Acronyms for Degradation Phenomenon

Stress Corrosion Cracking
SCC

Fatigue
FAT

Fracture Resistance
FR

Erosion-Corrosion Including Steam Cutting and Cavitation
EC

Fretting/Wear
WEAR

Microbially-Induced Corrosion
MIC

Pitting
PIT

Boric Acid Corrosion
BAC

Swelling
SW

Irradiation creep
IC

General Corrosion
GC

Flow Assisted Corrosion
FAC

Crevice Corrosion
CREV

Debonding
DEBOND

Thermal Creep
CREEP

Galvanic Corrosion
GALV

SCORING: **3=High, 2=Medium, 1=Low**

Susceptibility Factor - "can significant material degradation develop given plausible conditions?"
Blank or 0 = not considered to be an issue; (Blank - no knowledge about issue; 0 - issue is not a concern (explain why))
1 = conceptual basis for concern from data, or potential problems under unusual operating conditions, etc.;
2 = reasonable basis for concern or some plant experience;
3 = demonstrated, compelling problem or multiple plant observations.

Confidence Level - *personal* confidence in our judgment of *susceptibility*
1 = low confidence
2 = moderate confidence
3 = high confidence
Note, “3” is assumed if Susceptibility Factor is “blank”.

Knowledge Factor - extent to which the relevant dependencies have been quantified
1 = poor understanding, little and/or low-confidence data;
2 = some reasonable basis to know dependencies qualitatively or semi-quantitatively from data or extrapolation in similar “systems”;
3 = extensive, consistent data covering all dependencies relevant to the component, perhaps with models -- should provide clear insights into mitigation or management of problem.

Group 1 RCS Cold Leg Piping 1

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility	Confidence	Knowledge	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
			1=low, 2=med, 3=high					
1.1	All stainless steel components External surfaces when at <150°C Normally dry when at low temp	SCC PIT						All All
1.2	Wrought austenitic stainless steel piping Types 304,316, PWR primary 556 to 559°F, 2250 psia	FAT SCC						2,19 2,19
1.3.1	Austenitic piping weld HAZs Types 304, PWR primary 556 to 559°F, 2250 psia	SCC FAT						2,9,10,19, 20,21,22,23,25,27 2,9,10,19, 20,21,22,23,25,27
1.3.2	Austenitic piping weld HAZs Types 316, PWR primary 556 to 559°F, 2250 psia	SCC FAT						2,9,10,19, 20,21,22,23,25,27 2,9,10,19, 20,21,22,23,25,27
1.4	Austenitic to austenitic weld metals Type 308, PWR primary 556 to 559°F, 2250 psia	FAT FR SCC						1,3,4,5,6,7 8,11,12,13,14,15,16,17,18,24,26,28 1,3,4,5,6,7 8,11,12,13,14,15,16,17,18,24,26,28 1,3,4,5,6,7 8,11,12,13,14,15,16,17,18,24,26,28
1.5	Dissimilar metal welds Type 308/309 (see 1.9 for external) 556 to 559°F, 2250 psia	FAT SCC FR						28 28
1.6	Cast stainless steel components CF8, CF8M, PWR primary 556 to 559°F, 2250 psia	FR SCC FAT						9,22,25 9,22,25 9,22,25
1.7	Socket welds Types 304,316,308, PWR primary 556 to 559°F, 2250 psia	FAT SCC						3,5,6, <1 inch instrumentation piping and access plugs 3,5,6, <1 inch instrumentation piping and access plugs
1.8	Forged austenitic stainless steel nozzles Types 304, 316, PWR primary 556 to 559°F, 2250 psia	FAT SCC						10,20,21,23,27 10,20,21,23,27
1.9	Dissimilar metal welds Type 308/309 (see 1.5 for internal) External	SCC						28
1.10	Cast stainless steel piping CF8,CF8M, PWR primary 556 to 559°F, 2250 psia For other Westinghouse plants	FR SCC FAT						For other Westinghouse plants For other Westinghouse plants For other Westinghouse plants
1.11	Clad ferritic steel piping stainless steel clad carbon steel, PWR primary 556 to 559°F, 2250 psia For CE and B&W plants	FAT SCC BAC DEBOND						For CE and B&W plants For CE and B&W plants For CE and B&W plants

