		microbiologically-	and #*#Chapter XI.M32, "One-Time
Stainless steel	Fuel oil	influenced corrosion	Inspection"
Stairliess steel			
		Loss of material #*#due	
		to pitting, crevice, and	Chapter XI.M30, "Fuel Oil Chemistry,"
		microbiologically-	and #*#Chapter XI.M32, "One-Time
Stainless steel	Fuel oil	influenced corrosion	Inspection"
Stall liess steel			
		Loss of material #*#due	
		to pitting, crevice, and	Chapter XI.M30, "Fuel Oil Chemistry,"
		microbiologically-	and #*#Chapter XI.M32, "One-Time
Stainless steel	Fuel oil	influenced corrosion	Inspection"
		Loss of material #*#due	
		to pitting and crevice	#M#Chapter XI.M41, "Buried and
Stainless steel	Soil	corrosion	Underground Piping and Tanks"#M#
		Loss of material #*#due	
		to pitting and crevice	#M#Chapter XI.M41, "Buried and
Stainless steel	Soil	corrosion	Underground Piping and Tanks"#M#
		Loss of material #*#due	
		to pitting and crevice	#M#Chapter XI.M41, "Buried and
Stainless steel	Soil	corrosion	Underground Piping and Tanks"#M#
		Loss of material #*#due	
		to pitting and crevice	#M#Chapter XI.M41, "Buried and
Stainless steel	Soil	corrosion	Underground Piping and Tanks"#M#
		Loss of material #*#due	
		to pitting and crevice	#M#Chapter XI.M41, "Buried and
Stainless steel	Soil	corrosion	Underground Piping and Tanks"#M#
Stanicss Steel		00103011	

		Loss of material #*#due	
		to pitting, crevice, and	#M#Chapter XI.M39, "Lubricating Oil
Stainless steel	Lubricating oil	microbiologically- influenced corrosion	Analysis," and #*#Chapter XI.M32, "One Time Inspection"#M#
Otalilless steel			
		Loss of material #*#due	
		to pitting, crevice, and	#M#Chapter XI.M39, "Lubricating Oil
Stainless steel	l ubriggting oil	microbiologically- influenced corrosion	Analysis," and #*#Chapter XI.M32, "One- Time Inspection"#M#
Stall liess steel	Lubricating oil		
		Loss of material #*#due	
		to pitting, crevice, and	#M#Chapter XI.M39, "Lubricating Oil
		microbiologically-	Analysis," and #*#Chapter XI.M32, "One
Stainless steel	Lubricating oil	influenced corrosion	Time Inspection"#M#
		Loss of material #*#due	
		to pitting, crevice, and	#M#Chapter XI.M39, "Lubricating Oil
		microbiologically-	Analysis," and #*#Chapter XI.M32, "One
Stainless steel	Lubricating oil	influenced corrosion	Time Inspection"#M#
		Loss of material #*#due	
		to pitting, crevice, and	#M#Chapter XI.M39, "Lubricating Oil
		microbiologically-	Analysis," and #*#Chapter XI.M32, "One
Stainless steel	Lubricating oil	influenced corrosion	Time Inspection"#M#
		Loss of material #*#due	#M#Chapter XI.M39, "Lubricating Oil
		to pitting, crevice, and microbiologically-	Analysis," and #*#Chapter XI.M32, "One
Stainless steel	Lubricating oil	influenced corrosion	Time Inspection"#M#
	Ŭ	Reduction of heat	#M#Chapter XI.M2, "Water Chemistry,"
		transfer #*#due to	and #*#Chapter XI.M32, "One-Time
Stainless steel	Treated water	fouling	Inspection"#M#
		Reduction of heat transfer #*#due to	#M#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M32, "One-Time
Stainless steel	Treated water	fouling	Inspection"#M#
	Air – indoor,		
	uncontrolled		
Glass	(External)	None	None
		Loss of material #*#due to general, pitting,	#M#Chapter XI.M2, "Water Chemistry,"
		crevice, and galvanic	and #*#Chapter XI.M32, "Valer Chemistry,
Copper alloy	Treated water	corrosion	Inspection"#M#
		Loss of material #*#due	
		to general, pitting,	#M#Chapter XI.M2, "Water Chemistry,"
Connor allow	Tracted water	crevice, and galvanic	and #*#Chapter XI.M32, "One-Time
Copper alloy	Treated water	corrosion Loss of material #*#due	Inspection"#M#
		to general, pitting,	#M#Chapter XI.M2, "Water Chemistry,"
		crevice, and galvanic	and #*#Chapter XI.M32, "One-Time
Copper alloy	Treated water	corrosion	Inspection"#M#

	Sodium	Loss of material #*#due	#M#Chapter XI.M2, "Water Chemistry,"
	pentaborate	to pitting and crevice	and #*#Chapter XI.M32, "One-Time
Stainless steel	solution	corrosion	Inspection"#M#
Stall liess steel	Solution	Loss of material #*#due	Chapter XI.M38, "Inspection of Internal
	Condensation		
		to pitting and crevice corrosion	Surfaces in Miscellaneous Piping and
Aluminum	(Internal)	Loss of material #*#due	Ducting Components"
	O and a set is a		Chapter XI.M38, "Inspection of Internal
A 1	Condensation	to pitting and crevice	Surfaces in Miscellaneous Piping and
Aluminum	(Internal)	corrosion	Ducting Components"
	O and a set is a	Loss of material #*#due	Chapter XI.M38, "Inspection of Internal
	Condensation	to pitting and crevice	Surfaces in Miscellaneous Piping and
Aluminum	(Internal)	corrosion	Ducting Components"
		Loss of material #*#due	Chapter XI.M38, "Inspection of Internal
	Condensation	to pitting and crevice	Surfaces in Miscellaneous Piping and
Aluminum	(Internal)	corrosion	Ducting Components"
		Loss of material #*#due	Chapter XI.M38, "Inspection of Internal
	Condensation	to general, pitting, and	Surfaces in Miscellaneous Piping and
Copper alloy	(Internal)	crevice corrosion	Ducting Components"
	Air – indoor,		
	uncontrolled		
Copper alloy	(Internal/External)	None	None
		Loss of material #*#due	
		to general, pitting, and	
Steel	Air – outdoor	crevice corrosion	Chapter XI.M27, "Fire Water System"
Glass	Lubricating oil	None	None
	Air – indoor,	Loss of material #*#due	
	uncontrolled	to general, pitting, and	
Steel	(External)	crevice corrosion	Chapter XI.M26, "Fire Protection"
	Air – indoor,		
	uncontrolled or Air		
Titanium	– outdoor	None	None
Titanium			
(ASTM Grades			
1,2, 7, 11, or 12			
that contains >			
5% aluminum			
or more than			
0.20% oxygen			
or any amount			
of tin)	Raw water	None	None
		Reduction of heat	
			Chapter XI M20, "Open Cycle Cocling
Titopium	Developer	transfer #*#due to	Chapter XI.M20, "Open-Cycle Cooling
Titanium	Raw water	fouling	Water System"

		Reduction of heat	#M#Chapter XI.M39, "Lubricating Oil
		transfer #*#due to	Analysis," and #*#Chapter XI.M32, "One
Aluminum	Lubricating oil	fouling	Time Inspection"#M#
		louing	
		Cracking #*#due to	
		aggressive chemical	
Deletered		attack and leaching;	
Reinforced		#*#Changes in material	
concrete,		properties#*#due to	Chanter VI M20, "Onen Cycle Cooling
asbestos	Description	aggressive chemical	Chapter XI.M20, "Open-Cycle Cooling
cement	Raw water	attack	Water System"
		Cracking #*#duc to	
		Cracking #*#due to	
		aggressive chemical	
Deinforced		attack and leaching;	
Reinforced concrete,		#*#Changes in material	
asbestos		properties#*#due to	Chapter XI.M36, "External Surfaces
cement	Air – outdoor	aggressive chemical attack	Monitoring of Mechanical Components"
		auduk	monitoring or mechanical Components
		Cracking #*#due to	
		aggressive chemical	
		attack and leaching;	
Reinforced		#*#Changes in material	
concrete,		properties#*#due to	
asbestos		aggressive chemical	Chapter XI.M41, "Buried and
cement	Soil	attack	Underground Piping and Tanks"
		Loss of material #*#due	
	Air – outdoor	to pitting and crevice	Chapter XI.M36, "External Surfaces
Copper alloy	(External)	corrosion	Monitoring of Mechanical Components"
	Air – indoor,		
	uncontrolled		
Nickel alloy	(External)	None	None
· · · ·	Air – indoor,		
	uncontrolled or Air		
Titanium	– outdoor	None	Nama
			None
			None
Titanium			None
(ASTM Grades			None
(ASTM Grades 1,2, 7, 11, or 12			None
(ASTM Grades 1,2, 7, 11, or 12 that contains >			None
(ASTM Grades 1,2, 7, 11, or 12 that contains > 5% aluminum			None
(ASTM Grades 1,2, 7, 11, or 12 that contains > 5% aluminum or more than			None
(ASTM Grades 1,2, 7, 11, or 12 that contains > 5% aluminum or more than 0.20% oxygen			None
(ASTM Grades 1,2, 7, 11, or 12 that contains > 5% aluminum or more than 0.20% oxygen or any amount			
(ASTM Grades 1,2, 7, 11, or 12 that contains > 5% aluminum or more than 0.20% oxygen	Raw water	None	None
(ASTM Grades 1,2, 7, 11, or 12 that contains > 5% aluminum or more than 0.20% oxygen or any amount	Raw water	None Loss of material #*#due	None #M#Chapter XI.M39, "Lubricating Oil
(ASTM Grades 1,2, 7, 11, or 12 that contains > 5% aluminum or more than 0.20% oxygen or any amount of tin)		None Loss of material #*#due to pitting and crevice	None #M#Chapter XI.M39, "Lubricating Oil Analysis," and #*#Chapter XI.M32, "One
(ASTM Grades 1,2, 7, 11, or 12 that contains > 5% aluminum or more than 0.20% oxygen or any amount	Lubricating oil	None Loss of material #*#due	None #M#Chapter XI.M39, "Lubricating Oil
(ASTM Grades 1,2, 7, 11, or 12 that contains > 5% aluminum or more than 0.20% oxygen or any amount of tin)		None Loss of material #*#due to pitting and crevice	None #M#Chapter XI.M39, "Lubricating Oil Analysis," and #*#Chapter XI.M32, "One

Glass	Air – outdoor	None	None
	Air – indoor,		
	uncontrolled		
Stainless steel	(External)	None	None
		Loss of material #*#due	
		to pitting and crevice	Chapter XI.M41, "Buried and
Titanium	Soil	corrosion	Underground Piping and Tanks"
		Loss of material #*#due	
		to pitting and crevice	Chapter XI.M41, "Buried and
Super austenitic	Soil	corrosion	Underground Piping and Tanks"
		Loss of material #*#due	
		to pitting and crevice	Chapter XI.M41, "Buried and
Aluminum	Soil	corrosion	Underground Piping and Tanks"
		Loss of material #*#due	
		to pitting and crevice	Chapter XI.M41, "Buried and
Copper Alloy	Soil	corrosion	Underground Piping and Tanks"
		Cracking, blistering,	
		change in color #*#due	Chapter XI.M41, "Buried and
HDPE	Soil	to water absorption	Underground Piping and Tanks"
		Cracking, blistering,	
F 'h and a s	0 - ''	change in color #*#due	Chapter XI.M41, "Buried and
Fiberglass	Soil	to water absorption	Underground Piping and Tanks"
		Cracking, spalling,	
Original		corrosion of rebar	
Concrete	O e il	#*#due to exposure of	Chapter XI.M41, "Buried and
cylinder piping	Soil	rebar	Underground Piping and Tanks"
		Cracking, spalling, corrosion of rebar	
		#*#due to exposure of	Chapter XI.M41, "Buried and
Concrete	Soil	rebar	Underground Piping and Tanks"
Concrete	301		
		#M#Loss of material	
		#*#due to general,	
		pitting, crevice, galvanic,	
		and microbiologically-	
		influenced corrosion;	
		fouling that leads to	Chapter XI.M20, "Open-Cycle Cooling
Copper alloy	Raw water	corrosion#M#	Water System"
	Air with borated		
Stainless steel	water leakage	None	None
		Loss of material #*#due	
		to pitting and crevice	
Aluminum	Raw water	corrosion	Chapter XI.M27, "Fire Water System"
	Sodium		
	pentaborate		#M#Chapter XI.M2, "Water Chemistry,"
	solution >60°C	Cracking #*#due to	and #*#Chapter XI.M32, "One-Time
Stainless steel	(>140°F)	stress corrosion cracking	Inspection"#M#

		#M#Loss of material	
		#*#due to general,	
		pitting, crevice, galvanic,	
		and microbiologically-	
		influenced corrosion;	
		fouling that leads to	Chapter XI.M20, "Open-Cycle Cooling
Steel	Raw water	corrosion#M#	Water System"
	Closed-cycle		
	cooling water	Cracking #*#due to	#M#Chapter XI.M21A, "Closed Treated
Stainless steel	>60°C (>140°F)	stress corrosion cracking	
	Closed-cycle		
	cooling water	Cracking #*#due to	#M#Chapter XI.M21A, "Closed Treated
Stainless steel	>60°C (>140°F)	stress corrosion cracking	Water Systems"#M#
	Closed-cycle		
	cooling water	Cracking #*#due to	#M#Chapter XI.M21A, "Closed Treated
Stainless steel	>60°C (>140°F)	stress corrosion cracking	Water Systems"#M#
		Reduction of heat	
		transfer #*#due to	Chapter XI.M20, "Open-Cycle Cooling
Stainless steel	Raw water	fouling	Water System"
		Reduction of heat	
.		transfer #*#due to	Chapter XI.M20, "Open-Cycle Cooling
Stainless steel	Raw water	fouling	Water System"
		Reduction of heat	
		transfer #*#due to	Chapter XI.M20, "Open-Cycle Cooling
Stainless steel	Raw water	fouling	Water System"
		Reduction of heat	Oberten VI MOD "Oren Ovela Casting
Ctainlaga ataal	Dowwator	transfer #*#due to	Chapter XI.M20, "Open-Cycle Cooling
Stainless steel	Raw water	fouling Reduction of heat	Water System"
	Closed-cycle	transfer #*#due to	#M#Chapter XI.M21A, "Closed Treated
Stainless steel	cooling water	fouling	Water Systems"#M#
		Reduction of heat	
	Closed-cycle	transfer #*#due to	#M#Chapter XI.M21A, "Closed Treated
Stainless steel	cooling water	fouling	Water Systems"#M#
		Reduction of heat	
	Closed-cycle	transfer #*#due to	#M#Chapter XI.M21A, "Closed Treated
Stainless steel	cooling water	fouling	Water Systems"#M#
	g	Loss of material #*#due	
		to general, pitting,	
	Closed-cycle	crevice, and galvanic	#M#Chapter XI.M21A, "Closed Treated
Steel	cooling water	corrosion	Water Systems"#M#
		Loss of material #*#due	
		to general, pitting,	
	Closed-cycle	crevice, and galvanic	#M#Chapter XI.M21A, "Closed Treated
Steel	cooling water	corrosion	Water Systems"#M#
		Loss of material #*#due	
		to general, pitting,	
	Closed-cycle	crevice, and galvanic	#M#Chapter XI.M21A, "Closed Treated
Steel	cooling water	corrosion	Water Systems"#M#

		Loss of material #*#due	
		to general, pitting,	#NA#Ob anton XI NO1A
01	Closed-cycle	crevice, and galvanic	#M#Chapter XI.M21A, "Closed Treated
Steel	cooling water	corrosion	Water Systems"#M#
		Loss of material #*#due	
		to general, pitting,	
	Closed-cycle	crevice, and galvanic	#M#Chapter XI.M21A, "Closed Treated
Steel	cooling water	corrosion	Water Systems"#M#
		Loss of material #*#due	
		to general, pitting,	
	Closed-cycle	crevice, and galvanic	#M#Chapter XI.M21A, "Closed Treated
Steel	cooling water	corrosion	Water Systems"#M#
		Loss of material #*#due	
		to general, pitting,	
	Closed-cycle	crevice, and galvanic	#M#Chapter XI.M21A, "Closed Treated
Steel	cooling water	corrosion	Water Systems"#M#
		Loss of material #*#due	
		to general, pitting,	
	Closed-cycle	crevice, and galvanic	#M#Chapter XI.M21A, "Closed Treated
Steel	cooling water	corrosion	Water Systems"#M#
		Loss of material #*#due	
		to general, pitting,	
	Closed-cycle	crevice, and galvanic	#M#Chapter XI.M21A, "Closed Treated
Steel	cooling water	corrosion	Water Systems"#M#
		Loss of material #*#due	
		to general, pitting,	
	Closed-cycle	crevice, and galvanic	#M#Chapter XI.M21A, "Closed Treated
Steel	cooling water	corrosion	Water Systems"#M#
Stainless steel	Concrete	None	None
Stainless steel;			
steel with		Loss of material #*#due	
stainless steel	Closed-cycle	to microbiologically-	#M#Chapter XI.M21A, "Closed Treated
cladding	cooling water	influenced corrosion	Water Systems"#M#
Stainless steel;			
steel with		Loss of material #*#due	
stainless steel	Closed-cycle	to microbiologically-	#M#Chapter XI.M21A, "Closed Treated
cladding	cooling water	influenced corrosion	Water Systems"#M#
Stainless steel;			
steel with	Closed-cycle		
stainless steel	cooling water	Cracking #*#due to	#M#Chapter XI.M21A, "Closed Treated
cladding	>60°C (>140°F)	stress corrosion cracking	
		Loss of material #*#due	
		to general, pitting,	
		crevice, and	
		microbiologically-	Chapter XI.M20, "Open-Cycle Cooling
Copper alloy	Raw water	influenced corrosion	Water System"
			Hator Oyotom

		#M#Loss of material	
		#*#due to general,	
		pitting, crevice, and	
		microbiologically-	
		influenced corrosion;	
#M#Steel (with		fouling that leads to	Charter VI MOD IIOnen Ovela Casting
coating or	Description	corrosion; lining/coating	Chapter XI.M20, "Open-Cycle Cooling
lining)#M#	Raw water	degradation#M#	Water System"
		#M#Loss of material	
		#*#due to general,	
		pitting, crevice, and	
		microbiologically-	
		influenced corrosion;	
#M#Steel (with		fouling that leads to	
coating or		corrosion; lining/coating	Chapter XI.M20, "Open-Cycle Cooling
lining)#M#	Raw water	degradation#M#	Water System"
		#M#Loss of material	
		#*#due to general,	
		pitting, crevice, and	
		microbiologically-	
		influenced corrosion;	
#M#Steel (with		fouling that leads to	
coating or		corrosion; lining/coating	Chapter XI.M20, "Open-Cycle Cooling
lining)#M#	Raw water	degradation#M#	Water System"
······g///////			
		Loss of material #*#due	
		to general, pitting, and	Chapter XI.M20, "Open-Cycle Cooling
Copper alloy	Raw water	crevice corrosion	Water System"
		#M#Loss of material	
		#*#due to general,	
		pitting, crevice, and	
		microbiologically-	
		0,1	
		influenced corrosion;	Chapter XI M20, "Open Cycle Cooling
Common allass	Dowwater	fouling that leads to	Chapter XI.M20, "Open-Cycle Cooling
Copper alloy	Raw water	corrosion#M#	Water System"
		#M#Loss of material	
		#*#due to general,	
		pitting, crevice, and	
		microbiologically-	
		influenced corrosion;	
		fouling that leads to	
Copper alloy	Raw water	corrosion#M#	Chapter XI.M27, "Fire Water System"
		Loss of material #*#due	
		to general, pitting,	
#M#Steel (with		crevice, and	
coating or		microbiologically-	#M#Chapter XI.M41, "Buried and
wrapping)#M#	Soil	influenced corrosion	Underground Piping and Tanks"#M#