Group 2 RCS Crossover Leg Piping

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility	Confidence	Knowledge	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
			1=low, 2=med, 3=high					
2.1	All stainless steel components External surfaces when at <150°C Normally dry when at low temp	SCC PIT						All All
2.2	Wrought austenitic stainless steel piping Types 304,316, PWR primary 556 to 559°F, 2250 psia	FAT SCC						7,11 7,11
2.3.1	Austenitic piping weld HAZs Types 304, PWR primary 556 to 559°F, 2250 psia	SCC FAT						3,5,7,9,11,15,17 3,5,7,9,11,15,17
2.3.2	Austenitic piping weld HAZs Types 316, PWR primary 556 to 559°F, 2250 psia	SCC FAT						3,5,7,9,11,15,17 3,5,7,9,11,15,17
2.4	Austenitic to austenitic weld metals Type 308, PWR primary 556 to 559°F, 2250 psia	FAT FR SCC						1,2,4,6,8,10,12,13,14,16,18 1,2,4,6,8,10,12,13,14,16,18 1,2,4,6,8,10,12,13,14,16,18
2.5	Dissimilar metal welds Type 308/309 (see 2.9 for external) 556 to 559°F, 2250 psia	FAT SCC FR						1,2 1,2
2.6	Cast stainless steel components CF8, CF8M, PWR primary 556 to 559°F, 2250 psia	FR SCC FAT						5,9,17 5,9,17 5,9,17
2.7	Socket welds Types 304,316,308, PWR primary 556 to 559°F, 2250 psia	FAT SCC						12,14, <1 inch instrumentation piping and access plugs 12,14, <1 inch instrumentation piping and access plugs
2.8	Forged austenitic stainless steel nozzles Types 304, 316, PWR primary 556 to 559°F, 2250 psia	FAT SCC						3,15 3,15
2.9	Dissimilar metal welds Type 308/309 (see 2.5 for internal) External	SCC						1,2
2.10	Cast stainless steel piping CF8,CF8M, PWR primary 556 to 559°F, 2250 psia For other Westinghouse plants	FR SCC FAT						For other Westinghouse plants For other Westinghouse plants For other Westinghouse plants
2.11	Clad ferritic steel piping stainless steel clad carbon steel, PWR primary 556 to 559°F, 2250 psia For CE and B&W plants	FAT SCC BAC DEBOND						For CE and B&W plants For CE and B&W plants For CE and B&W plants

Group 3 RCS Hot Leg Piping

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility	Confidence	Knowledge	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
			1=low, 2=med, 3=high					
3.1	All stainless steel components External surfaces when at <150°C Normally dry when at low temp	SCC PIT						All All
3.2	Wrought austenitic stainless steel piping Types 304,316, PWR primary 610 to 620°F, 2250 psia	FAT SCC						4 4
3.3.1	Austenitic piping weld HAZs Types 304, PWR primary 610 to 620°F, 2250 psia	SCC FAT						2,4,8,11,10,17,18,20 2,4,8,10,11,17,18,20
3.3.2	Austenitic piping weld HAZs Types 316, PWR primary 610 to 620°F, 2250 psia	SCC FAT						2,4,8,11,10,17,18,20 2,4,8,10,11,17,18,20
3.4	Austenitic to austenitic weld metals Type 308, PWR primary 610 to 620°F, 2250 psia	FAT FR SCC						1,3,5,6,7,9,12,13,14,15,16,19,21,22 1,3,5,6,7,9,12,13,14,15,16,19,21,22 1,3,5,6,7,9,12,13,14,15,16,19,21,22
3.5	Dissimilar metal welds Type 308/309 (see 3.9 for external) 610 to 620°F, 2250 psia	FAT SCC FR						1,21,22 1,21,22
3.6	Cast stainless steel components CF8, CF8M, PWR primary 610 to 620°F, 2250 psia	FR SCC FAT						10,18 10,18 10,18
3.7	Socket welds Types 304,316,308, PWR primary 610 to 620°F, 2250 psia	FAT SCC						13,15,16, <1 inch instrumentation piping and access plugs 13,15,16, <1 inch instrumentation piping and access plugs
3.8	Forged austenitic stainless steel nozzles Types 304, 316, PWR primary 610 to 620°F, 2250 psia	FAT SCC						2,8,11,17,20 2,8,11,17,20
3.9	Dissimilar metal welds Type 308/309 (see 3.5 for internal) External	SCC						1,21,22
3.10	Cast stainless steel piping CF8,CF8M, PWR primary 610 to 620°F, 2250 psia For other Westinghouse plants	FR SCC FAT						For other Westinghouse plants For other Westinghouse plants For other Westinghouse plants
3.11	Clad ferritic steel piping stainless steel clad carbon steel, PWR primary 610 to 620°F, 2250 psia For CE and B&W plants	FAT SCC BAC DEBOND						For CE and B&W plants For CE and B&W plants For CE and B&W plants