		Loss of material #*#due	
		to general, pitting,	
#M#Stool (with		crevice, and	
#M#Steel (with			#M#Chapter VI M41 "Duried and
coating or	Soil	microbiologically-	#M#Chapter XI.M41, "Buried and
wrapping)#M#	Soil	influenced corrosion Loss of material #*#due	Underground Piping and Tanks"#M#
		to general, pitting,	
#M#Steel (with		crevice, and	
coating or	0	microbiologically-	#M#Chapter XI.M41, "Buried and
wrapping)#M#	Soil	influenced corrosion	Underground Piping and Tanks"#M#
		Loss of material #*#due	
		to general, pitting,	
#M#Steel (with		crevice, and	
coating or		microbiologically-	#M#Chapter XI.M41, "Buried and
wrapping)#M#	Soil	influenced corrosion	Underground Piping and Tanks"#M#
		Loss of material #*#due	
		to general, pitting,	
	Closed-cycle	crevice, and galvanic	#M#Chapter XI.M21A, "Closed Treated
Copper alloy	cooling water	corrosion	Water Systems"#M#
		Loss of material #*#due	
		to general, pitting,	
	Closed-cycle	crevice, and galvanic	#M#Chapter XI.M21A, "Closed Treated
Copper alloy	cooling water	corrosion	Water Systems"#M#
		Loss of material #*#due	
		to general, pitting,	
	Closed-cycle	crevice, and galvanic	#M#Chapter XI.M21A, "Closed Treated
Copper alloy	cooling water	corrosion	Water Systems"#M#
		Loss of material #*#due	
		to general, pitting,	
	Closed-cycle	crevice, and galvanic	#M#Chapter XI.M21A, "Closed Treated
Copper alloy	cooling water	corrosion	Water Systems"#M#
	<u> </u>	Loss of material #*#due	
		to general, pitting,	
	Closed-cycle	crevice, and galvanic	#M#Chapter XI.M21A, "Closed Treated
Copper alloy	cooling water	corrosion	Water Systems"#M#
		Loss of material #*#due	
		to general, pitting,	
	Closed-cycle	crevice, and galvanic	#M#Chapter XI.M21A, "Closed Treated
Copper alloy	cooling water	corrosion	Water Systems"#M#
		Loss of material #*#due	
		to general, pitting,	
	Closed-cycle	crevice, and galvanic	#M#Chapter XI.M21A, "Closed Treated
Copper alloy	cooling water	corrosion	Water Systems"#M#
		Loss of material #*#due	
	Closed evelo	to general, pitting,	#M#Chapter VI M21A "Closed Treated
Conner aller	Closed-cycle	crevice, and galvanic	#M#Chapter XI.M21A, "Closed Treated
Copper alloy	cooling water	corrosion	Water Systems"#M#
		Loss of material #*#due	
		to general, pitting,	
	Closed-cycle	crevice, and galvanic	#M#Chapter XI.M21A, "Closed Treated
Copper alloy	cooling water	corrosion	Water Systems"#M#

Copper alloy Closed-cycle to general, pitting, crevice, and galvanic ###Chapter XI.M21A, "Closed Treated Copper alloy Closed-cycle corrosion ###Chapter XI.M21A, "Closed Treated Copper alloy Closed-cycle corrosion #M#Chapter XI.M21A, "Closed Treated Copper alloy Closed-cycle corrosion #M#Chapter XI.M21A, "Closed Treated Copper alloy Closed-cycle corrosion #M#Chapter XI.M21A, "Closed Treated Copper alloy Closed-cycle corrosion Water Systems"#M# Copper alloy Closed-cycle corrosion Water Systems"#M# Copper alloy Closed-cycle corrosion Water Systems"#M# Steel Air – dry None None None Steel Closed-cycle Loss of material #"#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Steel Closed-cycle Loss of material #"#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Steel Closed-cycle Loss of material #"#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Steel Closed-cycle Loss of material #"#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Steel Closed-cycle Loss of material #"#due to			Loop of motorial #*#dua	
Closed-cycle cooling water crevice, and galvanic corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Copper alloy Closed-cycle cooling water crevice, and galvanic corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Copper alloy Closed-cycle cooling water crevice, and galvanic corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Copper alloy Closed-cycle cooling water crevice, and galvanic corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Copper alloy Closed-cycle cooling water crevice, and galvanic controlled #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Air – indron, controlled None None None Steel Closed-cycle cooling water Loss of material #"#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #"#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle Loss of material ###due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle Loss of material ###due to general, pitting, and crevice corrosion			Loss of material #*#due	
Copper alloy cooling water corrosion Water Systems"#M# Copper alloy Closed-cycle Loss of material #*#due to general, pitting, crevice, and galvanic #M#Chapter XI.M21A, "Closed Treated Copper alloy Closed-cycle corrosion Water Systems"#M# Closed-cycle corrosion #M#Chapter XI.M21A, "Closed Treated Copper alloy cooling water corrosion #M#Chapter XI.M21A, "Closed Treated Copper alloy cooling water corrosion #M#Chapter XI.M21A, "Closed Treated Copper alloy cooling water corrosion Mater Systems"#M# Air – indoor, controlled Coss of material #*#due to general, pitting, and cooling water None None Steel Closed-cycle Loss of material #*#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle Loss of material #*#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle Loss of material #*#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle Loss of materi				
Loss of material #*#due to general, pitting, corrosion ###Chapter XI.M21A, "Closed Treated Water Systems"#M# Copper alloy Closed-cycle cooling water corrosion ###Chapter XI.M21A, "Closed Treated Water Systems"#M# Copper alloy Closed-cycle cooling water corrosion ###Chapter XI.M21A, "Closed Treated Water Systems"#M# Copper alloy Closed-cycle controlled corvice, and galvanic controlled ###Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel (External) None None Steel Closed-cycle cooling water Loss of material #*#due to general, pitting, and crevice corrosion ###Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #*#due to general, pitting, and crevice corrosion ###Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #*#due to general, pitting, and crevice corrosion #W#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #*#due to general, pitting, and crevice corrosion #W#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #*#due to general, pitting, and crevice corrosion #W#Chapter XI.M21A, "Closed Treated Wat			-	
Closed-cycle cooling water to general, pitting, crevice, and galvanic corosion #/##Chapter XI.M21A, "Closed Treated Water Systems"#M# Copper alloy Closed-cycle coloning water Loss of material #*#due to general, pitting, controlled #/##Chapter XI.M21A, "Closed Treated Water Systems"#M# Air - indoor, controlled Air - dry None None Steel (External) None None Steel Closed-cycle cooling water Loss of material #*#due to general, pitting, and crevice corrosion #/##Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #*#due to general, pitting, and crevice corrosion #/##Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #*#due to general, pitting, and crevice corrosion #/##Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #*#due to general, pitting, and crevice corrosion #/##Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #*#due to general, pitting, and crevice corrosion #/##Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #*#due to general, pitting, and crevice	Copper alloy	cooling water		Water Systems"#M#
Closed-cycle cooling water crevice, and galvanic corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Copper alloy Closed-cycle cooling water Loss of material #"#due to general, pitting, crevice, and galvanic #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Copper alloy Closed-cycle cooling water None Water Systems"#M# Steel (External) None None Steel Air – dry None None Steel Closed-cycle cooling water Loss of material #"#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #"#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #"#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #"#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #"#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel			Loss of material #*#due	
Copper alloy cooling water corrosion Water Systems"#M# Loss of material #*#due cooling water Loss of material #*#due corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Air - indoor, controlled None None None Steel (External) None None Stainless steel Air - dry None None Stainless steel Air - dry None None Stainless steel Air - dry None None Steel Closed-cycle cooling water Loss of material #*#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #*#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #*#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #*#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #*#due to general, pitting,			to general, pitting,	
Copper alloy cooling water corrosion Water Systems"#M# Loss of material #*#due cooling water Loss of material #*#due corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Air - indoor, controlled None None None Steel (External) None None Stainless steel Air - dry None None Stainless steel Air - dry None None Stainless steel Air - dry None None Steel Closed-cycle cooling water Loss of material #*#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #*#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #*#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #*#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #*#due to general, pitting,		Closed-cycle	crevice, and galvanic	#M#Chapter XI.M21A, "Closed Treated
Loss of material #*#due to general, pitting, controlled #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel (External) None Stainless steel Air – dry None Stainless steel Air – dry None Steel (External) None Steel Closed-cycle cooling water Loss of material #*#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #*#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #*#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #*#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #*#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #*#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #*#due to genera	Copper allov	-	-	
Closed-cycle cooling water to general, pitting, crevice, and galvanic corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Air – indoor, controlled None None None Steel (External) None None Stainless steel Air – dry None None Stainless steel Air – dry None None Steel Closed-cycle cooling water Loss of material #*#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #*#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #*#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #*#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #*#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #*#due to general, pitting, and crevice cor				
Closed-cycle cooling water crevice, and galvanic corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Air - Indoor, controlled None None None Steel (External) None None Stainless steel Air - dry None None Steel Closed-cycle cooling water Loss of material #"#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #"#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #"#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #"#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #"#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #"#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-				
Copper alloy cooling water corrosion Water Systems"#M# Air - indoor, controlled None None None Steel (External) None None Steel Closed-cycle cooling water Loss of material #*#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #*#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #*#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #*#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #*#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #*#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #*#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water S		Closed avela		#M#Chapter VI M21A "Closed Treated
Air – indoor, controlled None None Steel (External) None None Stainless steel Air – dry None None Steel Closed-cycle Loss of material #*#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle Loss of material #*#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle Loss of material #*#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle Loss of material #*#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle Loss of material #*#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle Loss of material #*#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle Loss of material #*#due to general, pitting, crevice, and galvanic #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Closed-cycle Closed-cycle cooling water Loss of material #	Connor allas	-	-	•
Steel controlled (External) None None Stainless steel Air – dry None None Stainless steel Air – dry None None Steel Closed-cycle cooling water Loss of material #"#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #"#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #"#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #"#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #"#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #"#due to general, pitting, and crevice corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Steel Closed-cycle cooling water Loss of material #"#due to general, pitting, crevice, and galvanic #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# </td <td>Copper alloy</td> <td></td> <td>corrosion</td> <td>Water Systems #M#</td>	Copper alloy		corrosion	Water Systems #M#
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SteelClosed-cycle cooling waterto general, pitting, and crevice corrosion#M#Chapter XI.M21A, "Closed Treated Water Systems"#M#SteelClosed-cycle cooling waterLoss of material #*#due to general, pitting, and crevice corrosion#M#Chapter XI.M21A, "Closed Treated Water Systems"#M#SteelClosed-cycle cooling waterLoss of material #*#due to general, pitting, and crevice corrosion#M#Chapter XI.M21A, "Closed Treated Water Systems"#M#SteelClosed-cycle cooling waterLoss of material #*#due to general, pitting, and crevice corrosion#M#Chapter XI.M21A, "Closed Treated Water Systems"#M#SteelClosed-cycle cooling waterLoss of material #*#due to general, pitting, crevice, and galvanic#M#Chapter XI.M21A, "Closed Treated Water Systems"#M#Copper alloyClosed-cycle cooling waterLoss of material #*#due to general, pitting, crevice, and galvanic#M#Chapter XI.M21A, "Closed Treated Water Systems"#M#Copper alloyClosed-cycle corrosionLoss of material #*#due to general, pitting, crevice, and galvanic#M#Chapter XI.M21A, "Closed Treated Water Systems"#M#				
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SteelClosed-cycle cooling waterLoss of material #*#due to general, pitting, and crevice corrosion#M#Chapter XI.M21A, "Closed Treated Water Systems"#M#SteelClosed-cycle cooling waterLoss of material #*#due to general, pitting, and crevice corrosion#M#Chapter XI.M21A, "Closed Treated Water Systems"#M#SteelClosed-cycle cooling waterLoss of material #*#due to general, pitting, and crevice corrosion#M#Chapter XI.M21A, "Closed Treated Water Systems"#M#Copper alloyClosed-cycle cooling waterLoss of material #*#due to general, pitting, crevice, and galvanic corrosion#M#Chapter XI.M21A, "Closed Treated Water Systems"#M#Copper alloyClosed-cycle corrosionLoss of material #*#due to general, pitting, crevice, and galvanic#M#Chapter XI.M21A, "Closed Treated Water Systems"#M#	Chaol	-		
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SteelClosed-cycle cooling waterto general, pitting, and crevice corrosion#M#Chapter XI.M21A, "Closed Treated Water Systems"#M#SteelClosed-cycle cooling waterLoss of material #*#due to general, pitting, and crevice corrosion#M#Chapter XI.M21A, "Closed Treated Water Systems"#M#SteelClosed-cycle cooling waterLoss of material #*#due to general, pitting, crevice, corrosion#M#Chapter XI.M21A, "Closed Treated Water Systems"#M#Closed-cycle cooling waterLoss of material #*#due to general, pitting, crevice, and galvanic corrosion#M#Chapter XI.M21A, "Closed Treated Water Systems"#M#Copper alloyClosed-cycle cooling waterLoss of material #*#due to general, pitting, crevice, and galvanic#M#Chapter XI.M21A, "Closed Treated Water Systems"#M#Closed-cycleClosed-cycle corrosionLoss of material #*#due to general, pitting, crevice, and galvanic#M#Chapter XI.M21A, "Closed Treated Water Systems"#M#				
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Steel Closed-cycle Loss of material #*#due #M#Chapter XI.M21A, "Closed Treated Steel cooling water crevice corrosion Water Systems"#M# Loss of material #*#due Loss of material #*#due Water Systems"#M# Closed-cycle crevice, and galvanic #M#Chapter XI.M21A, "Closed Treated Copper alloy Closed-cycle crevice, and galvanic #M#Chapter XI.M21A, "Closed Treated Copper alloy Cooling water corrosion #M#Chapter XI.M21A, "Closed Treated Copper alloy Closed-cycle corrosion #M#Chapter XI.M21A, "Closed Treated Copper alloy Closed-cycle corrosion #M#Chapter XI.M21A, "Closed Treated Closed-cycle crevice, and galvanic #M#Chapter XI.M21A, "Closed Treated			• • •	
SteelClosed-cycle cooling waterto general, pitting, and crevice corrosion#M#Chapter XI.M21A, "Closed Treated Water Systems"#M#SteelLoss of material #*#due to general, pitting, crevice, and galvanic corrosionLoss of material #*#due to general, pitting, crevice, and galvanic water Systems"#M#Copper alloyClosed-cycle cooling waterLoss of material #*#due to general, pitting, crevice, and galvanic corrosion#M#Chapter XI.M21A, "Closed Treated Water Systems"#M#Copper alloyClosed-cycleLoss of material #*#due to general, pitting, crevice, and galvanic#M#Chapter XI.M21A, "Closed Treated	Steel	cooling water	crevice corrosion	Water Systems"#M#
SteelClosed-cycle cooling waterto general, pitting, and crevice corrosion#M#Chapter XI.M21A, "Closed Treated Water Systems"#M#SteelLoss of material #*#due to general, pitting, crevice, and galvanic corrosionLoss of material #*#due to general, pitting, crevice, and galvanic water Systems"#M#Copper alloyClosed-cycle cooling waterLoss of material #*#due to general, pitting, crevice, and galvanic corrosion#M#Chapter XI.M21A, "Closed Treated Water Systems"#M#Copper alloyClosed-cycleLoss of material #*#due to general, pitting, crevice, and galvanic#M#Chapter XI.M21A, "Closed Treated				
Steel cooling water crevice corrosion Water Systems"#M# Loss of material #*#due to general, pitting, Closed-cycle cooling water Loss of material #*#due crevice, and galvanic corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Loss of material #*#due to general, pitting, Closed-cycle Loss of material #*#due to general, pitting, crevice, and galvanic #M#Chapter XI.M21A, "Closed Treated			Loss of material #*#due	
Steel cooling water crevice corrosion Water Systems"#M# Loss of material #*#due to general, pitting, Closed-cycle cooling water Loss of material #*#due crevice, and galvanic corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Loss of material #*#due to general, pitting, Closed-cycle Loss of material #*#due to general, pitting, crevice, and galvanic #M#Chapter XI.M21A, "Closed Treated		Closed-cvcle	to general, pitting, and	#M#Chapter XI.M21A, "Closed Treated
Loss of material #*#due to general, pitting, Closed-cycle cooling water Loss of material #*#due to general, pitting, crevice, and galvanic #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Loss of material #*#due to general, pitting, Closed-cycle Loss of material #*#due to general, pitting, crevice, and galvanic #M#Chapter XI.M21A, "Closed Treated	Steel			
Copper alloy Closed-cycle to general, pitting, crevice, and galvanic corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Loss of material #*#due to general, pitting, Closed-cycle Loss of material #*#due to general, pitting, crevice, and galvanic #M#Chapter XI.M21A, "Closed Treated		g trattor		
Closed-cycle cooling water crevice, and galvanic corrosion #M#Chapter XI.M21A, "Closed Treated Water Systems"#M# Loss of material #*#due to general, pitting, Closed-cycle Loss of material #*#due to general, pitting, crevice, and galvanic #M#Chapter XI.M21A, "Closed Treated				
Copper alloy cooling water corrosion Water Systems"#M# Loss of material #*#due to general, pitting, Closed-cycle Loss of material #*#due to general, pitting, crevice, and galvanic #M#Chapter XI.M21A, "Closed Treated		Closed avala		#M#Chaptor XI M21A "Closed Treated
Loss of material #*#due to general, pitting, Closed-cycle crevice, and galvanic #M#Chapter XI.M21A, "Closed Treated	0			
to general, pitting,Closed-cyclecrevice, and galvanic#M#Chapter XI.M21A, "Closed Treated	Copper alloy	cooling water		
Closed-cycle crevice, and galvanic #M#Chapter XI.M21A, "Closed Treated				
Copper alloy cooling water corrosion Water Systems"#M#		Closed-cycle	crevice, and galvanic	
	Copper alloy	cooling water	corrosion	Water Systems"#M#

		Loss of material #*#due	
		to general, pitting,	
	Closed-cycle	crevice, and galvanic	#M#Chapter XI.M21A, "Closed Treated
Coppor allow	cooling water	corrosion	Water Systems"#M#
Copper alloy	cooling water	Reduction of heat	
01	Closed-cycle	transfer #*#due to	#M#Chapter XI.M21A, "Closed Treated
Steel	cooling water	fouling	Water Systems"#M#
		Reduction of heat	
	Closed-cycle	transfer #*#due to	#M#Chapter XI.M21A, "Closed Treated
Steel	cooling water	fouling	Water Systems"#M#
		Reduction of heat	
	Closed-cycle	transfer #*#due to	#M#Chapter XI.M21A, "Closed Treated
Steel	cooling water	fouling	Water Systems"#M#
		Reduction of heat	
	Closed-cycle	transfer #*#due to	#M#Chapter XI.M21A, "Closed Treated
Steel	cooling water	fouling	Water Systems"#M#
		Reduction of heat	
	Closed-cycle	transfer #*#due to	#M#Chapter XI.M21A, "Closed Treated
Copper Alloy	cooling water	fouling	Water Systems"#M#
		Reduction of heat	
	Closed-cycle	transfer #*#due to	#M#Chapter XI.M21A, "Closed Treated
Copper Alloy	cooling water	fouling	Water Systems"#M#
		Reduction of heat	
	Closed-cycle	transfer #*#due to	#M#Chapter XI.M21A, "Closed Treated
Copper Alloy	cooling water	fouling	Water Systems"#M#
		Reduction of heat	
	Closed-cycle	transfer #*#due to	#M#Chapter XI.M21A, "Closed Treated
Copper Alloy	cooling water	fouling	Water Systems"#M#
		Loss of material #*#due	
		to general, pitting, and	Chapter XI.M20, "Open-Cycle Cooling
Nickel alloy	Raw water	crevice corrosion	Water System"
		Loss of material #*#due	
			Chapter XI M20, "Open Cycle Ceeling
Nickel allov	Raw water	to general, pitting, and	Chapter XI.M20, "Open-Cycle Cooling
INICKEI alloy	Raw water	crevice corrosion	Water System"
		Llandaning and loss of	#N#Chapter XI M20 Illustration of
		Hardening and loss of	#M#Chapter XI.M38, "Inspection of
	_ (strength #*#due to	Internal Surfaces in Miscellaneous
Elastomers	Raw water	elastomer degradation	Piping and Ducting Components"#M#
			Chapter XI.M38, "Inspection of Internal
		Loss of material #*#due	Surfaces in Miscellaneous Piping and
Elastomers	Raw water	to erosion	Ducting Components"
		Cracking #*#due to	Chapter XI.M36, "External Surfaces
Stainless steel	Air – outdoor	stress corrosion cracking	Monitoring of Mechanical Components"
		Cracking #*#due to	Chapter XI.M36, "External Surfaces
Stainless steel	Air – outdoor	stress corrosion cracking	Monitoring of Mechanical Components"