Group 4 RCS Pressurizer

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility	Confidence	Knowledge	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
			1=low, 2=med, 3=high					
4.1	All stainless steel exposed to air External surfaces when at <150°C Normally dry when at low temp	SCC PIT						10,17,18,19,20,21,22,32,33,39,41 10,17,18,19,20,21,22,32,33,39,41
4.2	Shell plates/forgings/welds/brackets etc A533B Gr.A Cl.2 or SA-508 Cl.2 Up to 653°F, 2250 psia	FAT FR BAC CREV SCC						1,2,3,4,5,6,7,8,9,11,12,13,14,15,16,23,24,25,30,34,35,36,37,40,42,43 1,2,3,4,5,6,7,8,9,11,12,13,14,15,16,23,24,25,30,34,35,36,37,40,42,43 1,2,3,4,5,6,7,8,9,11,12,13,14,15,16,23,24,25,30,34,35,36,37,40,42,43 1,2,3,4,5,6,7,8,9,11,12,13,14,15,16,23,24,25,30,34,35,36,37,40,42,43 1,2,3,4,5,6,7,8,9,11,12,13,14,15,16,23,24,25,30,34,35,36,37,40,42,43
4.3	Stainless steel cladding Types 308, 309, PWR primary 653°F, 2250 psia	SCC FAT DEBOND PIT						All pressure boundary internal surfaces All pressure boundary internal surfaces All pressure boundary internal surfaces All pressure boundary internal surfaces
4.4	Wrought stainless steel (internals) Types 304, 316, PWR primary 653°F, 2250 psia	FAT SCC						27,28,29,31,38
4.5	Dissimilar metal welds Type 308/309 653°F, 2250 psia	FAT SCC FR						10,17,18,19,20,21,22 10,17,18,19,20,21,22 10,17,18,19,20,21,22
4.6	Dissimilar metal welds Alloys 82/182 653°F, 2250 psia	FAT SCC FR						10,17,18,19,20,21,22 10,17,18,19,20,21,22 10,17,18,19,20,21,22
4.7	Forged austenitic nozzles Alloy 600, PWR primary 653°F, 2250 psia	FAT SCC						32,33,39,41 32,33,39,41
4.8	Heater sleeves/attachement weld Type 316, cold worked, Type 308, PWR primary >653°F, 2250 psia	FAT SCC						26,27 26,27
4.9	Manway retaining bolts SA-193 Gr B7 In the event of flange leak	FAT SCC BAC						44 44 44
4.10.1	Austenitic stainless weld HAZs Types 304, PWR primary 653°F, 2250 psia	SCC FAT						27,28,29,31,32,33,38,39,41 27,28,29,31,32,33,38,39,41
4.10.2	Austenitic stainless weld HAZs Types 316, PWR primary 653°F, 2250 psia	SCC FAT						27,28,29,31,32,33,38,39,41 27,28,29,31,32,33,38,39,41
4.11	Dissimilar metal welds Type 308/309 External	SCC						10,17,18,19,20,21,22
4.12	Dissimilar metal welds Alloys 82/182 External	SCC						10,17,18,19,20,21,22
4.13	Forged austenitic nozzles Types 304, 316, PWR primary 653°F, 2250 psia	FAT SCC						32,33,39,41 32,33,39,41
4.14	Heater sleeves/attachement weld Alloy 600, cold worked, PWR primary >653°F, 2250 psia For CE plants	FAT SCC						For CE Plants For CE Plants

Group 5 RCS Pressurizer Spray Piping

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility	Confidence	Knowledge	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
			1=low, 2=med, 3=high					
5.1	All stainless steel components External surfaces when at <150°C Normally dry when at low temp	SCC PIT						All All
5.2	Wrought austenitic stainless steel piping Types 304,316, PWR primary 556 to 559°F, 2250 psia	FAT SCC						10,20
5.3.1	Austenitic piping weld HAZs Types 304, PWR primary 556 to 559°F, 2250 psia	SCC FAT						8,9,10,14,19,20,22,26 8,9,10,14,19,20,22,26
5.3.2	Austenitic piping weld HAZs Types 316, PWR primary 556 to 559°F, 2250 psia	SCC FAT						8,9,10,14,19,20,22,26 8,9,10,14,19,20,22,26
5.4	Austenitic to austenitic weld metals Type 308, PWR primary 556 to 559°F, 2250 psia	FAT FR SCC						1,2,3,4,5,6,7,11,12,13,15,16,17,18,21,23,24,25,27,28,29,30,31,32,33,35,36
5.5	Forged austenitic stainless steel nozzles Types 304, 316, PWR primary 556 to 559°F, 2250 psia	FAT SCC						8,9,14,19,22,26
5.6	Socket welds Types 304,316,308, PWR primary 556 to 559°F, 2250 psia	FAT SCC						6,15,34, <1 inch instrumentation piping and access plugs 6,15,34, <1 inch instrumentation piping and access plugs

Group 6 RCS Pressurizer Surge Piping

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility	Confidence	Knowledge	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
			1=low, 2=med, 3=high					
6.1	All stainless steel components External surfaces when at <150°C Normally dry when at low temp	SCC PIT						All All
6.2	Wrought austenitic stainless steel piping Types 304,316, PWR primary 620 to 653°F, 2250 psia	FAT SCC						3,4
6.3.1	Austenitic piping weld HAZs Types 304, PWR primary 620 to 653°F, 2250 psia	SCC FAT						3,4,5,6 3,4,5,6
6.3.2	Austenitic piping weld HAZs Types 316, PWR primary 620 to 653°F, 2250 psia	SCC FAT						3,4,5,6 3,4,5,6
6.4	Austenitic to austenitic weld metals Type 308, PWR primary 620 to 653°F, 2250 psia	FAT FR SCC						1,2,6
6.5	Forged austenitic stainless steel nozzles Types 304, 316, PWR primary 620 to 653°F, 2250 psia	FAT SCC						5,6
6.6	Socket welds Types 304,316,308, PWR primary 620 to 653°F, 2250 psia	FAT SCC						5, <1 inch instrumentation piping and access plugs 5, <1 inch instrumentation piping and access plugs

Group 7 RCS Pressurizer to PORVs

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility	Confidence	Knowledge	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
			1=low, 2=med, 3=high					
7.1	All stainless steel components External surfaces when at <150°C Normally dry when at low temp	SCC PIT						All All
7.2	Wrought austenitic stainless steel piping Types 304,316, Stagnant saturated steam/condensate 653°F, 2250 psia	FAT SCC						6,12
7.3.1	Austenitic components weld HAZs Types 304, Stagnant saturated steam/condensate 653°F, 2250 psia	SCC FAT						2,5,6,8,10,12,14,18 2,5,6,8,10,12,14,18
7.3.2	Austenitic components weld HAZs Types 316, Stagnant saturated steam/condensate 653°F, 2250 psia	SCC FAT						2,5,6,8,10,12,14,18 2,5,6,8,10,12,14,18
7.4	Austenitic to austenitic weld metals Type 308, Stagnant saturated steam/condensate 653°F, 2250 psia	FAT FR SCC						1,3,4,7,9,11,13,15,16,17,19,20,21
7.5	Forged austenitic stainless steel nozzles Types 304, 316, Stagnant saturated steam/condensate 653°F, 2250 psia	FAT SCC						2,5,8,10,14,18
7.6	Socket welds Types 304, 308, Stagnant saturated steam/condensate 653°F, 2250 psia	FAT SCC						4, <1 inch instrumentation piping and access plugs