	Cracking #*#due to	Chapter XI.M36, "External Surfaces
Air – outdoor	-	Monitoring of Mechanical Components"
	Cracking #*#due to	Chapter XI.M36, "External Surfaces
Air – outdoor	stress corrosion cracking	Monitoring of Mechanical Components"
	Cracking #*#due to	Chapter XI.M36, "External Surfaces
Air – outdoor	-	Monitoring of Mechanical Components"
	Cracking #*#due to	Chapter XI.M36, "External Surfaces
Air – outdoor	stress corrosion cracking	Monitoring of Mechanical Components"
	Cracking #*#due to	Chapter XI.M36, "External Surfaces
Air – outdoor	0	Monitoring of Mechanical Components"
	•	Chapter XI.M36, "External Surfaces
Air – outdoor	stress corrosion cracking	Monitoring of Mechanical Components"
	Cracking #*#due to	Chapter XI.M36, "External Surfaces
Air – outdoor	•	Monitoring of Mechanical Components"
		Chapter XI.M36, "External Surfaces
Air — Outdoor	Stress corrosion cracking	Monitoring of Mechanical Components"
	Cracking #*#due to	Chapter XI.M36, "External Surfaces
Air – outdoor	-	Monitoring of Mechanical Components"
Air outdoor		Chapter XI.M36, "External Surfaces
	Suces convision cracking	
Gas	None	None
	Loss of material #*#due	
Air outdoor		Chapter XI.M36, "External Surfaces
Ali – Outdoor	CONTOSION	Monitoring of Mechanical Components"
	Loss of material #*#due	
		Chapter XI.M36, "External Surfaces
Air – outdoor	corrosion	Monitoring of Mechanical Components"
	Air – outdoor Air – outdoor Air – outdoor Air – outdoor Air – outdoor Air – outdoor Air – outdoor Gas Air – outdoor	Air – outdoor Cracking #*#due to stress corrosion cracking Gas None Loss of material #*#due to pitting and crevice Air – outdoor Loss of material #*#due to pitting and crevice

		Loss of material #*#due	
		to pitting and crevice	Chapter XI.M36, "External Surfaces
Stainless steel	Air – outdoor	corrosion	Monitoring of Mechanical Components"
		Loss of material #*#due	
Stainless steel	Air – outdoor	to pitting and crevice corrosion	Chapter XI.M36, "External Surfaces
Starriess steel		CONDSION	Monitoring of Mechanical Components"
		Loss of material #*#due	
		to pitting and crevice	Chapter XI.M36, "External Surfaces
Stainless steel	Air – outdoor	corrosion	Monitoring of Mechanical Components"
		l and of motorial #*#dua	
		Loss of material #*#due to pitting and crevice	Chapter XI.M36, "External Surfaces
Stainless steel	Air – outdoor	corrosion	Monitoring of Mechanical Components"
		Loss of material #*#due	
	A. ()	to pitting and crevice	Chapter XI.M36, "External Surfaces
Stainless steel	Air – outdoor	corrosion	Monitoring of Mechanical Components"
		Loss of material #*#due	
		to pitting and crevice	Chapter XI.M36, "External Surfaces
Stainless steel	Air – outdoor	corrosion	Monitoring of Mechanical Components"
		Loss of material #*#due	Chapter VI M2C, "External Curfages
Stainless steel	Air – outdoor	to pitting and crevice corrosion	Chapter XI.M36, "External Surfaces Monitoring of Mechanical Components"
		Loss of material #*#due	
		to pitting and crevice	Chapter XI.M36, "External Surfaces
Stainless steel	Air – outdoor	corrosion	Monitoring of Mechanical Components"
		Loss of material #*#due	
		to pitting and crevice	Chapter XI.M36, "External Surfaces
Stainless steel	Air – outdoor	corrosion	Monitoring of Mechanical Components"
		Loss of material #*#due	
Stainlage steel	Air outdoor	to pitting and crevice	Chapter XI.M36, "External Surfaces
Stainless steel	Air – outdoor	corrosion	Monitoring of Mechanical Components"
		Loss of material #*#due	Chapter XI.M30, "Fuel Oil Chemistry",
		to general, pitting, and	and #*#Chapter XI.M32, "One-Time
Steel	Fuel oil	crevice corrosion	Inspection"
		#M#Reduction of	
#M#Dorol		neutron-absorbing	
#M#Boral; boron steel, and		capacity; change in dimensions and loss of	
other materials		material #*#due to	#M#Chapter XI.M40, "Monitoring of
(excluding	Treated borated	effects of SFP	Neutron-Absorbing Materials other than
Boraflex)#M#	water	environment#M#	Boraflex"#M#
· ·			•

		#M#Reduction of	
		neutron-absorbing	
#M#Boral;		capacity; change in	
boron steel, and		dimensions and loss of	
other materials		material #*#due to	#M#Chapter XI.M40, "Monitoring of
(excluding		effects of SFP	Neutron-Absorbing Materials other than
Boraflex)#M#	Treated water	environment#M#	Boraflex"#M#
		Cracking, spalling,	
		corrosion of rebar	
Asbestos		#*#due to exposure of	Chapter XI.M41, "Buried and
cement pipe	Soil	rebar	Underground Piping and Tanks"
		Cracking, blistering,	Chapter XI.M38, "Inspection of Internal
	Raw water	change in color #*#due	Surfaces in Miscellaneous Piping and
Fiberglass	(internal)	to water absorption	Ducting Components"
		Cracking, blistering,	Chapter XI.M38, "Inspection of Internal
	Raw water	change in color #*#due	Surfaces in Miscellaneous Piping and
HDPE	(internal)	to water absorption	Ducting Components"
		Loss of material #*# due	
		to general, pitting, and	Chapter XI.M24, "Compressed Air
Copper alloy	Condensation	crevice corrosion	Monitoring"
		Loss of material#*# due	
		to general, pitting and	Chapter XI.M41, "Buried and
Steel	Soil	crevice corrosion	Underground Piping and Tanks"
Steel	Soil	Loss of preload	Chapter XI.M18, "Bolting Integrity"
		Loss of material #*#due	
		to pitting and crevice	Chapter XI.M41, "Buried and
Stainless Steel	Soil	corrosion	Underground Piping and Tanks"
Stainless Steel	Soil	Loss of preload	Chapter XI.M18, "Bolting Integrity"
Concrete;			
cementitious		Cracking #*# due to	Chapter XI.M20, "Open-Cycle Cooling
material	Raw Water	settling	Water System"
		Loss of material #*#due	
Concrete;		to abrasion, cavitation,	
cementitious		aggressive chemical	Chapter XI.M20, "Open-Cycle Cooling
material	Raw Water	attack, and leaching	Water System"
		Changes in material	
Concrete;		properties #*#due to	
cementitious		aggressive chemical	Chapter XI.M20, "Open-Cycle Cooling
material	Raw Water	attack	Water System"
Concrete;			
cementitious		Cracking #*# due to	Chapter XI.M36, "External Surfaces
material	Air - outdoor	settling	Monitoring of Mechanical Components"
		Loss of material #*#due	
Concrete;		to abrasion, cavitation,	
cementitious		aggressive chemical	Chapter XI.M36, "External Surfaces
material	Air - outdoor	attack, and leaching	Monitoring of Mechanical Components"
		,	

		Changes in motorial	
0		Changes in material	
Concrete;		properties #*#due to	
cementitious		aggressive chemical	Chapter XI.M36, "External Surfaces
material	Air - outdoor	attack	Monitoring of Mechanical Components"
		Loss of material #*#due	
	Closed-cycle	to pitting and crevice	Chapter XI.M21A, "Closed Treated
Aluminum	cooling water	corrosion	Water Systems"
		Loss of material #*#due	
	Closed-cycle	to pitting and crevice	Chapter XI.M21A, "Closed Treated
Aluminum	cooling water	corrosion	Water Systems"
		Loss of material #*#due	
		to pitting and crevice	Chapter XI.M36, "External Surfaces
Aluminum	Air - outdoor	corrosion	Monitoring of Mechanical Components"
		Loss of material #*#due	Chapter XI.M2, "Water Chemistry," and
		to pitting and crevice	#*#Chapter XI.M32, "One-Time
Aluminum	Treated water	corrosion	Inspection"
		Loss of material #*#due	Chapter XI.M2, "Water Chemistry," and
		to pitting and crevice	#*#Chapter XI.M32, "One-Time
Aluminum	Treated water	corrosion	Inspection"
Aluminum		Hardening and loss of	Chapter XI.M38, "Inspection of Internal
	Closed evelo	-	
	Closed-cycle	strength #*#due to	Surfaces in Miscellaneous Piping and
Elastomers	cooling water	elastomer degradation	Ducting Components"
	Air with borated		
Nickel alloy	water leakage	None	None
		Loss of preload #*#due	
		to thermal effects,	
		gasket creep, and self-	
Copper alloy	Any environment	loosening	Chapter XI.M18, "Bolting Integrity"
		Loss of preload #*#due	
		to thermal effects,	
		gasket creep, and self-	
Nickel alloy	Any environment	loosening	Chapter XI.M18, "Bolting Integrity"
· · · · ·		Loss of preload #*#due	
		to thermal effects,	
Steel: stainless	Air – outdoor	gasket creep, and self-	
steel	(External)	loosening	Chapter XI.M18, "Bolting Integrity"
		Loss of preload #*#due	
		to thermal effects,	
Steel; stainless		gasket creep, and self-	
steel	Raw water	loosening	Chapter XI.M18, "Bolting Integrity"
31661		Loss of preload #*#due	
	Trooted borntad	to thermal effects,	
	Treated borated	gasket creep, and self-	
Stainless steel	water	loosening	Chapter XI.M18, "Bolting Integrity"
		Loss of preload #*#due	
		to thermal effects,	
Steel; stainless		gasket creep, and self-	
steel	Fuel oil	loosening	Chapter XI.M18, "Bolting Integrity"

		Loss of prologd #*#dug	
		Loss of preload #*#due	
Ctool, stainlass		to thermal effects,	
Steel; stainless	The stad weater	gasket creep, and self-	Obersten VI M40, "Delting late with"
steel	Treated water	loosening	Chapter XI.M18, "Bolting Integrity"
	Air – indoor,		
PVC	uncontrolled	None	None
	Condensation		
PVC	(Internal)	None	None
		Loss of material #*#due	
		to general (steel only),	Chapter XI.M38, "Inspection of Internal
Steel; stainless	Raw water	pitting, and crevice	Surfaces in Miscellaneous Piping and
steel	(potable)	corrosion	Ducting Components"
		Loss of material #*#due	Chapter XI.M38, "Inspection of Internal
	Raw water	to pitting and crevice	Surfaces in Miscellaneous Piping and
Copper alloy	(potable)	corrosion	Ducting Components"
		Loss of material #*#due	
			Chapter XI.M38, "Inspection of Internal
		to pitting, crevice, and	
		microbiologically-	Surfaces in Miscellaneous Piping and
Copper alloy	Waste water	influenced corrosion	Ducting Components"
		Loss of material #*#due	
		to pitting, crevice, and	Chapter XI.M38, "Inspection of Internal
	Condensation	microbiologically-	Surfaces in Miscellaneous Piping and
Stainless steel	(Internal)	influenced corrosion	Ducting Components"
		Loss of material #*#due	
		to pitting, crevice, and	Chapter XI.M38, "Inspection of Internal
	Condensation	microbiologically-	Surfaces in Miscellaneous Piping and
Nickel alloy	(Internal)	influenced corrosion	Ducting Components"
		Loss of material #*#due	
		to pitting, crevice, and	Chapter XI.M38, "Inspection of Internal
		microbiologically-	Surfaces in Miscellaneous Piping and
Stainless steel	Waste Water	influenced corrosion	Ducting Components"
Stall liess steel			
		Loss of material #*#due	
		to pitting, crevice, and	Chapter XI.M38, "Inspection of Internal
		microbiologically-	Surfaces in Miscellaneous Piping and
Nickel alloy	Waste Water	influenced corrosion	Ducting Components"
Glass	Waste Water	None	None
		Loss of material #*#due	
		to pitting, crevice, and	Chapter XI.M38, "Inspection of Internal
		microbiologically-	Surfaces in Miscellaneous Piping and
Stainless steel	Waste Water	influenced corrosion	Ducting Components"

		Loss of material #*#due to pitting, crevice, and	Chapter XI.M38, "Inspection of Internal
NP also La Uassa		microbiologically-	Surfaces in Miscellaneous Piping and
Nickel alloy	Waste Water	influenced corrosion	Ducting Components"
Steel	Condensation (Internal)	Loss of material #*#due to pitting, crevice, and microbiologically- influenced corrosion	Chapter XI.M38, "Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components"
Steel	Waste Water	Loss of material #*#due to general, pitting, crevice, and microbiologically- influenced corrosion	Chapter XI.M38, "Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components"
Steel	Concrete	None	#M#None, provided #*#1) attributes of the concrete are consistent with ACI 318 or ACI 349 (low water-to-cement ratio, low permeability, and adequate air entrainment) as cited in NUREG-1557, and #*#2) plant OE indicates no degradation of the concrete#M#
Stainless steel	Treated water >60°C (>140°F)	Cracking #*#due to stress corrosion cracking, intergranular stress corrosion cracking	#M#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M25, "BWR Reactor Water Cleanup System"#M#
Gray cast iron	Treated water	Loss of material #*#due to selective leaching	Chapter XI.M33, "Selective Leaching"
Gray cast iron	Treated water	Loss of material #*#due to selective leaching	Chapter XI.M33, "Selective Leaching"
Gray cast iron	Treated water	Loss of material #*#due to selective leaching	Chapter XI.M33, "Selective Leaching"
Gray cast iron	Treated water	Loss of material #*#due to selective leaching	Chapter XI.M33, "Selective Leaching"
Gray cast iron	Treated water	Loss of material #*#due to selective leaching	Chapter XI.M33, "Selective Leaching"
Gray cast iron	Treated water	Loss of material #*#due to selective leaching	Chapter XI.M33, "Selective Leaching"
Gray cast iron	Treated water	Loss of material #*#due to selective leaching	Chapter XI.M33, "Selective Leaching"
Gray cast iron	Treated water	Loss of material #*#due to selective leaching	Chapter XI.M33, "Selective Leaching"

		Loss of material #*#due	
Gray cast iron	Treated water	to selective leaching	Chapter XI.M33, "Selective Leaching"
		Loss of material #*#due	
Gray cast iron	Treated water	to selective leaching	Chapter XI.M33, "Selective Leaching"
Copper alloy			
(>15% Zn or		Loss of material #*#due	
>8% AI)	Treated water	to selective leaching	Chapter XI.M33, "Selective Leaching"
Copper alloy			
(>15% Zn or		Loss of material #*#due	
>8% AI)	Treated water	to selective leaching	Chapter XI.M33, "Selective Leaching"
Copper alloy			
(>15% Zn or		Loss of material #*#due	
>8% AI)	Treated water	to selective leaching	Chapter XI.M33, "Selective Leaching"
Copper alloy			Chapter Alimos, Scientive Leadining
(>15% Zn or		Loss of material #*#due	
>8% AI)	Treated water	to selective leaching	Chapter XI.M33, "Selective Leaching"
	Air – indoor,		Chapter Alimos, Scientive Leadining
	controlled		
Aluminum	(External)	None	None
Adminum			
Aluminum	Gas	None	None
Aluminum	003	None	None
Steel	Air – dry	None	None
		Loss of material #*#due	
	Air – outdoor	to general, pitting, and	Chapter XI.M36, "External Surfaces
Steel	(External)	crevice corrosion	Monitoring of Mechanical Components"
		Loss of material #*#due	
	Air – outdoor	to general, pitting, and	Chapter XI.M36, "External Surfaces
Steel	(External)	crevice corrosion	Monitoring of Mechanical Components"
	Air – indoor,	Loss of material #*#due	
	uncontrolled	to general, pitting, and	Chapter XI.M36, "External Surfaces
Steel	(External)	crevice corrosion	Monitoring of Mechanical Components"
	Air – indoor,	Loss of material #*#due	
	uncontrolled	to general, pitting, and	Chapter XI.M36, "External Surfaces
Steel	(External)	crevice corrosion	Monitoring of Mechanical Components"
	Air – indoor,	Loss of material #*#due	
	uncontrolled	to general, pitting, and	Chapter XI.M36, "External Surfaces
Steel	(External)	crevice corrosion	Monitoring of Mechanical Components"
	Air – indoor,	Loss of material #*#due	
	uncontrolled	to general, pitting, and	Chapter XI.M36, "External Surfaces
Steel	(External)	crevice corrosion	Monitoring of Mechanical Components"
	(

	Air – indoor,	Loss of material #*#due	
	uncontrolled	to general, pitting, and	Chapter XI.M36, "External Surfaces
Steel	(External)	crevice corrosion	Monitoring of Mechanical Components"
31661			
	Air indeer	Loss of material #*#due	
	Air – indoor, uncontrolled		Chapter VI M26 "External Surfaces
Chaol		to general, pitting, and	Chapter XI.M36, "External Surfaces
Steel	(External)	crevice corrosion	Monitoring of Mechanical Components"
Copper alloy (>15% Zn or	Closed evals	Loop of motorial #*#dua	
N	Closed-cycle	Loss of material #*#due	Chapter VI M22 "Calasting Leashing"
>8% AI)	cooling water	to selective leaching	Chapter XI.M33, "Selective Leaching"
Copper alloy	Closed evelo		
(>15% Zn or	Closed-cycle	Loss of material #*#due	Oberster VI MO2 "Oelective Leophine"
>8% AI)	cooling water	to selective leaching	Chapter XI.M33, "Selective Leaching"
Copper alloy	Closed surely		
(>15% Zn or	Closed-cycle	Loss of material #*#due	Objector VI MOD #Optor/free Loophing #
>8% AI)	cooling water	to selective leaching	Chapter XI.M33, "Selective Leaching"
Copper alloy			
(>15% Zn or	Closed-cycle	Loss of material #*#due	
>8% AI)	cooling water	to selective leaching	Chapter XI.M33, "Selective Leaching"
Copper alloy			
(>15% Zn or	Closed-cycle	Loss of material #*#due	
>8% AI)	cooling water	to selective leaching	Chapter XI.M33, "Selective Leaching"
Copper alloy			
(>15% Zn or	Closed-cycle	Loss of material #*#due	
>8% AI)	cooling water	to selective leaching	Chapter XI.M33, "Selective Leaching"
Copper alloy			
(>15% Zn or	Closed-cycle	Loss of material #*#due	
>8% AI)	cooling water	to selective leaching	Chapter XI.M33, "Selective Leaching"
Copper alloy			
(>15% Zn or	Closed-cycle	Loss of material #*#due	
>8% AI)	cooling water	to selective leaching	Chapter XI.M33, "Selective Leaching"
Copper alloy			
(>15% Zn or	Closed-cycle	Loss of material #*#due	
>8% AI)	cooling water	to selective leaching	Chapter XI.M33, "Selective Leaching"
Copper alloy			
(>15% Zn or	Closed-cycle	Loss of material #*#due	
>8% AI)	cooling water	to selective leaching	Chapter XI.M33, "Selective Leaching"
Copper alloy			
(>15% Zn or	Closed-cycle	Loss of material #*#due	
>8% AI)	cooling water	to selective leaching	Chapter XI.M33, "Selective Leaching"
Copper alloy			
(>15% Zn or	Closed-cycle	Loss of material #*#due	
>8% AI)	cooling water	to selective leaching	Chapter XI.M33, "Selective Leaching"
Glass	Air	None	None
Glass	Fuel oil	None	None
Glass	Raw water	None	None
Glass	Treated water	None	None

	Treated borated		
Glass	water	None	None
	Trator		
		Loss of material #*#due	
		to pitting, crevice, and	
		microbiologically-	Chapter XI.M20, "Open-Cycle Cooling
Stainlaga ataol	Douvwator	U	
Stainless steel	Raw water	influenced corrosion	Water System"
Oteal	0	Nama	Nama
Steel	Gas	None	None
Copper alloy		loop of motorial #*#dua	
(>15% Zn or	Treated weter	Loss of material #*#due	Charter XI M22 "Calasting Lasshing"
>8% AI)	Treated water	to selective leaching	Chapter XI.M33, "Selective Leaching"
Copper alloy			
(>15% Zn or		Loss of material #*#due	
>8% AI)	Treated water	to selective leaching	Chapter XI.M33, "Selective Leaching"
Copper alloy			
(>15% Zn or		Loss of material #*#due	
>8% AI)	Treated water	to selective leaching	Chapter XI.M33, "Selective Leaching"
Copper alloy			
(>15% Zn or	Air with borated	Loss of material #*#due	
>8% AI)	water leakage	to boric acid corrosion	Chapter XI.M10, "Boric Acid Corrosion"
Steel (with			
stainless steel		Loss of material #*#due	
cladding);	Treated borated	to pitting and crevice	
stainless steel	water	corrosion	Chapter XI.M2, "Water Chemistry"
Steel (with			
stainless steel		Loss of material #*#due	
cladding);	Treated borated	to pitting and crevice	
stainless steel	water	corrosion	Chapter XI.M2, "Water Chemistry"
Steel (with			
stainless steel		Loss of material #*#due	
cladding);	Treated borated	to pitting and crevice	
stainless steel	water	corrosion	Chapter XI.M2, "Water Chemistry"
Copper alloy	Air – dry	None	None
		Loss of material #*#due	
	Condensation	to pitting and crevice	Chapter XI.M24, "Compressed Air
Stainless steel	(Internal)	corrosion	Monitoring"
	Treated borated		
	water >60°C	Cracking #*#due to	
Stainless steel	(>140°F)		Chapter XI.M2, "Water Chemistry"
			A plant-specific aging management
			program is to be evaluated.
Steel (with			#*#Reference NRC Information Notice
stainless steel			94-63, "Boric Acid Corrosion of
or nickel-alloy	Treated borated	Loss of material#*#due	Charging Pump Casings Caused by
cladding)	water	to cladding breach	Cladding Cracks."
oladanig)			
Copper alloy	Gas	None	None
	003		

	Air with borated		
Glass	water leakage	None	None
Glass	waler leakaye	none	None
	Condonaction		
	Condensation	News	News
Glass	(Internal/External)	None	None
0	0	News	News
Glass	Gas	None Loss of material #*#due	None
			Chapter XI.M38, "Inspection of Internal
	Oandanastian	to pitting and crevice	Surfaces in Miscellaneous Piping and
Stainless steel	Condensation	corrosion	Ducting Components"
		Loss of material #*#due	Chapter XI.M38, "Inspection of Internal
		to pitting and crevice	Surfaces in Miscellaneous Piping and
Stainless steel	Condensation	corrosion	Ducting Components"
		Loss of material #*#due	Chapter XI.M38, "Inspection of Internal
		to pitting and crevice	Surfaces in Miscellaneous Piping and
Stainless steel	Condensation	corrosion	Ducting Components"
	Air with steam or	Loss of material #*#due	
Steel	water leakage	to general corrosion	Chapter XI.M18, "Bolting Integrity"
		Cracking #*#due to	
High-strength	Air with steam or	cyclic loading, stress	
steel	water leakage	corrosion cracking	Chapter XI.M18, "Bolting Integrity"
			Fatigue is a time-limited aging analysis
			(TLAA) to be evaluated for the period of
			extended operation. See the SRP,
		Cumulative fatigue	Section 4.3 "Metal Fatigue," for
	Steam or Treated	damage #*#due to	acceptable methods for meeting the
Steel	water	fatigue	requirements of 10 CFR 54.21(c)(1).
			Fatigue is a time-limited aging analysis
			(TLAA) to be evaluated for the period of
			extended operation. See the SRP,
		Cumulativa fatigua	
		Cumulative fatigue	Section 4.3 "Metal Fatigue," for
01	Steam or Treated	damage #*#due to	acceptable methods for meeting the
Steel	water	fatigue	requirements of 10 CFR 54.21(c)(1).
			Fatigue is a time-limited aging analysis
			(TLAA) to be evaluated for the period of
			extended operation. See the SRP,
		Cumulative fatigue	Section 4.3 "Metal Fatigue," for
		damage #*#due to	acceptable methods for meeting the
Steel	Treated water	fatigue	requirements of 10 CFR 54.21(c)(1).
			Fatigue is a time-limited aging analysis
			(TLAA) to be evaluated for the period of
			extended operation. See the SRP,
		Cumulative fatigue	Section 4.3 "Metal Fatigue," for
		damage #*#due to	acceptable methods for meeting the
Steel	Treated water	fatigue	requirements of 10 CFR 54.21(c)(1).

			Fatigue is a time-limited aging analysis
			(TLAA) to be evaluated for the period of
			extended operation. See the SRP,
		Cumulative fatigue	Section 4.3 "Metal Fatigue," for
		damage #*#due to	acceptable methods for meeting the
Steel	Treated water	fatigue	requirements of 10 CFR 54.21(c)(1).
		Wall thinning #*#due to	
		flow-accelerated	Chapter XI.M17, "Flow-Accelerated
Steel	Steam	corrosion	Corrosion"
		Wall thinning #*#due to	
		flow-accelerated	Chapter XI.M17, "Flow-Accelerated
Steel	Steam	corrosion	Corrosion"
		Wall thinning #*#due to	
		flow-accelerated	Chapter XI.M17, "Flow-Accelerated
Steel	Steam	corrosion	Corrosion"
		Wall thinning #*#due to	
		flow-accelerated	Chapter XI.M17, "Flow-Accelerated
Steel	Steam	corrosion	Corrosion"
		Wall thinning #*#due to	
		flow-accelerated	Chapter XI.M17, "Flow-Accelerated
Steel	Treated water	corrosion	Corrosion"
		Wall thinning #*#due to	
		flow-accelerated	Chapter XI.M17, "Flow-Accelerated
Steel	Treated water	corrosion	Corrosion"
		Wall thinning #*#due to	
		flow-accelerated	Chapter XI.M17, "Flow-Accelerated
Steel	Treated water	corrosion	Corrosion"
		Wall thinning #*#due to	
		flow-accelerated	Chapter XI.M17, "Flow-Accelerated
Steel	Treated water	corrosion	Corrosion"
		Wall thinning #*#due to	
		flow-accelerated	Chapter XI.M17, "Flow-Accelerated
Steel	Treated water	corrosion	Corrosion"
		Loss of material #*#due	
		to general, pitting,	
	Closed-cycle	crevice, and galvanic	#M#Chapter XI.M21A, "Closed Treated
Steel	cooling water	corrosion	Water Systems"#M#
		Loss of material #*#due	
		to general, pitting,	
	Closed-cycle	crevice, and galvanic	Chapter XI.M21A, "Closed Treated
Steel	cooling water	corrosion	Water Systems"
		Loss of material #*#due	
		to general, pitting,	
	Closed-cycle	crevice, and galvanic	Chapter XI.M21A, "Closed Treated
Steel	cooling water	corrosion	Water Systems"
		Loss of material #*#due	
		to general, pitting,	
	Closed-cycle	crevice, and galvanic	Chapter XI.M21A, "Closed Treated
Steel	cooling water	corrosion	Water Systems"

Stainless steelClosed-cycle cooling waterto pitting and crevice corrosionChapter XI.M21A, "Closed Treated Water Systems"Stainless steelClosed-cycle cooling waterLoss of material #*#due to pitting and crevice corrosionChapter XI.M21A, "Closed Treated Water Systems"Stainless steelClosed-cycle cooling waterLoss of material #*#due to pitting and crevice corrosionChapter XI.M21A, "Closed Treated Water Systems"Stainless steelClosed-cycle cooling waterLoss of material #*#due to pitting and crevice corrosionChapter XI.M21A, "Closed Treated Water Systems"Stainless steelRaw waterReduction of heat transfer #*#due to foulingChapter XI.M20, "Open-Cycle Cooling Water System"Stainless steelRaw waterfoulingWater System"Air – indoor, uncontrolledLoss of material #*#dueChapter XI.M36, "External Surfaces			Loss of material #*#due	
Stainless steel cooling water corrosion Water Systems" Stainless steel Closed-cycle to pitting and crevice corrosion Chapter XI.M21A, "Closed Treated Water Systems" Stainless steel Closed-cycle to pitting and crevice corrosion Chapter XI.M21A, "Closed Treated Water Systems" Stainless steel Closed-cycle corrosion Chapter XI.M21A, "Closed Treated Water Systems" Steel Raw water fouling Water Systems" Steel Raw water Chapter XI.M20, "Open-Cycle Cooling Water System" Stainless steel Raw water fouling Water System" Stainless steel Raw water fouling Chapter XI.M20, "Open-Cycle Cooling Water System" Steel Raw water fouling Chapter XI.M20, "Open-Cycle Cooling Water System" Steel Air - outdoor Loss of material #*#due to boric acid corrosion Chapter XI.M20, "Den-Cycle Cooling Water System" </td <td></td> <td>Closed avale</td> <td></td> <td>Chapter XI M21A "Closed Treated</td>		Closed avale		Chapter XI M21A "Closed Treated
Stainless steel Loss of material #*#due to pitting and crevice Chapter XI.M21A, "Closed Treated Water Systems" Stainless steel Closed-cycle cooling water Loss of material #*#due to pitting and crevice Chapter XI.M21A, "Closed Treated Water Systems" Stainless steel Closed-cycle cooling water Corrosion Water Systems" Steel Raw water Reduction of heat transfer #*#due to fouling Chapter XI.M20, "Open-Cycle Cooling Water System" Stainless steel Raw water Reduction of heat transfer #*#due to fouling Chapter XI.M20, "Open-Cycle Cooling Water System" Stainless steel Raw water Reduction of heat transfer #*#due to fouling Chapter XI.M20, "Open-Cycle Cooling Water System" Stainless steel Raw water Reduction of heat transfer #*#due to fouling Chapter XI.M20, "Open-Cycle Cooling Water System" Stainless steel Raw water fouling Water System" Steel Raw water fouling Water System" Air - indoor, uncontrolled Loss of material #*#due to general, pitting, and crevice corrosion Chapter XI.M20, "Aboveground Metallic trans" Steel Air - outdoor (External) Loss of material #*#due to general, pitting, and crevice corrosion Chapter XI.M29, "Above	Stainloss stool			-
Stainless steel Closed-cycle coling water to pitting and crevice corrosion Chapter XI.M21A, "Closed Treated Water Systems" Stainless steel Closed-cycle cooling water to pitting and crevice corrosion Chapter XI.M21A, "Closed Treated Water Systems" Steel Raw water fouling Water Systems" Steel Raw water fouling Water Systems" Stainless steel Raw water fouling Water System" Steel Raw water fouling Water System" Air with borated (External) Loss of material #*#due to boric acid corrosion Chapter XI.M20, "Open-Cycle Cooling Water System" Steel Air – outdoor (External) Loss of material #*	Stanliess steel			
Stainless steel cooling water corrosion Water Systems" Stainless steel Closed-cycle cooling water Loss of material #*#due to pitting and crevice corrosion Chapter XI.M21A, "Closed Treated Water Systems" Steel Raw water Reduction of heat transfer #*#due to fouling Chapter XI.M20, "Open-Cycle Cooling Water System" Stainless steel Raw water Reduction of heat transfer #*#due to fouling Chapter XI.M20, "Open-Cycle Cooling Water System" Stainless steel Raw water fouling Water System" Stainless steel Raw water fouling Chapter XI.M20, "Open-Cycle Cooling Water System" Stainless steel Raw water fouling Chapter XI.M20, "Open-Cycle Cooling Water System" Steel Raw water fouling Chapter XI.M20, "Open-Cycle Cooling Water System" Steel Air - outdoor Loss of		Closed evals		Chapter VI M21A "Classed Treated
Loss of material #*#due to pitting and crevice Chapter XI.M21A, "Closed Treated Water Systems" Steel Reduction of heat transfer #*#due to fouling Chapter XI.M21A, "Closed Treated Water Systems" Steel Raw water Reduction of heat transfer #*#due to fouling Chapter XI.M20, "Open-Cycle Cooling Water System" Stainless steel Raw water Reduction of heat transfer #*#due to fouling Chapter XI.M20, "Open-Cycle Cooling Water System" Stainless steel Raw water fouling Water System" Air - indoor, uncontrolled Loss of material #*#due to boric acid corrosion Chapter XI.M36, "External Surfaces Monitoring of Mechanical Components" Steel Air - outdoor Loss of material #*#due to boric acid corrosion Chapter XI.M29, "Aboveground Metallic Tanks" Steel Air - outdoor Loss of material #*#due to boric acid corrosion Chapter XI.M29, "Aboveground Metallic Tanks" Steel Air - outdoor Loss of material #*#due to general, pitting, and crevice corrosion Chapt	Ctainland ateal			-
Closed-cycle Stainless steel to pitting and crevice corrosion Chapter XI.M21A, "Closed Treated Water Systems" Steel Raw water Reduction of heat transfer #*#due to fouling Chapter XI.M20, "Open-Cycle Cooling Water System" Steel Raw water Foduction of heat transfer #*#due to fouling Chapter XI.M20, "Open-Cycle Cooling Water System" Stainless steel Raw water Foduction of heat transfer #*#due to fouling Chapter XI.M20, "Open-Cycle Cooling Water System" Stainless steel Raw water fouling Water System" Mir – indoor, uncontrolled Loss of material #*#due to general corrosion Chapter XI.M30, "External Surfaces Monitoring of Mechanical Components" Steel Air – outdoor Loss of material #*#due to boric acid corrosion Chapter XI.M29, "Aboveground Metallic Tanks" Steel Air – outdoor (External) Loss of material #*#due to boric acid corrosion Chapter XI.M36, "External Surfaces Monitoring of Mechanical Components" Steel Air – outdoor (External)	Stamless steel	cooling water		
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Steel Reduction of heat transfer #*#due to chapter XI.M20, "Open-Cycle Cooling Water System" Steel Raw water Reduction of heat transfer #*#due to chapter XI.M20, "Open-Cycle Cooling Water System" Stainless steel Raw water Reduction of heat transfer #*#due to chapter XI.M20, "Open-Cycle Cooling Water System" Stainless steel Raw water Reduction of heat transfer #*#due to chapter XI.M20, "Open-Cycle Cooling Water System" Stainless steel Raw water Reduction of heat transfer #*#due to chapter XI.M20, "Open-Cycle Cooling Water System" Stainless steel Raw water Reduction of heat transfer #*#due to chapter XI.M20, "Open-Cycle Cooling Water System" Steel Air - indoor, uncontrolled Loss of material #*#due to general corrosion Chapter XI.M36, "External Surfaces Monitoring of Mechanical Components" Steel Air - outdoor Loss of material #*#due to general, pitting, and crevice corrosion Chapter XI.M29, "Aboveground Metallic Tanks" Steel Air - outdoor Loss of material #*#due to boric acid corrosion Chapter XI.M36, "External Surfaces Monitoring of Mechanical Components" Steel Air - outdoor Loss of material #*#due to general corrosion Chapter XI.M36, "External Surfaces Monitoring of Mechanical Components" Steel (External) Loss of materi				
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Steelwater leakageto boric acid corrosionChapter XI.M10, "Boric Acid Corrosion"SteelAir – outdoor (External)Loss of material #*#due to general corrosionChapter XI.M36, "External Surfaces Monitoring of Mechanical Components"SteelCondensation (External)Loss of material #*#due to general corrosionChapter XI.M36, "External Surfaces Monitoring of Mechanical Components"SteelCondensation (External)Loss of material #*#due to general corrosionChapter XI.M36, "External Surfaces Monitoring of Mechanical Components"Steel(External)NoneNoneGlassLubricating oilNoneNoneReduction of heat transfer #*#due to#M#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M32, "One-Time				
Air – outdoor Loss of material #*#due Chapter XI.M36, "External Surfaces Steel (External) Loss of material #*#due Chapter XI.M36, "External Surfaces Steel Condensation Loss of material #*#due Chapter XI.M36, "External Surfaces Steel (External) Loss of material #*#due Chapter XI.M36, "External Surfaces Monitoring of Mechanical Components" Air – indoor Monitoring of Mechanical Components" Air – indoor controlled None None Steel (External) None None Glass Lubricating oil None None Reduction of heat #M#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M32, "One-Time				
Steel(External)to general corrosionMonitoring of Mechanical Components"SteelCondensation (External)Loss of material #*#due to general corrosionChapter XI.M36, "External Surfaces Monitoring of Mechanical Components"SteelAir – indoor controlled (External)NoneNoneGlassLubricating oilNoneNoneReduction of heat transfer #*#due to#M#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M32, "One-Time	Steel	water leakage	to boric acid corrosion	Chapter XI.M10, "Boric Acid Corrosion"
Steel(External)to general corrosionMonitoring of Mechanical Components"SteelCondensation (External)Loss of material #*#due to general corrosionChapter XI.M36, "External Surfaces Monitoring of Mechanical Components"SteelAir – indoor controlled (External)NoneNoneGlassLubricating oilNoneNoneReduction of heat transfer #*#due to#M#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M32, "One-Time				
Steel Condensation (External) Loss of material #*#due to general corrosion Chapter XI.M36, "External Surfaces Monitoring of Mechanical Components" Air – indoor controlled Air – indoor controlled None None Steel (External) None None Glass Lubricating oil None None Reduction of heat transfer #*#due to #M#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M32, "One-Time				
Steel (External) to general corrosion Monitoring of Mechanical Components" Air – indoor controlled Air – indoor controlled None None Steel (External) None None Glass Lubricating oil None None Reduction of heat transfer #*#due to #M#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M32, "One-Time	Steel	(External)	to general corrosion	Monitoring of Mechanical Components"
Steel (External) to general corrosion Monitoring of Mechanical Components" Air – indoor controlled Air – indoor controlled None None Steel (External) None None Glass Lubricating oil None None Reduction of heat transfer #*#due to #M#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M32, "One-Time				
Air – indoor controlled D D Steel (External) None None Glass Lubricating oil None None Reduction of heat transfer #*#due to #M#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M32, "One-Time				
Steel controlled (External) None None Glass Lubricating oil None None Reduction of heat transfer #*#due to #M#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M32, "One-Time	Steel	,	to general corrosion	Monitoring of Mechanical Components"
Steel (External) None None Glass Lubricating oil None None Reduction of heat transfer #*#due to #M#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M32, "One-Time				
Glass Lubricating oil None None Reduction of heat #M#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M32, "One-Time				
Reduction of heat #M#Chapter XI.M2, "Water Chemistry," transfer #*#due to and #*#Chapter XI.M32, "One-Time	Steel	(External)	None	None
Reduction of heat #M#Chapter XI.M2, "Water Chemistry," transfer #*#due to and #*#Chapter XI.M32, "One-Time				
transfer #*#due to and #*#Chapter XI.M32, "One-Time	Glass	Lubricating oil		
Copper alloy Treated water fouling Inspection"#M#				
	Copper alloy	Treated water	fouling	Inspection"#M#