Group 8 RCS Pressurizer to SRVs

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility	Confidence	Knowledge	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
			1=low, 2=med, 3=high					
8.1	All stainless steel components External surfaces when at <150°C Normally dry when at low temp	SCC PIT						All All
8.2	Wrought austenitic stainless steel piping Types 304,316, Stagnant saturated steam/condensate 653°F, 2250 psia	FAT SCC						4
8.3.1	Austenitic piping weld HAZs Types 304, Stagnant saturated steam/condensate 653°F, 2250 psia	SCC FAT						2,4,9 2,4,9
8.3.2	Austenitic piping weld HAZs Types 316, Stagnant saturated steam/condensate 653°F, 2250 psia	SCC FAT						2,4,9 2,4,9
8.4	Austenitic to austenitic weld metals Type 308, Stagnant saturated steam/condensate 653°F, 2250 psia	FAT FR SCC						1,3,5,6,7,8
8.5	Forged austenitic stainless steel nozzles Types 304, 316, Stagnant saturated steam/condensate 653°F, 2250 psia	FAT SCC						2, 9

Group 9 RCS Reactor Coolant Pump

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility	Confidence	Knowledge	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
			1=low, 2=med, 3=high					
9.1	All stainless steel exposed to air External surfaces when at <150°C Normally dry when at low temp	SCC PIT						1,2 1,2
9.2	Stainless steel (internals including weldments) Types 304, 316, 308, PWR primary 556°F to 559°F, 2250 psia	FAT SCC FR						4 4
9.3	Internal high strength parts (Inc pump shaft) A-286, 17-4PH, X750, 403? 556°F to 559°F, 2250 psia	FAT FR SCC						6,7 6,7 6,7
9.4	Forged austenitic flange Type 304, PWR primary 120°F, 2250 psia	FAT SCC						4,5 4,5
9.5	Cast stainless steel CF8, PWR primary 556°F to 559°F, 2250 psia	FR SCC FAT						1,2 1,2
9.6	Main flange bolts SA-540 Gr B24, containment air Hot	FAT SCC BAC						3 3 3

Group 10 RCS Reactor Pressure Vessel

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility	Confidence	Knowledge	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
			1=low, 2=med, 3=high					
10.1	Any stainless steel exposed to air External surfaces when at <150°C Normally dry when at low temp	SCC PIT						8,9,10,11,26 8,9,10,11,26
10.2	Shell plates/forgings/welds/brackets etc A533B Gr.A Cl.2 or SA-508 Cl.2 556°F to 559°F, 600°F, 2250 psia	FAT FR BAC CREV CREEP SCC						1,2,3,4,5,6,7,16,17,23,24,25,31 3,23 1,2,3,4,5,6,7,16,17,23,24,25,31 1,2,3,4,5,6,7,16,17,23,24,25,31 1,2,3,4,5,6,7,16,17,23,24,25,31 1,2,3,4,5,6,7,16,17,23,24,25,31
10.3	Stainless steel welds and cladding Types 308, 309, PWR primary 556°F to 559°F, 600°F, 2250 psia	SCC FAT EC FR						10,11 Cladding Vessel Head Seals
10.4	Dissimilar metal welds Type 308/309 653°F, 2250 psia	FAT SCC FR						8,9,12,13,14,15,18,19,20,21,22 8,9
10.5	Forged austenitic nozzles Types 304, 316, PWR primary 653°F, 2250 psia	FAT SCC						26
10.6	Closure studs/nuts SA-540 Gr B23, Cl3 In the event of flange leak	FAT SCC EC						27 27 27
10.7	Cast stainless steel CF8, PWR primary 556°F to 559°F, 2250 psia	FR SCC FAT						11 11 11
10.8	Dissimilar metal welds Alloys 82/182 653°F, 2250 psia	SCC FAT FR						12,13,14,15,18,19,20,21,22 12,13,14,15,18,19,20,21,22 12,13,14,15,18,19,20,21,22
10.9	Forged austenitic nozzles Alloy 600, PWR primary 653°F, 2250 psia	SCC FAT						28,29,30
10.10	CRDM Housing and canopy seals Type 304, 348, Stainless steel, PWR Primary 200°F to 600°F, 2250 psia (normally stagnant)	SCC FAT CREV						32 32 32
10.11	Dissimilar metal welds Type 308/309 External	SCC						8,9
10.12	Dissimilar metal welds Alloys 82/182 External	SCC						8,9