		Reduction of heat	Chapter XI.M2, "Water Chemistry," and
		transfer #*#due to	#*#Chapter XI.M32, "One-Time
Copper alloy	Treated water	fouling	Inspection"
		Reduction of heat	#M#Chapter XI.M2, "Water Chemistry,"
		transfer #*#due to	and #*#Chapter XI.M32, "One-Time
Copper alloy	Treated water	fouling	Inspection"#M#
		Loss of material #*#due	#M#Chapter XI.M2, "Water Chemistry,"
		to pitting and crevice	and #*#Chapter XI.M32, "One-Time
Copper alloy	Treated water	corrosion	Inspection"#M#
		Loss of material #*#due	#M#Chapter XI.M2, "Water Chemistry,"
		to pitting and crevice	and #*#Chapter XI.M32, "One-Time
Copper alloy	Treated water	corrosion	Inspection"#M#
		Reduction of heat	#M#Chapter XI.M39, "Lubricating Oil
		transfer #*#due to	Analysis," and #*#Chapter XI.M32, "One
Stainless steel	Lubricating oil	fouling	Time Inspection" #M#
		Reduction of heat	#M#Chapter XI.M39, "Lubricating Oil
		transfer #*#due to	Analysis," and #*#Chapter XI.M32, "One
Steel	Lubricating oil	fouling	Time Inspection" #M#
Copper alloy			
(≤15% Zn and	Air with borated		
≤8% AI)	water leakage	None	None
Glass	Air – outdoor	None	None
	Air – indoor,		
	uncontrolled		
Nickel alloy	(External)	None	None
		Loss of material #*#due	Chapter XI.M38, "Inspection of Internal
	Condensation	to pitting and crevice	Surfaces in Miscellaneous Piping and
Stainless steel	(Internal)	corrosion	Ducting Components"
		Loss of material #*#due	Chapter XI.M38, "Inspection of Internal
	Condensation	to pitting and crevice	Surfaces in Miscellaneous Piping and
Stainless steel	(Internal)	corrosion	Ducting Components"
	Condensation		
Glass	(Internal/External)	None	None
		Reduction of heat	Chapter XI.M39, "Lubricating Oil
		transfer #*#due to	Analysis," and #*#Chapter XI.M32, "One
Aluminum	Lubricating oil	fouling	Time Inspection"
		Loss of material #*#due	Chapter XI.M39, "Lubricating Oil
	Ludenia etimore 1	to pitting and crevice	Analysis," and #*#Chapter XI.M32, "One-
Aluminum	Lubricating oil	corrosion	Time Inspection"
		Loss of material #*#due	Chapter VI M20, "Akaya may ad Martall'
Steel		to general, pitting, and	Chapter XI.M29, "Aboveground Metallic
Steel	Soil or Concrete	crevice corrosion	Tanks"
		Loop of motorial #*#due	
		Loss of material #*#due	Chapter VI M20 "Above served Metal"
	Soil or Concrete	to general, pitting, and crevice corrosion	Chapter XI.M29, "Aboveground Metallic Tanks"
Steel			

Stainless steel	Raw water	#M#Loss of material #*#due to general, pitting, crevice, galvanic, and microbiologically- influenced corrosion; fouling that leads to corrosion#M#	Chapter XI.M20, "Open-Cycle Cooling Water System"
Stainless steel	Raw water	#M#Loss of material #*#due to pitting, crevice, and microbiologically- influenced corrosion; fouling that leads to corrosion#M#	Chapter XI.M20, "Open-Cycle Cooling Water System"
Stainless steel	Raw water	#M#Loss of material #*#due to general, pitting, crevice, galvanic, and microbiologically- influenced corrosion; fouling that leads to corrosion#M#	Chapter XI.M20, "Open-Cycle Cooling Water System"
Stainless steel	Air – outdoor	Cracking #*#due to stress corrosion cracking	Chapter XI.M36, "External Surfaces Monitoring of Mechanical Components"
Stainless steel	Air – outdoor	Cracking #*#due to stress corrosion cracking	Chapter XI.M36, "External Surfaces Monitoring of Mechanical Components"
Stainless steel	Air – outdoor	Cracking #*#due to stress corrosion cracking	Chapter XI.M36, "External Surfaces Monitoring of Mechanical Components"
Stainless steel	Air – outdoor	Cracking #*#due to stress corrosion cracking	Chapter XI.M36, "External Surfaces Monitoring of Mechanical Components"
Stainless steel	Air – outdoor	Cracking #*#due to stress corrosion cracking	Chapter XI.M36, "External Surfaces Monitoring of Mechanical Components"
Stainless steel	Air – outdoor	Cracking #*#due to stress corrosion cracking	Chapter XI.M36, "External Surfaces Monitoring of Mechanical Components"
Stainless steel	Air – outdoor	Cracking #*#due to stress corrosion cracking	Chapter XI.M36, "External Surfaces Monitoring of Mechanical Components"

		Cracking #*#due to	Chapter XI.M36, "External Surfaces
Stainless steel	Air – outdoor	-	Monitoring of Mechanical Components"
		Cracking #*#due to	Chapter XI.M36, "External Surfaces
Stainless steel	Air – outdoor	-	Monitoring of Mechanical Components"
	Air – indoor,		
	uncontrolled		
Stainless steel	(External)	None	None
		Loss of material #*#due	
		to pitting and crevice	Chapter XI.M36, "External Surfaces
Stainless steel	Air – outdoor	corrosion	Monitoring of Mechanical Components"
		Loss of material #*#due	
		to pitting and crevice	Chapter XI.M36, "External Surfaces
Stainless steel	Air – outdoor	corrosion	Monitoring of Mechanical Components"
		Loss of material #*#due	
		to pitting and crevice	Chapter XI.M36, "External Surfaces
Stainless steel	Air – outdoor	corrosion	Monitoring of Mechanical Components"
		Loop of motorial #*#dua	
		Loss of material #*#due	Chapter VI M26 "External Surfaces
Stainless steel	Air – outdoor	to pitting and crevice corrosion	Chapter XI.M36, "External Surfaces Monitoring of Mechanical Components"
Stanness steel			
		Loss of material #*#due	
		to pitting and crevice	Chapter XI.M36, "External Surfaces
Stainless steel	Air – outdoor	corrosion	Monitoring of Mechanical Components"
		Loss of material #*#due	
		to pitting and crevice	Chapter XI.M36, "External Surfaces
Stainless steel	Air – outdoor	corrosion	Monitoring of Mechanical Components"
		Loss of material #*#due	
		to pitting and crevice	Chapter XI.M36, "External Surfaces
Stainless steel	Air – outdoor	corrosion	Monitoring of Mechanical Components"
		Loss of material #*#due	
Otainlassistast		to pitting and crevice	Chapter XI.M36, "External Surfaces
Stainless steel	Air – outdoor	corrosion	Monitoring of Mechanical Components"
		Loss of material #*#due	
		to pitting and crevice	Chapter XI.M36, "External Surfaces
Stainless steel	Air – outdoor	corrosion	Monitoring of Mechanical Components"
			mentering of mechanical components
Stainless steel	Concrete	None	None

		#M#Loss of material	
		###due to general,	
		pitting, crevice, galvanic,	
		and microbiologically-	Chenter VI M20 Illness etter of Interest
		influenced corrosion;	Chapter XI.M38, "Inspection of Internal
		fouling that leads to	Surfaces in Miscellaneous Piping and
Steel	Raw water	corrosion#M#	Ducting Components"
		Loss of material #*#due	
		to pitting, and crevice	Chapter XI.M29, "Aboveground Metallic
Stainless steel	Soil or Concrete	corrosion	Tanks"
		Loss of material #*#due	
	Air – outdoor	to general, pitting, and	Chapter XI.M29, "Aboveground Metallic
Stainless Steel	(External)	crevice corrosion	Tanks"
		Loss of material #*#due	
		to pitting, and crevice	Chapter XI.M29, "Aboveground Metallic
Aluminum	Soil or Concrete	corrosion	Tanks"
		Loss of material #*#due	
	Air – outdoor	to general, pitting, and	Chapter XI.M29, "Aboveground Metallic
Aluminum	(External)	crevice corrosion	Tanks"
		Loss of material#*# due	
		to general, pitting and	Chapter XI.M41, "Buried and
Steel	Soil	crevice corrosion	Underground Piping and Tanks"
			Chapter XI.M18, "Bolting Integrity
Steel	Soil	Loss of preload	Program"
		Loss of material #*#due	
		to pitting and crevice	Chapter XI.M41, "Buried and
Stainless Steel	Soil	corrosion	Underground Piping and Tanks"
			Chapter XI.M18, "Bolting Integrity
Stainless Steel	Soil	Loss of preload	Program"
		Loss of material #*#due	
		to general, pitting,	
#M#Steel (with		crevice, and	
coating or		microbiologically-	#M#Chapter XI.M41, "Buried and
wrapping)#M#	Soil	influenced corrosion	Underground Piping and Tanks"#M#
		Loss of material #*#due	
		to general, pitting,	
#M#Steel (with		crevice, and	
coating or		microbiologically-	#M#Chapter XI.M41, "Buried and
wrapping)#M#	Soil	influenced corrosion	Underground Piping and Tanks"#M#
wiapping)#W#	3011		
		#M#Loss of material	
		#*#due to general,	
		pitting, crevice, galvanic,	
		and microbiologically-	
		influenced corrosion;	
		fouling that leads to	Chapter XI.M20, "Open-Cycle Cooling
Steel	Raw water	corrosion#M#	Water System"

Steel	Raw water	#M#Loss of material #*#due to general, pitting, crevice, galvanic, and microbiologically- influenced corrosion; fouling that leads to corrosion#M#	Chapter XI.M20, "Open-Cycle Cooling Water System"
Steel	Raw water	#M#Loss of material #*#due to general, pitting, crevice, galvanic, and microbiologically- influenced corrosion; fouling that leads to corrosion#M#	Chapter XI.M20, "Open-Cycle Cooling Water System"
Aluminum	Air - outdoor	Loss of material #*#due to pitting and crevice corrosion	Chapter XI.M36, "External Surfaces Monitoring of Mechanical Components"
Nickel alloy	Air with borated water leakage	None	None
Copper alloy	Any environment	Loss of preload #*#due to thermal effects, gasket creep, and self- loosening	Chapter XI.M18, "Bolting Integrity"
Stainless steel	Gas	None	None
Nickel alloy	Any environment	Loss of preload #*#due to thermal effects, gasket creep, and self- loosening Loss of preload #*#due to thermal effects,	Chapter XI.M18, "Bolting Integrity"
Steel; stainless steel	Air – outdoor (External)	gasket creep, and self- loosening	Chapter XI.M18, "Bolting Integrity"
PVC	Air – indoor, uncontrolled	None	None
PVC	Condensation (Internal)	None	None
Steel	Concrete	None	#M#None, provided #*#1) attributes of the concrete are consistent with ACI 318 or ACI 349 (low water-to-cement ratio, low permeability, and adequate air entrainment) as cited in NUREG-1557, and #*#2) plant OE indicates no degradation of the concrete#M#

		Loss of material #*#due	#M#Chapter XI.M2, "Water Chemistry,"
		to pitting and crevice	and #*#Chapter XI.M32, "One-Time
Stainless steel	Steam	corrosion	Inspection"#M#
Stairliess Steel	Steam	Loss of material #*#due	#M#Chapter XI.M2, "Water Chemistry,"
	Oto ore	to pitting and crevice	and #*#Chapter XI.M32, "One-Time
Stainless steel	Steam	corrosion	Inspection"#M#
		Loss of material #*#due	#M#Chapter XI.M2, "Water Chemistry,"
		to pitting and crevice	and #*#Chapter XI.M32, "One-Time
Stainless steel	Steam	corrosion	Inspection"#M#
		Loss of material #*#due	#M#Chapter XI.M2, "Water Chemistry,"
		to pitting and crevice	and #*#Chapter XI.M32, "One-Time
Nickel alloy	Steam	corrosion	Inspection"#M#
		Loss of material #*#due	#M#Chapter XI.M2, "Water Chemistry,"
		to general, pitting, and	and #*#Chapter XI.M32, "One-Time
Steel	Steam	crevice corrosion	Inspection"#M#
Aluminum	Gas	None	None
		Loss of material #*#due	
Gray cast iron	Soil	to selective leaching	Chapter XI.M33, "Selective Leaching"
		Loss of material #*#due	
Gray cast iron	Soil	to selective leaching	Chapter XI.M33, "Selective Leaching"
		Loss of material #*#due	
Gray cast iron	Treated water	to selective leaching	Chapter XI.M33, "Selective Leaching"
		Loss of material #*#due	
Gray cast iron	Treated water	to selective leaching	Chapter XI.M33, "Selective Leaching"
		Loss of material #*#due	
Gray cast iron	Treated water	to selective leaching	Chapter XI.M33, "Selective Leaching"
	- , , ,	Loss of material #*#due	
Gray cast iron	Treated water	to selective leaching	Chapter XI.M33, "Selective Leaching"
Oner see at incom	Develop	Loss of material #*#due	Oberster VI MO2 "Oelesting Leeshing"
Gray cast iron	Raw water	to selective leaching	Chapter XI.M33, "Selective Leaching"
		l ooo of motorial #*#dua	
Crow and incr	Doutwater	Loss of material #*#due	Chapter VI M22 "Coloctive Leaching"
Gray cast iron	Raw water	to selective leaching	Chapter XI.M33, "Selective Leaching"
Copper alloy	Cleared average		
(>15% Zn or	Closed-cycle	Loss of material #*#due	Objected VI MOD #Optesting Longhing "
>8% AI)	cooling water	to selective leaching	Chapter XI.M33, "Selective Leaching"
Copper alloy			
(>15% Zn or	Closed-cycle	Loss of material #*#due	
>8% AI)	cooling water	to selective leaching	Chapter XI.M33, "Selective Leaching"
Copper alloy			
(>15% Zn or	Closed-cycle	Loss of material #*#due	
>8% AI)	cooling water	to selective leaching	Chapter XI.M33, "Selective Leaching"

Common allas			
Copper alloy			
(>15% Zn or	Deventer	Loss of material #*#due	Observer MINION "Oslasting Lagabias"
>8% AI)	Raw water	to selective leaching	Chapter XI.M33, "Selective Leaching"
Copper alloy			
(>15% Zn or		Loss of material #*#due	
>8% AI)	Raw water	to selective leaching	Chapter XI.M33, "Selective Leaching"
Copper alloy			
(>15% Zn or		Loss of material #*#due	
>8% AI)	Raw water	to selective leaching	Chapter XI.M33, "Selective Leaching"
Copper alloy			
(>15% Zn or		Loss of material #*#due	
>8% AI)	Raw water	to selective leaching	Chapter XI.M33, "Selective Leaching"
Copper alloy	Raw water	Loss of material #*#due to pitting, crevice, and microbiologically- influenced corrosion	Chapter XI.M20, "Open-Cycle Cooling Water System"
Copper alloy	Raw water	Loss of material #*#due to pitting, crevice, and microbiologically- influenced corrosion	Chapter XI.M20, "Open-Cycle Cooling Water System"
Copper alloy	Raw water	Loss of material #*#due to pitting, crevice, and microbiologically- influenced corrosion	Chapter XI.M20, "Open-Cycle Cooling Water System"
Copper alloy	Raw water	Loss of material #*#due to pitting, crevice, and microbiologically- influenced corrosion	Chapter XI.M20, "Open-Cycle Cooling Water System"
Glass	Air	None	None
Glass	All		
Glass	Raw water	None	None
01000			
Glass	Treated water	None	None
01033			
Stainless steel	Raw water	Loss of material #*#due to pitting, crevice, and microbiologically- influenced corrosion	Chapter XI.M20, "Open-Cycle Cooling Water System"
Stainless steel	Raw water	Loss of material #*#due to pitting, crevice, and microbiologically- influenced corrosion	Chapter XI.M20, "Open-Cycle Cooling Water System"

		Loss of material #*#due	
		to pitting, crevice, and	
		microbiologically-	Chapter XI.M20, "Open-Cycle Cooling
Stainless steel	Raw water	influenced corrosion	Water System"
		Loss of material #*#due	
	Closed-cycle	to pitting and crevice	Chapter XI.M21A, "Closed Treated
Stainless steel	cooling water	corrosion	Water Systems"
		Loss of material #*#due	
	Closed-cycle	to pitting and crevice	Chapter XI.M21A, "Closed Treated
Stainless steel	cooling water	corrosion	Water Systems"
	Ĭ	Loss of material #*#due	
	Closed-cycle	to pitting and crevice	Chapter XI.M21A, "Closed Treated
Stainless steel	cooling water	corrosion	Water Systems"
Steel	Gas	None	None
		Reduction of heat	
	Closed-cycle	transfer #*#due to	Chapter XI.M21A, "Closed Treated
Stainless steel	cooling water	fouling	Water Systems"
		Reduction of heat	
	Closed-cycle	transfer #*#due to	Chapter XI.M21A, "Closed Treated
Stainless steel	cooling water	fouling	Water Systems"
		Reduction of heat	
	Closed-cycle	transfer #*#due to	Chapter XI.M21A, "Closed Treated
Stainless steel	cooling water	fouling	Water Systems"
o "		N 1	N 1
Copper alloy	Gas	None	None
	Closed-cycle		
Otainlana ataal	cooling water	Cracking #*#due to	Chapter XI.M21A, "Closed Treated
Stainless steel	>60°C (>140°F)	stress corrosion cracking	Water Systems"
	Closed-cycle	Creaking #*#due to	Chapter VI M21A "Closed Treated
Stainlage steel	cooling water	Cracking #*#due to	Chapter XI.M21A, "Closed Treated Water Systems"
Stainless steel	>60°C (>140°F) Closed-cycle	stress corrosion cracking	
	cooling water	Cracking #*#due to	Chapter XI.M21A, "Closed Treated
Stainless steel	>60°C (>140°F)	stress corrosion cracking	
Copper alloy			
(>15% Zn or		Loss of material #*#due	
>8% AI)	Treated water	to selective leaching	Chapter XI.M33, "Selective Leaching"
Copper alloy		in concentro readming	concerve Ecoloring
(>15% Zn or		Loss of material #*#due	
>8% AI)	Treated water	to selective leaching	Chapter XI.M33, "Selective Leaching"
Copper alloy			
(>15% Zn or		Loss of material #*#due	
>8% AI)	Treated water	to selective leaching	Chapter XI.M33, "Selective Leaching"
		Reduction of heat	
		transfer #*#due to	Chapter XI.M20, "Open-Cycle Cooling
Copper alloy	Raw water	fouling	Water System"

Copper alloy	Raw water	fouling Reduction of heat	Water System"
		transfer #*#due to	Chapter XI.M20, "Open-Cycle Cooling
Copper alloy	Raw water	fouling	Water System"
		Reduction of heat	
	Closed-cycle	transfer #*#due to	Chapter XI.M21A, "Closed Treated
Copper alloy	cooling water	fouling	Water Systems"
		Loss of material #*#due	Chapter XI.M38, "Inspection of Internal
	Air – outdoor	to general, pitting, and	Surfaces in Miscellaneous Piping and
Steel	(Internal)	crevice corrosion	Ducting Components"
	Air – indoor,		
	uncontrolled	None	Nama
Copper alloy	(External)	None	None
		Loss of material #*#due	Chapter XI.M38, "Inspection of Internal
	Condensation	to general, pitting, and	Surfaces in Miscellaneous Piping and
Steel	(Internal)	crevice corrosion	Ducting Components"
	(
		Loss of material #*#due	Chapter XI.M38, "Inspection of Internal
	Condensation	to general, pitting, and	Surfaces in Miscellaneous Piping and
Steel	(Internal)	crevice corrosion	Ducting Components"
		Reduction of heat	
	Closed-cycle	transfer #*#due to	Chapter XI.M21A, "Closed Treated
Steel	cooling water	fouling	Water Systems"
	Closed evelo	Reduction of heat transfer #*#due to	Chapter XI M21A "Closed Treated
Steel	Closed-cycle cooling water	fouling	Chapter XI.M21A, "Closed Treated Water Systems"
		Reduction of heat	
	Closed-cycle	transfer #*#due to	Chapter XI.M21A, "Closed Treated
Steel	cooling water	fouling	Water Systems"
	Ŭ	Reduction of heat	
	Closed-cycle	transfer #*#due to	Chapter XI.M21A, "Closed Treated
Steel	cooling water	fouling	Water Systems"
	Air with borated		
Glass	water leakage	None	None
Class	Condensation	Nono	Nono
Glass	Condensation	None	None
Glass	Gas	None	None
	Closed-cycle		
Glass	cooling water	None	None
	, , , , , , , , , , , , , , , , , , ,		
		Loss of material #*#due	#M#Chapter XI.M2, "Water Chemistry,"
		to general, pitting, and	and #*#Chapter XI.M32, "One-Time
Steel	Steam	crevice corrosion	Inspection"#M#
		Loss of material #*#due	#M#Chapter XI.M2, "Water Chemistry,"
Steel	Steam	to general, pitting, and crevice corrosion	and #*#Chapter XI.M32, "One-Time
Steel	Steam	crevice corrosion	Inspection"#M#

Steel	Steam	Loss of material #*#due to general, pitting, and crevice corrosion	#M#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M32, "One-Time Inspection"#M#
Steel	Treated water	Loss of material #*#due to general, pitting, and crevice corrosion	#M#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M32, "One-Time Inspection"#M#
Steel	Treated water	Loss of material #*#due to general, pitting, and crevice corrosion	#M#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M32, "One-Time Inspection"#M#
Steel	Treated water	Loss of material #*#due to general, pitting, and crevice corrosion	#M#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M32, "One-Time Inspection"#M#
Steel	Treated water	Loss of material #*#due to general, pitting, and crevice corrosion	#M#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M32, "One-Time Inspection"#M#
Steel	Treated water	Loss of material #*#due to general, pitting, and crevice corrosion	#M#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M32, "One-Time Inspection"#M#
Steel	Treated water	Loss of material #*#due to general, pitting, and crevice corrosion	#M#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M32, "One-Time Inspection"#M#
Steel	Treated water	Loss of material #*#due to general, pitting, and crevice corrosion	#M#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M32, "One-Time Inspection"#M#
Steel	Treated water	Loss of material #*#due to general, pitting, and crevice corrosion	#M#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M32, "One-Time Inspection"#M#
Steel; stainless steel	Treated water	Loss of material #*#due to general (steel only), pitting, and crevice corrosion	#M#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M32, "One-Time Inspection"#M#
Steel; stainless steel	Treated water	Loss of material #*#due to general (steel only), pitting, and crevice corrosion	#M#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M32, "One-Time Inspection"#M#
		Loss of material #*#due to general, pitting, crevice, and microbiologically-	#M#Chapter XI.M39, "Lubricating Oil Analysis," and #*#Chapter XI.M32, "One-
Steel	Lubricating oil	influenced corrosion	Time Inspection" #M#

		Loss of material #*#due	
		to general, pitting,	#M#Chapter XI.M2, "Water Chemistry,"
		crevice, and galvanic	and #*#Chapter XI.M32, "Vater Chemistry,
Stool	Troated water	_	•
Steel	Treated water	corrosion	Inspection"#M#
			#NA#Chanter VI NA2 "Mater Chamietry"
		Loss of material #*#due	#M#Chapter XI.M2, "Water Chemistry,"
01	The stad was taken	to general, pitting, and	and #*#Chapter XI.M32, "One-Time
Steel	Treated water	crevice corrosion	Inspection"#M#
		loss of motorial #*#due	#N4#Chapter XI N42 "Mater Chamietry"
		Loss of material #*#due	#M#Chapter XI.M2, "Water Chemistry,"
Ctool	Tracted water	to general, pitting, and	and #*#Chapter XI.M32, "One-Time
Steel	Treated water	crevice corrosion	Inspection"#M#
		loss of motorial #*#due	
		Loss of material #*#due	#M#Chapter XI M20 III ubrighting Oil
		to pitting, crevice, and	#M#Chapter XI.M39, "Lubricating Oil
Otaliala a start	Ludenie eticar di	microbiologically-	Analysis," and #*#Chapter XI.M32, "One-
Stainless steel	Lubricating oil	influenced corrosion	Time Inspection" #M#
		loop of motorial #*#due	
		Loss of material #*#due	Chapter VI MO1A UCLESS of Tracted
0	Closed-cycle	to pitting, crevice, and	Chapter XI.M21A, "Closed Treated
Copper alloy	cooling water	galvanic corrosion	Water Systems"
		Loss of material #*#due	
	Closed-cycle	to pitting, crevice, and	Chapter XI.M21A, "Closed Treated
Copper alloy	cooling water	galvanic corrosion	Water Systems"
		Loss of material #*#due	
o "	Closed-cycle	to pitting, crevice, and	Chapter XI.M21A, "Closed Treated
Copper alloy	cooling water	galvanic corrosion	Water Systems"
		Loss of material #*#due	#M#Chapter XI.M2, "Water Chemistry,"
	Transforder	to pitting and crevice	and #*#Chapter XI.M32, "One-Time
Stainless steel	Treated water	corrosion	Inspection"#M#
		Loss of material #*#due	#M#Chapter XI.M2, "Water Chemistry,"
	Transford	to pitting and crevice	and #*#Chapter XI.M32, "One-Time
Stainless steel	Treated water	corrosion	Inspection"#M#
		Loss of material #*#due	#M#Chapter XI.M2, "Water Chemistry,"
	T	to pitting and crevice	and #*#Chapter XI.M32, "One-Time
Stainless steel	Treated water	corrosion	Inspection"#M#
		#M#Loss of material	
#M#Steel;		#*#due to general (steel	
stainless	Air – outdoor	only), pitting, and crevice	
steel#M#	(External)	corrosion#M#	Chapter XI.M18, "Bolting Integrity"
	A	Loss of preload #*#due	
#M#Steel;	Air – indoor,	to thermal effects,	
stainless	uncontrolled	gasket creep, and self-	
steel#M#	(External)	loosening	Chapter XI.M18, "Bolting Integrity"
		#M#Loss of material	
#M#Steel;	Air – indoor,	#*#due to general (steel	
stainless steel#M#	uncontrolled	only), pitting, and crevice	Chapter XI.M18, "Bolting Integrity"
	(External)	corrosion#M#	

			#M#Chapter XI.M2, "Water Chemistry,"
	Treated water	Cracking #*#due to	and #*#Chapter XI.M32, "One-Time
Stainless steel	>60°C (>140°F)	stress corrosion cracking	
	Air – indoor,		
	uncontrolled		
Stainless steel	(Internal)	None	None
		Loss of material #*#due	#M#Chapter XI.M2, "Water Chemistry,"
		to pitting and crevice	and #*#Chapter XI.M32, "One-Time
Stainless steel	Treated water	corrosion	Inspection"#M#
		Loss of material #*#due	#M#Chapter XI.M2, "Water Chemistry,"
		to pitting and crevice	and #*#Chapter XI.M32, "One-Time
Stainless steel	Treated water	corrosion	Inspection"#M#
		Loss of material #*#due	#M#Chapter XI.M2, "Water Chemistry,"
		to pitting and crevice	and #*#Chapter XI.M32, "One-Time
Stainless steel	Treated water	corrosion	Inspection"#M#
		Loss of material #*#due	#M#Chapter XI.M2, "Water Chemistry,"
		to pitting and crevice	and #*#Chapter XI.M32, "One-Time
Stainless steel	Treated water	corrosion	Inspection"#M#
		Loss of material #*#due	#M#Chapter XI.M2, "Water Chemistry,"
		to pitting and crevice	and #*#Chapter XI.M32, "One-Time
Stainless steel	Treated water	corrosion	Inspection"#M#
		Loss of material #*#due	#M#Chapter XI.M2, "Water Chemistry,"
		to pitting and crevice	and #*#Chapter XI.M32, "One-Time
Stainless steel	Treated water	corrosion	Inspection"#M#
		Loss of material #*#due	#M#Chapter XI.M2, "Water Chemistry,"
		to pitting and crevice	and #*#Chapter XI.M32, "One-Time
Stainless steel	Treated water	corrosion	Inspection"#M#
			#M#Chapter XI.M2, "Water Chemistry,"
	Treated water	Cracking #*#due to	and #*#Chapter XI.M32, "One-Time
Stainless steel	>60°C (>140°F)	stress corrosion cracking	
			#M#Chapter XI.M2, "Water Chemistry,"
	Treated water	Cracking #*#due to	and #*#Chapter XI.M32, "One-Time
Stainless steel	>60°C (>140°F)	stress corrosion cracking	
			#M#Chapter XI.M2, "Water Chemistry,"
	Treated water	Cracking #*#due to	and #*#Chapter XI.M32, "One-Time
Stainless steel	>60°C (>140°F)	stress corrosion cracking	Inspection"#M#
			#M#Chapter XI.M2, "Water Chemistry,"
	Treated water	Cracking #*#due to	and #*#Chapter XI.M32, "One-Time
Stainless steel	>60°C (>140°F)	stress corrosion cracking	•
			#M#Chapter XI.M2, "Water Chemistry,"
	Treated water	Cracking #*#due to	and #*#Chapter XI.M32, "One-Time
Stainless steel	>60°C (>140°F)	stress corrosion cracking	
			#M#Chapter XI.M2, "Water Chemistry,"
	Treated water	Cracking #*#due to	and #*#Chapter XI.M32, "One-Time
Stainless steel	>60°C (>140°F)	stress corrosion cracking	Inspection"#M#
	Air – indoor,		
	uncontrolled		
Glass	(External)	None	None
		Loss of material #*#due	#M#Chapter XI.M2, "Water Chemistry,"
		to pitting and crevice	and #*#Chapter XI.M32, "One-Time
Aluminum	Treated water	corrosion	Inspection"#M#

		Loss of material #*#due	#M#Chapter XI.M2, "Water Chemistry,"
		to pitting and crevice	and #*#Chapter XI.M32, "One-Time
Aluminum	Treated water	corrosion	Inspection"#M#
		Loss of material #*#due	#M#Chapter XI.M2, "Water Chemistry,"
		to pitting and crevice	and #*#Chapter XI.M32, "One-Time
Aluminum	Treated water	corrosion	Inspection"#M#
		Loss of material #*#due	#M#Chapter XI.M2, "Water Chemistry,"
		to pitting and crevice	and #*#Chapter XI.M32, "One-Time
Aluminum	Treated water	corrosion	Inspection"#M#
		Loss of material #*#due	#M#Chapter XI.M2, "Water Chemistry,"
		to pitting and crevice	and #*#Chapter XI.M32, "One-Time
Aluminum	Treated water	corrosion	Inspection"#M#
		Loss of material #*#due	#M#Chapter XI.M39, "Lubricating Oil
		to general, pitting, and	Analysis," and #*#Chapter XI.M32, "One
Steel	Lubricating oil	crevice corrosion	Time Inspection" #M#
		Loss of material #*#due	#M#Chapter XI.M39, "Lubricating Oil
		to general, pitting, and	Analysis," and #*#Chapter XI.M32, "One
Steel	Lubricating oil	crevice corrosion	Time Inspection" #M#
01661			
		Loss of material #*#due	#M#Chapter XI.M39, "Lubricating Oil
			Analysis," and #*#Chapter XI.M32, "One
Stool	Lubriccting oil	to general, pitting, and	
Steel	Lubricating oil	crevice corrosion	Time Inspection" #M#
		Loss of material #*#due	#M#Chapter VI M20, "I ubrighting Oil
		Loss of material #*#due	#M#Chapter XI.M39, "Lubricating Oil
01	Look at a flar a set	to general, pitting, and	Analysis," and #*#Chapter XI.M32, "One
Steel	Lubricating oil	crevice corrosion	Time Inspection" #M#
		Loss of material #*#due	#M#Chapter XI.M39, "Lubricating Oil
Ote el		to general, pitting, and	Analysis," and #*#Chapter XI.M32, "One
Steel	Lubricating oil	crevice corrosion	Time Inspection" #M#
		Loss of material #*#due	#M#Chapter XI.M39, "Lubricating Oil
		to pitting and crevice	Analysis," and #*#Chapter XI.M32, "One
Copper alloy	Lubricating oil	corrosion	Time Inspection" #M#
		Loss of material #*#due	#M#Chapter XI.M39, "Lubricating Oil
		to pitting and crevice	Analysis," and #*#Chapter XI.M32, "One
Copper alloy	Lubricating oil	corrosion	Time Inspection" #M#
		Loss of material #*#due	#M#Chapter XI.M39, "Lubricating Oil
		to pitting and crevice	Analysis," and #*#Chapter XI.M32, "One
Copper alloy	Lubricating oil	corrosion	Time Inspection" #M#
		Loss of material #*#due	#M#Chapter XI.M39, "Lubricating Oil
		to pitting and crevice	Analysis," and #*#Chapter XI.M32, "One
Copper alloy	Lubricating oil	corrosion	Time Inspection" #M#
		Loss of material #*#due	#M#Chapter XI.M39, "Lubricating Oil
		to pitting and crevice	Analysis," and #*#Chapter XI.M32, "One
Copper alloy	Lubricating oil	corrosion	Time Inspection" #M#
	Air – indoor,		
	uncontrolled		
Aluminum	(Internal/External)	None	None

		Loss of material #*#due	
		to pitting and crevice	#M#Chapter XI.M41, "Buried and
Stainless steel	Soil	corrosion	Underground Piping and Tanks"#M#
		Loss of material #*#due	
		to pitting and crevice	#M#Chapter XI.M41, "Buried and
Stainless steel	Soil	corrosion	Underground Piping and Tanks"#M#
Stainless steel	Lubricating oil	Loss of material #*#due to pitting, crevice, and microbiologically- influenced corrosion	#M#Chapter XI.M39, "Lubricating Oil Analysis," and #*#Chapter XI.M32, "One- Time Inspection" #M#
Stainless steel	Lubricating oil	Loss of material #*#due to pitting, crevice, and microbiologically- influenced corrosion	#M#Chapter XI.M39, "Lubricating Oil Analysis," and #*#Chapter XI.M32, "One- Time Inspection" #M#
Stainless steel	Lubricating oil	Loss of material #*#due to pitting, crevice, and microbiologically- influenced corrosion	#M#Chapter XI.M39, "Lubricating Oil Analysis," and #*#Chapter XI.M32, "One- Time Inspection" #M#
Stainless steel	Lubricating oil	Loss of material #*#due to pitting, crevice, and microbiologically- influenced corrosion	#M#Chapter XI.M39, "Lubricating Oil Analysis," and #*#Chapter XI.M32, "One- Time Inspection" #M#
Stainless steel	Lubricating oil	Loss of material #*#due to pitting, crevice, and microbiologically- influenced corrosion	#M#Chapter XI.M39, "Lubricating Oil Analysis," and #*#Chapter XI.M32, "One- Time Inspection" #M#
Stainless steel	Treated water	Reduction of heat transfer #*#due to fouling Reduction of heat	#M#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M32, "One-Time Inspection"#M# #M#Chapter XI.M2, "Water Chemistry,"
Stainless steel	Treated water	transfer #*#due to fouling	and #*#Chapter XI.M32, "One-Time Inspection"#M#
Stainless steel	Treated water >60°C (>140°F)	Cracking #*#due to stress corrosion cracking	#M#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M32, "One-Time
Stainless steel	Steam	Cracking #*#due to stress corrosion cracking	#M#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M32, "One-Time
Stainless steel	Steam	Cracking #*#due to stress corrosion cracking	#M#Chapter XI.M2, "Water Chemistry," and #*#Chapter XI.M32, "One-Time Inspection"#M#
		Cracking #*#duc to	#M#Chapter XI.M2, "Water Chemistry,"
Stainless steel	Steam	Cracking #*#due to stress corrosion cracking	and #*#Chapter XI.M32, "One-Time
Stall liess steel	Steam	Reduction of heat	#M#Chapter XI.M39, "Lubricating Oil
		transfer #*#due to	Analysis," and #*#Chapter XI.M32, "One
Copper alloy	Lubricating oil	fouling	Time Inspection" #M#
		iounig	

FurtherEvaluation	Туре
Yes, if a de-	
watering system is relied upon to control settlement	PWR
Vac if a da	
Yes, if a de- watering system is relied upon to	
•	PWR
Yes, if a de- watering system	
is relied upon to	BWR
Yes, if a de-	
watering system is relied upon to	
control settlement	BWR
Yes, if a de- watering system	
is relied upon to control settlement	BWR
Yes, if a de-	
watering system is relied upon to	
control settlement	BWR

NL		
No	PWR	
No	BWR	
	DWIX	
Yes, TLAA	PWR	
Yes, TLAA	BWR	
Yes, TLAA	PWR	
163, 1244		
Yes, TLAA	BWR	
	DIME	
No	PWR	

No	BWR
Yes, TLAA	BWR
No	BWR
No	BWR
No	BWR
Nia	
No	BWR
No	BWR
No	BWR
INO	DVVR
Yes, TLAA	BWR
	DWD
Yes, TLAA	BWR
No	BWR

No	BWR
INU	BWK
#M#No#M#	PWR
#M#Yes, if a de- watering system	
is relied upon to	
settlement#M#	PWR
#M#Yes, if leaching is	
observed in	
accessible areas that impact	
intended	
function#M#	PWR

#M#Yes, if concrete is not constructed as stated#M#	PWR
#M#Yes, if a de- watering system is relied upon to control settlement#M#	BWR
#M#Yes, if a de- watering system is relied upon to control settlement#M#	BWR
#M#Yes, if a de- watering system is relied upon to control settlement#M#	BWR

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#M#No#M#	BWR
#IVI#INO#IVI#	DVIN
#M#No#M#	BWR
	DIALD
#M#No#M#	BWR
Vec if	
Yes, if	
temperature limits are exceeded	BWR
	DVVR

#M#Yes, if corrosion is		
significant #M#	BWR	
#M#Yes, if leaching is observed in accessible areas that impact intended function#M#	BWR	
#M#Yes, if leaching is observed in		
accessible areas that impact		
intended function#M#	BWR	

#M#Yes, if	
corrosion is	
indicated from the	
IWE	
examinations#M#	BWR
No	BWR
NU	DVVIN
No	BWR
No	BWR
N La	DWD
No	BWR
	DIAG
#M#No#M#	BWR
44N A 44N 1 - 44N A 44	
#M#No#M#	BWR
#M#Yes, if	
concrete is not	
constructed as	
stated#M#	BWR

#M#Yes, if leaching is observed in accessible areas that impact intended function#M#	BWR
#M#Yes, for plants located in moderate to severe weathering conditions #M#	BWR
#M#No#M#	BWR

#M#Yes, for plants located in moderate to severe weathering conditions #M#	PWR	
No	PWR	
No	BWR	
No	PWR	
No	BWR	
No	PWR	
No	BWR	

#M#No#M#	PWR
#M#No#M#	BWR
Yes, if corrosion	
is significant	BWR
#M#No#M#	PWR
#M#No#M#	PWR
#M#No#M#	PWR

Yes, if		
temperature limits		
are exceeded	PWR	
#M#No#M#	PWR	
#M#No#M#	PWR	
#M#No#M#	BWR	
No	PWR	
No		
No	BWR	

#M#No#M#	PWR
#M#No#M#	BWR
Yes, detection of	
aging effects is to be evaluated	PWR
Yes, detection of	
aging effects is to	
be evaluated	PWR
No	PWR
No	BWR
No	PWR
No	BWR
No	PWR
N 1	DMD
No	BWR
#M#No#M#	BWR
#M#No#M#	BWR

#M#No#M#	BWR
No	BWR
#M#No#M#	BWR
#M#No#M#	BWR
#M#No#M#	BWR
	BWK
#M#Yes, if corrosion is	
significant #*#Recoating of	
the torus is	
recommended.# M#	BWR
#M#No#M#	BWR

#M#No#M#	BWR
#M#No#M#	PWR
#M#No#M#	BWR
#M#Yes, if	
leaching is observed in	
accessible areas	
that impact	
intended	
function#M#	PWR
#M#Yes, if	
leaching is observed in	
accessible areas	
that impact	
intended	
function#M#	BWR

#M#No#M#	BWR
#M#No#M#	BWR
#M#No#M#	BWR

Voc. if		
Yes, if		
temperature limits	DIALD	
are exceeded	BWR	

Yes, if temperature limits are exceeded	BWR	
#M#No#M#	PWR	
#M#No#M#	BWR	
#M#No#M#	BWR	
#M#No#M#	BWR	

#M#Yes, if corrosion is indicated from the IWE examinations#M# BWR

Yes, if corrosion is indicated from the IWE examinations	BWR	

#M#Yes, if	
corrosion is	
indicated from the IWE	
examinations#M#	BWR
#M#No#M#	BWR

		1
Yes, if		
tomporaturo limito		
temperature limits		
are exceeded	BWR	
#M#No#M#	BWR	

#M#Yes, if concrete is not constructed as stated#M#	PWR
No	PWR
#M#Yes, if a de- watering system is relied upon to control settlement#M#	PWR
#M#Yes, if a de- watering system is relied upon to control settlement#M#	BWR

#M#Yes, for plants located in moderate to severe weathering conditions #M#	PWR	
#M#No#M#	BWR	
#M#No#M# #M#No#M#	BWR PWR	

#M#No#M#	BWR
#M#No#M#	BWR
#M#No#M#	PWR
#M#No#M#	BWR
#M#No#M#	PWR
#M#No#M#	BWR
#M#No#M#	BWR
#M#No#M#	BWR
#M#No#M#	BWR

#M#No#M# I	BWR
#M#Yes, if concrete is not constructed as	
stated#M#	BWR
No	BWR
No	BWR
	2
#M#No#M# I	BWR

#M#No#M#	PWR
#M#Yes, if	
corrosion is indicated from the	
IWE examinations#M#	PWR

#M#Yes, if corrosion is indicated from the IWE examinations#M# PWR #M#Yes, if corrosion is indicated from the IWE examinations#M# BWR

#M#Yes, if concrete is not constructed as stated#M#	BWR
#M#Yes, if concrete is not constructed as stated#M#	BWR
No	BWR/PW R
No	BWR

No	BWR/PW
No	R
No	BWR/PW R
	r.
No	BWR/PW R
No, unless	
leakages have	
been detected through the SFP	
liner that cannot	
be accounted for from the leak	BWR/PW
chase channels	R
No	BWR/PW R
No	BWR/PW R
INO	
Yes, plant-	BWR/PW
specific	R
Vec plant	BWR/PW
Yes, plant- specific	R
	BWR/PW
No	R

	BWR/PW
No	R
No	BWR/PW R
No	ĸ
NL	
No	PWR
No	PWR
No	PWR
No	PWR
No	PWR
No	PWR
	BWR/PW
Yes, TLAA	R

Yes, TLAA	BWR/PW R	
Yes, TLAA	BWR/PW R	
No	BWR/PW R	

	BWR/PW	
No	R	
NO		
	BWR/PW	
No	R	
NO		
	BWR/PW	
#M#No#M#	R	
	BWR/PW	
#M#No#M#	R	
#M#Yes, for		
plants located in		
moderate to		
severe		
weathering	BWR/PW	
conditions #M#	R	
	Γ	

#M#Yes, for plants located in moderate to severe weathering conditions #M#	BWR

#M#Yes, for plants located in moderate to severe weathering conditions #M#	BWR

#M#Yes, for plants located in moderate to severe weathering conditions #M#	BWR

#M#Yes, for plants located in moderate to severe weathering conditions #M#	BWR

#M#Yes, for plants located in moderate to severe weathering conditions #M#	BWR

#M#Yes, for plants located in moderate to severe weathering conditions #M#	BWR	
#M#Yes, if leaching is observed in accessible areas that impact intended function#M#	BWR/PW R	

#M#Yes, for plants located in moderate to severe weathering conditions #M#	BWR/PW R	
Yes, if temperature limits are exceeded	BWR/PW R	

Yes, if		
temperature limits are exceeded	BWR	
Yes, if		
temperature limits are exceeded	BWR/PW R	

Yes, if temperature limits are exceeded	BWR/PW R	
	ĸ	
Yes, if temperature limits are exceeded	BWR/PW R	

#M#Yes, if concrete is not constructed as stated#M#	BWR/PW R	
#M#Yes, if concrete is not constructed as stated#M#	BWR	

#M#Yes, if concrete is not constructed as	BWR/PW	
stated#M#	R	
#M#Yes, if concrete is not constructed as stated#M#	BWR/PW R	

#M#Yes, if concrete is not		
constructed as stated#M#	BWR/PW R	
#M#Yes, if concrete is not constructed as stated#M#	BWR/PW R	

#M#Yes, if concrete is not constructed as stated#M#	BWR/PW R	
#M#Yes, if		
concrete is not constructed as stated#M#	BWR	
#M#No#M#	BWR/PW R	

#M#No#M#	BWR
#M#No#M#	BWR/PW R
#M#No#M#	BWR
No	BWR/PW R

#M#Yes, if concrete is not constructed as	BWR/PW	
stated#M#	R	
No	BWR/PW R	
No	BWR/PW R	

No	BWR/PW R
No	BWR/PW R
#M#No#M#	BWR/PW R
#M#No#M#	BWR
#M#No#M#	BWR/PW R
#M#No#M#	BWR/PW R
	BWR/PW
#M#No#M#	R
#M#No#M#	BWR/PW R
#M#No#M#	BWR
No	BWR/PW R
No	BWR/PW R
No	BWR/PW R

No	BWR/PW R
No	BWR/PW R
No	BWR/PW R
#M#No#M#	BWR/PW R
#M#No#M#	BWR
#M#No#M#	BWR/PW R
#M#No#M#	BWR

No	BWR/PW R
No	BWR
No	BWR/PW R
No	BWR/PW R
No	BWR/PW R
No	BWR
No	BWR/PW R
No	BWR/PW R
No	BWR/PW R
No	BWR/PW R

#M#No#M#	BWR/PW R
#M#No#M#	BWR
#M#No#M#	BWR/PW R
#M#No#M#	BWR
#M#No#M#	BWR/PW R
#M#No#M#	BWR
#M#No#M#	BWR/PW R
#M#No#M#	BWR/PW R

#M#No#M#	BWR/PW R
#M#No#M#	BWR/PW R
#M#No#M#	BWR
No	BWR/PW R
No	BWR
No	BWR/PW R
No	BWR
No	BWR/PW R
No	BWR/PW R
No	BWR/PW R

No	BWR/PW R
	BWR/PW
#M#No#M#	R
#M#No#M#	BWR
#M#No#M#	BWR/PW R
	BWR/PW
#M#No#M#	R
	BWR/PW
#M#No#M#	R
#M#No#M#	BWR/PW R
#M#No#M#	BWR
No	BWR/PW R
No	BWR
	BWR/PW
No	R

No	BWR/PW R
No	BWR/PW R
No	BWR/PW R
No	BWR/PW R
No	BWR
	BWR/PW
No	R BWR/PW
No	R BWR/PW
No	R BWR/PW
No	R
#M#No#M#	BWR/PW R
#M#No#M#	BWR

#M#No#M#	BWR/PW R
#M#No#M#	BWR/PW R
#M#No#M#	BWR/PW R
#M#No#M#	BWR/PW R
#M#No#M#	BWR
#M#No#M#	BWR/PW R
#M#No#M#	BWR

#M#No#M#	BWR/PW R	
	BWR/PW	
#M#No#M#	R	
	BWR/PW	
#M#No#M#	R	
#M#No#M#	BWR/PW R	
#M#No#M#	BWR	
No	PWR	
No	PWR	
No	PWR	

No	PWR
No	PWR
No	PWR
No	
No	PWR
#M#Yes, if a de-	
watering system	
is relied upon to	
control	BWR/PW
settlement#M#	R
#M#Yes, if a de-	
watering system	
is relied upon to	
control	
settlement#M#	BWR
#M#Yes, if a de-	
watering system	
is relied upon to	
	BWR/PW
settlement#M#	R
#M#Yes, if a de-	
watering system	
is relied upon to	
control	BWR/PW
settlement#M#	R

#M#Yes, if a de- watering system is relied upon to control settlement#M#	BWR/PW R
#M#Yes, if a de- watering system is relied upon to control settlement#M#	BWR/PW R
#M#Yes, if a de- watering system is relied upon to control settlement#M#	BWR/PW R
#M#Yes, if a de- watering system is relied upon to control settlement#M#	BWR
No	BWR/PW R
No	BWR BWR/PW
No	R

NI-	BWR/PW
No	R
No	BWR/PW R
No	BWR/PW R
No	BWR/PW R
No	BWR
No	BWR/PW R
No	BWR/PW R

No	BWR/PW R
No	BWR/PW R
No	BWR/PW R
#M#No#M#	BWR/PW R
#M#No#M#	BWR
#M#No#M#	BWR/PW R
#M#No#M#	BWR/PW R

#M#No#M#	BWR/PW R
	BWR/PW
#M#No#M#	R
#M#No#M#	BWR/PW R
Yes, if a de-	
watering system is relied upon to	BWR/PW
control settlement	
Yes, if leaching is	
observed in accessible areas	
that impact	BWR/PW
intended function	R

#M#Yes, if a de- watering system is relied upon to	
control settlement#M#	BWR/PW R
#M#Yes, if a de- watering system is relied upon to control settlement#M#	BWR
#M#Yes, if a de- watering system is relied upon to control settlement#M#	BWR/PW R
#M#Yes, if a de- watering system is relied upon to control settlement#M#	BWR/PW R
#M#Yes, if a de- watering system is relied upon to control settlement#M#	BWR/PW R
#M#Yes, if a de- watering system is relied upon to control settlement#M#	BWR/PW R
#M#Yes, if a de- watering system is relied upon to control settlement#M#	BWR/PW R

#M#Yes, if a de- watering system is relied upon to control settlement#M#	BWR
No	BWR/PW R
#M#No#M#	BWR/PW R
	BWR/PW
#M#No#M#	R
#M#No#M#	BWR/PW R
	BWR/PW
#M#No#M#	R
No	BWR/PW R
No	BWR/PW R
No	BWR/PW R

N1 -	BWR/PW
No	R
No	BWR/PW R
	BWR/PW
No	R
No	BWR/PW R
	BWR/PW
No	R
No	BWR/PW R
No	BWR/PW R
	BWR/PW
#M#No#M#	R

#M#No#M#	BWR/PW R
#M#No#M#	BWR/PW R
#M#No#M#	R BWR/PW R

	BWR/PW
#M#No#M#	R
	BWR/PW
#M#No#M#	R
	BWR/PW
#M#No#M#	R
	BWR/PW
#M#No#M#	R
	BWR/PW
#M#No#M#	R
	BWR/PW
No	R
N1-	BWR/PW
No	R
	BWR/PW
No	R
No	BWR/PW R
	BWR/PW
No	R

	<u> </u>
No	BWR/PW R
#M#Yes, if leaching is observed in accessible areas	
that impact intended function#M#	BWR/PW R

#M#Yes, if leaching is observed in accessible areas that impact intended		
intended function#M#	BWR	
#M#Yes, if		
leaching is observed in		
accessible areas that impact		
intended function#M#	BWR/PW R	

#M#Yes, if leaching is observed in accessible areas that impact intended function#M#	BWR/PW R	
#M#Yes, if leaching is observed in accessible areas that impact intended function#M#	к BWR/PW R	

#M#Yes, if leaching is		
observed in accessible areas that impact intended function#M#	BWR/PW R	
#M#Yes, if leaching is observed in accessible areas that impact intended function#M#	BWR	
No	BWR/PW R	
No	BWR/PW R	
No	BWR/PW R	

No	BWR/PW R
	BWR/PW
No	R
No	BWR/PW R
	BWR/PW
No	R
No	BWR/PW R
Yes, TLAA	BWR
Ves plant	
Yes, plant- specific	PWR
-	

No	BWR
	5
No	PWR
No	PWR
No	PVK
No	PWR
No	BWR
No	BWR
No	BWR

No	PWR
No	PWR
Yes, TLAA	PWR
,	
Yes, detection of	
aging effects is to	
be evaluated	BWR
No	PWR
No	PWR
No	PWR
NL	
No	PWR
Yes, TLAA	PWR

No	PWR
No	BWR
No	BWR
	DVIN
No	PWR
	PWR
Yes, TLAA	PVVR
×	
Yes, TLAA	BWR
Yes, TLAA	PWR
Yes, TLAA	PWR

Yes, TLAA	PWR
Yes, detection of aging effects is to be evaluated	BWR
No	PWR
No	BWR
No	PWR
No	PWR
No	PWR

Yes, TLAA	PWR
Yes, TLAA	PWR
No	
No	PWR
No	PWR
No	PWR
Yes, plant-	
specific	PWR
No	PWR

No	PWR
No	PWR
No	PWR
Yes, TLAA	PWR
Yes, TLAA	PWR
No	PWR
No	BWR
No	PWR

Yes, TLAA	BWR	
Yes, TLAA	PWR	
No	PWR	
No	PWR	
Yes, plant- specific	BWR	

Yes, TLAA	BWR	
No	BWR	
No	BWR	
No	BWR	

Yes, TLAA	BWR
No	BWR
Yes, TLAA	BWR
Yes, TLAA	PWR

Yes, plant-		
specific	PWR	
No	PWR	
110		
No	PWR	
No	PWR	
No	PWR	
Yes, TLAA	PWR	

Yes, TLAA	PWR	
Yes, TLAA	PWR	
No	PWR	

No PWR No BWR No BWR No BWR		
No BWR No BWR		
No BWR No BWR	No	PWR
No BWR		
No BWR	No	BMK
No BWR		
No BWR	No	BWR
No BWR		
No BWR	No	BWR
No BWR	No	BWR
No BWR		
	No	BWR

No	BWR
No	BWR
No	BWR
No	BWR/PW R
	r.
	BWR/PW
No	R
No	BWR/PW
No	R
	BWR/PW
No	R
	BWR/PW
No	R
No	PWR
#M#No#M#	PWR
Yes, plant-	
specific	PWR
#M#No#M#	BWR

#M#No#M#	PWR
#M#No#M#	BWR
#M#No#M#	BWR
No	PWR
No	PWR
N1-	DWD
No	PWR
No	BWR
No	PWR
No	PWR

No	PWR
No	BWR
No	PWR
No	BWR
Yes, TLAA	BWR
No	BWR
No	
No	BWR
No	PWR
No	PWR

No	PWR
	F VVIX
No	PWR
#M#Yes, plant	
specific or	
integrated	
surveillance program#M#	BWR
#M#Yes, plant	BWIT
specific or	
integrated surveillance	
program#M#	PWR
#M#Yes, plant	
specific or	
integrated surveillance	
program#M#	PWR
No	סעוס
No	PWR
No	BWR
	DWA
No	PWR
No	PWR
No	PWR

No	PWR
No	PWR
No	PWR
No	PWR
No	PWR
No	PWR

Yes, if accessible Primary, Expansion or Existing program components indicate aging effects that need management	PWR
Yes, if accessible Primary, Expansion or Existing program components indicate aging effects that need management	PWR
No	PWR
No	PWR
No	FWK

No	PWR	
No	PWR	
No	PWR	
No	PWR	
No	PWR	
No	PWR	

No PWR No PWR No PWR No PWR			
No PWR No PWR No PWR No PWR			
No PWR No PWR No PWR No PWR			
No PWR No PWR No PWR No PWR			
No PWR No PWR No PWR No PWR			
No PWR No PWR No PWR No PWR			
No PWR No PWR No PWR No PWR			
No PWR No PWR No PWR No PWR			
No PWR No PWR No PWR	No	PWR	
No PWR No PWR No PWR			
No PWR No PWR No PWR			
No PWR No PWR No PWR			
No PWR No PWR No PWR			
No PWR No PWR No PWR	No	PWR	
No PWR No PWR			
No PWR No PWR	No	PW/R	
No PWR No PWR			
No PWR No PWR	NI-		
No PWR	NO	PVVR	
No PWR			
No PWR		DMD	
	NO	PWR	
No PWR	No	PWR	
No PWR			
	No	PWR	

No	PWR
No	PWR
INO	PWR
No	PWR
No	BWR
No	PWR
No	PWR
No	PWR

No	PWR	
No	PWR	
Yes, if accessible Primary, Expansion or Existing program components indicate aging effects that need management	PWR	
Yes, if accessible Primary, Expansion or Existing program components indicate aging effects that need management	PWR	
No	PWR	

NIA	
No	PWR
No	PWR
No	PWR
No	PWR
No	PWR
No	PWR

No	PWR
No	PWR
No	PWR
No	PWR
No	PWR
No	PWR
No	PWR
No	PWR

No	PWR
No	PWR
No	PWR
No	PWR
No	PWR
No	PWR
No	PWR
No	PWR

No	PWR
No	PWR
No	PWR
No	PWR
No	PWR
No	PWR
No	PWR
No	PWR

Yes, TLAA	PWR	
No	PWR	
No	PWR	
Yes, if accessible Primary, Expansion or Existing program components indicate aging effects that need management	PWR	
Yes, if accessible Primary, Expansion or Existing program components indicate aging effects that need management	PWR	

No	PWR
No	PWR
No	PWR
No	PWR
No	PWR
No	
No	PWR

No	PWR	
No	PWR	
No	PWR	
No	PWR	
No	PWR	

No	PWR
No	PWR
No	PWR
No	PWR
No	PWR
No	PWR
No	PWR

No PWR No PWR Yes, TLAA PWR	
No PWR Yes, TLAA PWR	
Yes, TLAA PWR	
Yes, TLAA PWR	
No PWR	
No PWR	
No PWR	
No PWR	
No PWR	
No PWR	

Yes, TLAA	PWR
No	PWR
No	PWR
No	PWR
No	PWR
No	PWR
No	PWR
#M#No, if	
conditions are	BWR/PW
met.#M#	R

No	PWR
Yes, plant-	
specific	PWR
Yes, plant-	
specific	PWR
Yes, plant-	PWR
specific	
No	PWR
No	PWR
#M#No#M#	PWR
#M#No#M#	PWR

No	PWR
No	PWR
No	PWR
No	PWR
NO	
No	PWR
No	PWR
No	PWR
#M#Yes,	
detection of aging	
effects is to be	
evaluated#M#	PWR

Yes, detection of aging effects is to be evaluated	PWR	
No	BWR	
No	PWR	
No	BWR	
No	PWR	

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No	PWR
Yes, TLAA	PWR
No	BWR
No	BWR/PW R
No	PWR
No	PWR
No	BWR
No	PWR
No	PWR

No	PWR
No	PWR
No	PWR
#M#Yes,	
detection of aging	
effects is to be	
evaluated#M#	PWR
No	PWR
No	PWR
No	PWR
#M#No#M#	BWR

#M#No#M#	PWR
#M#No#M#	PWR
No	BWR
No	BWR
	DWIX
Yes, TLAA	BWR
100, 12,01	Dirit
No	PWR
No	PWR
#M#No#M#	PWR
No	PWR
#M#No#M#	PWR
#M#No#M#	BWR

No	BWR
No	PWR
No	PWR
	PWR
Yes, TLAA	
#M#No#M#	PWR
#M#No#M#	PWR
#M#No#M#	PWR
Yes, plant- specific	PWR

No	BWR/PW R
No	BWR/PW R
No	BWR
No	BWR
Yes, TLAA	BWR
No	BWR
No	PWR
No	PWR
Yes, TLAA	PWR
No	PWR
No	PWR
No	BWR
No	BWR/PW R
No	Г

	514/5
No	BWR
Yes, plant- specific	PWR
No	BWR
No	PWR
No	BWR
No	BWR
No	BWR
No	PWR
No	PWR
No	PWR
No	PWR
No	BWR
	BWR/PW
No	R
No	BWR/PW R

	BWR/PW
No	R
No	BWR
No	PWR
No	BWR
No	PWR
No	PWR
No	PWR
	BWR/PW
No	R
	BWR/PW
No	R
	BWR/PW
No	R
No	PWR
	BWR/PW
No	R
No	PWR
INO .	
No	PWR
No	FVK
Yes,	
environmental	
conditions need	BWR/PW
to be evaluated	R

Yes,	
environmental	
conditions need	BWR/PW
to be evaluated	R
Yes,	
environmental	
conditions need	BWR/PW
to be evaluated	R
Yes,	
environmental	
conditions need	BWR/PW
to be evaluated	R
Yes,	
environmental	
conditions need	BWR/PW
to be evaluated	R
Yes,	
· · · ·	
environmental	
conditions need	BWR/PW
to be evaluated	R
Yes,	
environmental	
conditions need	BWR/PW
to be evaluated	R
Yes,	
environmental	
conditions need	BWR/PW
to be evaluated	R
	BWR/PW
<u>#N 4#N 1 ~ #N 4#</u>	R
#M#No#M#	R
#M#No, if	
conditions are	BWR/PW
met.#M#	R
Voc. plant	
Yes, plant-	
specific	BWR
	BWR/PW
No	R
	BWR/PW
No	R

No	BWR/PW R
No	BWR/PW R
No	BWR/PW R
No	BWR/PW R
No	PWR
No	PWR
No	BWR/PW R
No	BWR/PW R
No	BWR/PW R
No	BWR/PW R BWR/PW
No	R
No	BWR/PW R

	BWR/PW
No	R
No	PWR
No	BWR
	BWIK
No	PWR
No	BWR BWR/PW
No	R
	BWR/PW
No	R
	BWR/PW
No	R BWR/PW
No	R
No	PWR
Ne	
No	BWR
No	PWR
No	BWR
No	PWR
	BWR/PW
No	R
NIa	
No	PWR
No	PWR

No	PWR
No	PWR
Yes, verify that	
plant-specific	
program addresses clad	
breach	PWR
breach	
No	PWR
No	BWR
No	PWR
No	BWR
No	PWR
INO	
#M#No#M#	BWR
#M#No#M#	BWR
#M#No#M#	BWR
#M#No#M#	BWR
#11#10-#11#	BWR/PW
#M#No#M#	R

#M#No#M#	BWR/PW R
	BWR/PW
No	R
No	BWR/PW R
No	BWR/PW
No	R BWR/PW
No	R
	BWR/PW
No	R
	BWR/PW
No	R
	BWR/PW
No	R
No	BWR/PW R
No	ĸ
#M#No#M#	BWR
#M#No#M#	PWR
#M#No#M#	BWR
#M#No#M#	BWR
#M#No#M#	PWR
#IVI#INO#IVI#	
#M#No#M#	BWR
#M#No#M#	PWR
#M#No#M#	PWR

#M#No#M#	BWR
	BWI
#M#No#M#	PWR
#M#No#M#	PWR
#M#No#M#	BWR
#M#No#M#	PWR
#M#No#M#	PWR
#M#No#M#	BWR
#M#No#M#	PWR
#M#No#M#	PWR
#M#No#M#	BWR
#M#No#M#	PWR
#M#No#M#	PWR
#M#No#M#	BWR
#M#No#M#	PWR
#M#No#M#	PWR

#M#No#M#	PWR
No	BWR/PW R
No	BWR/PW R
No	BWR/PW R
No	PWR
No	PWR
No	BWR
No	PWR
No	PWR

BWR
DWIX
PWR
PWR
BWR
PWR
PWR
DWD
BWR
PWR
PWR
BWR
PWR
BWR/PW R
PWR
BWR

No F	PWR
No F	PWR
No E	BWR
No F	PWR
1	
No E	BWR
No F	PWR
	VIIX
No E	BWR
No F	PWR
E	BWR/PW
No F	२
No F	PWR
No E	BWR
	BWR/PW R

Yes, TLAA	BWR/PW R	
No	BWR/PW R	
No	BWR/PW R	
No	BWR/PW R	

	BWR/PW	
No	R	
Yes, plant-	BWR/PW	
specific	R	
	BWR/PW	
No	R	
	BWR/PW	
No	R	
No	BWR/PW R	

BWR/PW R	
BWR/PW R	
BWR/PW R	
BWR/PW	
R	
PWR	
BWR/PW R	
	R BWR/PW R BWR/PW R BWR/PW R BWR/PW

Yes, plant-	BWR/PW
specific	R
	BWR/PW
No	R
	BWR/PW
No	R
N La	BWR/PW
No	R
	BWR/PW
No	R
NU	
	BWR/PW
None	R
None	
Yes, plant-	BWR/PW
specific	R
Yes, plant-	BWR/PW
specific	R
	BWR/PW
No	R
	BWR/PW
No	R
N La	BWR/PW
No	R
No	BWR/PW R
No	
	BWR/PW
No	R
	BWR/PW
No	R
	• •

	1
No	BWR/PW R
No	BWR/PW R
Yes, TLAA	BWR/PW R
No	BWR/PW R
No	BWR/PW R

No	BWR/PW R
No	BWR/PW R
No	BWR/PW R
No	BWR/PW R
Yes, TLAA	PWR
No	PWR
No	BWR/PW R
No	BWR/PW
No	R
No	BWR/PW R BWR/PW
No	R R
No	BWR/PW R

No	BWR/PW R
No	BWR/PW R
No	BWR/PW R
No	BWR/PW R
No	BWR/PW R
Yes, TLAA	PWR
Yes, TLAA	BWR/PW R
No	BWR/PW R

No	BWR/PW R
No	BWR/PW R
No	BWR/PW R
No	BWR/PW R
No	PWR
Yes, TLAA	PWR
No	BWR
	BWR/PW
Yes, TLAA	R

Yes, TLAA	BWR
,	
	BWR/PW
No	R
Yes, plant-	
specific	PWR
	BWR/PW
No	R
NO	IX
	BWR/PW
No	R
	BWR/PW
No	R
No	PWR
No	PWR
No	PWR
NU	FVK
N I -	BWR/PW
No	R
	BWR/PW
No	R
No	PWR
-	
NIa	
No	BWR

	BWR/PW
No	R
No	BWR/PW R
No	BWR/PW R
No	BWR/PW R
	BWR/PW
No	R
	BWR/PW
No	R
	BWR/PW
No	R
	BWR/PW
No	R
No	PWR
No	PWR
#m#No#m#	PWR
#111#INO#I11#	
#m#No#m#	BWR
	BWR/PW
#m#No#m#	R

#m#No#m#	BWR/PW R
#m#No#m#	BWR/PW R
#m#No#m#	BWR/PW R
	BWR/PW
#m#No#m#	R BWR/PW
#m#No#m#	R
#m#No#m#	BWR/PW R
#m#No#m#	BWR/PW R
No	BWR/PW R
#m#No#m#	BWR/PW R
#m#No#m#	BWR/PW R
#m#No#m#	BWR

#m#No#m#	BWR
#m#No#m#	PWR
#m#No#m#	BWR
	BWIX
	BWR/PW
#ma#N attract	
#m#No#m#	R
	BWR/PW
#m#No#m#	R
	BWR/PW
#m#No#m#	R
	BWR/PW
#m#No#m#	R
No	PWR
#m#No#m#	BWR
	2
#m#No#m#	BWR
	DVVIX
#m#No#no#	
#m#No#m#	BWR
#m#No#m#	BWR
	BWR/PW
#m#No#m#	R

No	BWR/PW R
No	BWR/PW R
No	BWR/PW R
No	BWR/PW
#m#No#m#	PWR
#m#no#m#	
No	PWR
#m#No#m#	BWR/PW R
#m#No#m#	BWR/PW R
#m#No#m#	PWR
No	PWR
#m#No#m#	BWR/PW R
No	BWR/PW R
#M#No#M#	BWR/PW R
No	BWR/PW R
No	BWR/PW R

No	BWR/PW R
No	BWR/PW R
#m#No#m#	BWR/PW R
#m#No#m#	BWR/PW R
#m#No#m#	PWR
#m#No#m#	BWR
	BWR/PW
#m#No#m#	R BWR/PW
No	R

	BWR/PW
#m#No#m#	R
	BWR/PW
#m#No#m#	R
	BWR/PW
No	R
#m#No#m#	BWR
#m#No#m#	BWR
#M#No#M#	BWR
	BWR/PW
#m#No#m#	R
#m#No#m#	BWR/PW R
#m#No#m#	BWR/PW R
	BWR/PW
#m#No#m#	R
	BWR/PW
#m#No#m#	R
#m#No#~*	BWR/PW
#m#No#m#	R

#m#No#m#	PWR
#m#No#m#	BWR
#m#No#m#	BWR/PW R
#m#No#m#	BWR/PW R
No	BWR/PW R
No	BWR/PW R
#m#No#m#	BWR/PW R

#m#No#m#	BWR/PW R
#m#No#m#	BWR/PW R
#m#No#m#	PWR
#m#No#m#	BWR
#m#No#m#	BWR/PW R
#m#No#m#	BWR/PW R
#M#No#M#	BWR
#m#No#m#	BWR
	BWR/PW
No	R
#m#No#m#	BWR
#m#No#m#	BWR
#m#No#m#	BWR

#m#No#m#	BWR
No	BWR/PW R
No	BWR/PW R BWR/PW
No	R
No	BWR/PW R

#~~#NI_0#~~#	BWR/PW R
#m#No#m#	ĸ
	BWR/PW
No	R
	BWR/PW
No	R
No	BWR/PW R
	BWR/PW
No	R
	BWR/PW
No	R
No	BWR/PW R
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	BWR/PW
#m#No#m#	R BWR/PW
No	BWR/PW R
	IX.

No	BWR/PW R
No	BWR/PW R
No	BWR/PW R
No	BWR/PW R
No	BWR/PW R
#m#No#m#	BWR

No	BWR/PW R
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#m#No#m#	BWR/PW R
#m#No#m#	BWR/PW R
No	BWR/PW R

No	BWR/PW R
No	BWR/PW R
	BWR/PW
No	R
	BWR/PW
No	R
	BWR/PW
No	R
No	BWR/PW R
No	BWR/PW
No	R
No	BWR/PW R
No	BWR
	2
No	BWR
	BWR/PW
No	R
•	BWR/PW
No	R

No	BWR/PW R
No	BWR/PW R
#m#No#m#	BWR/PW R

	BWR/PW
#m#No#m#	R
	BWR/PW
#m#No#m#	R
#m#No#m#	BWR/PW R
	BWR/PW
No	R
No	BWR/PW R
No	ĸ
	BWR/PW
No	R
	BWR/PW
No	R
No	BWR/PW R
	BWR/PW
No	R
No	BWR/PW R
	BWR/PW
No	R
NIa	BWR/PW
No	R

WR/PW
WR/PW

	BWR/PW
No	R
	BWR/PW
No	R
	BWR/PW
No	R
	BWR/PW
No	R
	BWR/PW
No	R
	BWR/PW
No	R
	BWR/PW
No	R
	BWR/PW
No	R
NI-	BWR/PW
No	R
	BWR/PW
No	R
	BWR/PW
No	R
#m#No#m#	BWR/PW R
No	BWR/PW R
Yes,	
environmental conditions need	BWR/PW
to be evaluated	R
Yes, environmental	
conditions need	BWR/PW
to be evaluated	R

Vaa	
Yes,	
environmental	
conditions need	BWR/PW
to be evaluated	R
Yes,	
environmental	
conditions need	BWR/PW
to be evaluated	R
Yes,	
environmental	
conditions need	BWR/PW
to be evaluated	R
Yes,	
environmental	
conditions need	BWR/PW
to be evaluated	R
Yes,	
environmental	
conditions need	BWR/PW
to be evaluated	R
Yes,	
environmental	
conditions need	BWR/PW
to be evaluated	R
Yes,	
environmental	
conditions need	BWR/PW
to be evaluated	R
Yes,	
environmental	
conditions need	BWR/PW
to be evaluated	R
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Yes,	
environmental	
conditions need	BWR/PW
to be evaluated	R
Yes,	
environmental	
conditions need	BWR/PW
to be evaluated	R
	BWR/PW
No	R
Yes,	
environmental	
conditions need	BWR/PW
to be evaluated	R
Yes,	
environmental	
conditions need	BWR/PW
to be evaluated	R

Vee	
Yes,	
environmental	BWR/PW
conditions need	
to be evaluated	R
Yes,	
environmental	
conditions need	BWR/PW
to be evaluated	R
Yes,	
environmental	
conditions need	BWR/PW
to be evaluated	R
Yes,	
environmental	
conditions need	BWR/PW
	R
to be evaluated	ĸ
Yes,	
environmental	
conditions need	BWR/PW
to be evaluated	R
Yes,	
environmental	
conditions need	BWR/PW
to be evaluated	R
Yes,	
environmental	
conditions need	BWR/PW
to be evaluated	R
	Γ.
Yes,	
environmental	
conditions need	BWR/PW
to be evaluated	R
Yes,	
environmental	
conditions need	BWR/PW
to be evaluated	R
Yes,	
environmental	
conditions need	BWR/PW
to be evaluated	R
	BWR/PW
#m#No#m#	R
No	PWR

No	BWR
	BWR/PW
No	R
No	BWR/PW
No	R
	BWR/PW
No	R
	BWR/PW
No	BWR/PW R
	BWR/PW
No	R
No	BWR/PW R
INO	
	BWR/PW
No	R
No	BWR/PW R
110	
	BWR/PW
No	R
	BWR/PW
No	R
	BWR/PW
No	R
No	BWR/PW R
No	BWR/PW
No	R

No	BWR/PW R
No	BWR/PW R
INO	ĸ
No	BWR/PW R
No	BWR/PW R
No	BWR/PW R
	BWR/PW
No	R
No	PWR
No	BWR/PW R

No	BWR/PW R
No	BWR/PW R

	BWR/PW
No	R
	BWR/PW
No	R
No	BWR/PW R
No	ĸ
#m#No, if	
conditions are met.#m#	BWR/PW R
No	BWR
No	PWR
No	
No	BWR
	BWR/PW
No	R
No	PWR
	BWR/PW
No	R
No	BWR
	BWR/PW
No	R
	BWR/PW
No	R

No	BWR/PW R
No	BWR/PW R
No	BWR
No	BWR/PW R
No	BWR/PW R
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No	BWR/PW R
No	BWR/PW R
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No	PWR
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No	BWR
No	BWR/PW R
No	BWR/PW R BWR/PW
No	R
No	BWR/PW R

	BWR/PW
No	R
No	BWR/PW R
INO	ĸ
	BWR/PW
No	R
No	PWR
	BWR/PW
No	R
	BWR/PW
No	R
NIa	
No	PWR
	BWR/PW
No	R
Nia	
No	PWR
No	PWR
	BWR/PW
No	R
	BWR/PW
No	R
No	PWR
Yes, verify that plant-specific	
program	
addresses clad	
cracking	PWR
-	
	BWR/PW
No	R

	BWR/PW
No	R
	BWR/PW
No	R
	BWR/PW
No	R
No	BWR/PW R
Yes, TLAA	PWR
Yes, TLAA	BWR
Yes, TLAA	PWR
Yes, TLAA	BWR
100, 12/01	

Yes, TLAA	PWR
	BWR/PW
No	R
No	PWR
N1 -	
No	BWR
	BWR/PW
No	R
No	PWR
No	BWR
	DWIX
	BWR/PW
No	R
No	PWR
No	PWR
	BWR/PW
No	R
	BWR/PW
No	R
No	PWR
No	PWR

	BWR/PW
No	R
No	PWR
No	PWR
No	PWR
	BWR/PW
No	R
No	PWR
No	PWR
NO	
	BWR/PW
No	R
No	PWR
No	BWR/PW R
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	BWR/PW
No	R
	BWR/PW
No	R
	BWR/PW
No	R
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#101#100#101#	IX.

No	PWR
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	BWR/PW
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#M#No#M#	PWR
#M#No#M#	PWR
#M#No#M#	PWR
No	
No	PWR BWR/PW
No	R
No	BWR/PW R
No	PWR
No	PWR
No	BWR/PW R
No	PWR

	1
	BWR/PW
No	R
No	PWR
INO	PVVR
No	PWR
	FVK
Yes,	
environmental	
conditions need	BWR/PW
to be evaluated	R
Yes,	
environmental	
conditions need	BWR/PW
to be evaluated Yes,	R
environmental	
conditions need	BWR/PW
to be evaluated	R
Yes,	
environmental	
conditions need	BWR/PW
to be evaluated	R
Yes,	
environmental	
conditions need	BWR/PW
to be evaluated	R
Yes,	
environmental	
conditions need	BWR/PW
to be evaluated	R
Yes,	-
environmental	
conditions need	BWR/PW
to be evaluated	R

Vee	
Yes,	
environmental	BWR/PW
conditions need	
to be evaluated	R
Yes,	
environmental	
conditions need	BWR/PW
to be evaluated	R
	BWR/PW
No	R
Yes,	
environmental	
conditions need	BWR/PW
to be evaluated	R
Yes,	
environmental	
conditions need	BWR/PW
to be evaluated	R
Yes.	
environmental	
conditions need	BWR/PW
to be evaluated	R
Yes,	
environmental	
conditions need	BWR/PW
to be evaluated	R
Yes,	
environmental	
conditions need	BWR/PW
to be evaluated	R
Yes,	
environmental	
conditions need	BWR/PW
to be evaluated	R
Yes,	
environmental	
conditions need	BWR/PW
to be evaluated	R
Yes,	
environmental	
conditions need	BWR/PW
to be evaluated	R
Yes,	IX
environmental	
conditions need	BWR/PW
to be evaluated	R
No	BWR/PW R

No	PWR
	BWR/PW
No	R
	BWR/PW
No	R
	BWR/PW
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	BWR/PW
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No	R
	BWR/PW
#M#No#M#	R
	BWR/PW
#M#No#M#	R
	BWR/PW
No	R
INU	R

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No	BWR/PW R
No	BWR/PW R
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met.#M#	R

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No	BWR/PW R
No	PWR
No	BWR
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No	BWR/PW R
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	BWR/PW
No	R
No	BWR/PW R
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No	R BWR/PW
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	BWR/PW
#M#No#M#	R
No	PWR

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#M#No#M#	BWR/PW R
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#M#No#M#	BWR/PW R
#M#No#M#	PWR
#M#No#M#	BWR/PW R
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No	BWR/PW R
No	PWR
No	PWR
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No	BWR/PW R
No	BWR/PW R
No	BWR/PW R

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	BWR/PW
No	R
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#M#No#M#	BWR/PW R
#M#No#M#	PWR
#M#No#M#	BWR
	BWR/PW
#M#No#M#	R
#M#No#M#	PWR
#M#No#M#	PWR
#M#No#M#	PWR
	BWR/PW
#M#No#M#	R
#M#No#M#	PWR
	BWR/PW
#M#No#M#	R
#M#No#M#	PWR
#M#No#M#	PWR
	BWR/PW
No	R
#M#No#M#	PWR

#M#No#M#	BWR
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No	BWR/PW R

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No	PWR
#M#No#M#	BWR
#M#No#M#	PWR