Group 11 RCS Steam Generator

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility	Confidence	Knowledge	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
			1=low, 2=med, 3=high					
11.1	All stainless steel exposed to air External surfaces when at <150°C Normally dry when at low temp	SCC PIT						61 61
11.2	Shell plates/forgings/welds/brackets etc A533B Gr.A Cl.2, SA-508 Cl.2A, SA-516 544°F to 620°F, 1000 or 2250 psia	FAT BAC FAC PIT SCC CREV						1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,21,22,56,57,58,59,60,62,63,64,66 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,21,22,56,57,58,59,60,62,63,64,66 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,21,22,56,57,58,59,60,62,63,64,66 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,21,22,56,57,58,59,60,62,63,64,66 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,21,22,56,57,58,59,60,62,63,64,66
11.3	Low alloy steel nozzles/welds SA-216 Gr WCC 556°F to 620°F, 2250 psia	FAT BAC SCC CREV PIT FAC						19,20 19,20 19,20 19,20
11.4	Stainless cladding - Channel head Types 308, 309, PWR primary (see 11.11 for Nickel alloy) 610°F to 620°F, 2250 psia	SCC FAT DEBOND PIT FR						60,64,66 60,64,66 60,64,66 60,64,66 60,64,66
11.5	SG tubes/roll transitions/U-bends/sleeves/plugs Alloy 600 MA, PWR primary (see 11.12 for 600 TT and 11.13 for 690 TT) 556°F to 620°F, 2250 psia	SCC FAT						23,24,68 68,69,70
11.6	SG tubes secondary side including crevices Alloy 600 MA, PWR secondary (see 11.14 for 600 TT and 11.15 for 690 TT) 544°F to 620°F, 1000 psia	SCC WEAR FAT PIT						25,26,28,29 28,29,32,33 23,24,25,26,27,28,29,30,31,32,33 23,24,25,26,27,28,29,30,31,32,33
11.7	Dissimilar metal welds Type 308/309 (see 11.17 for external) 556°F to 620°F, 2250 psia	FAT SCC FR						61 61 61
11.8	Forged austenitic nozzles Type 316, PWR primary 556°F to 620°F, 2250 psia	FAT SCC						61 61
11.9	Channel head divider plate Alloy 600, PWR primary (see 11.19 for alloy 690) 556°F to 620°F, 2250 psia	FAT SCC						65 65
11.10	Primary and Secondary Manways SA-553 Gr A, Prim/Sec/Containment air 544°F to 620°F, 1000 or 2250 psia (In the event of flange leak - BAC)	FAT SCC BAC						66,67 66,67 66,67
11.11	Stainless cladding - Channel head Alloys 600, 82, 52, PWR primary (see 11.4 for stainless steel) 610°F to 620°F, 2250 psia	SCC FR DEBOND						60,64,66 60,64,66
11.12	SG tubes/roll transitions/U-bends/sleeves/plugs Alloy 600 TT, PWR primary (see 11.5 for 600 MA and 11.13 for 690 TT) 556°F to 620°F, 2250 psia	SCC FAT						34,35,69 68,69,70
11.13	SG tubes/roll transitions/U-bends/sleeves/plugs Alloy 690 TT, PWR primary (see 11.5 for 600 MA and 11.12 for 600 TT) 556°F to 620°F, 2250 psia	SCC FAT						45,46 68,69,70
11.14	SG tubes secondary side including crevices Alloy 600 TT, PWR secondary (see 11.6 for 600 MA and 11.15 for 690 TT) 544°F to 620°F, 1000 psia	SCC WEAR FAT PIT						37,39,40,43 39,40,43,44 34,35,36,37,38,39,40,41,42,43,44 34,35,36,37,38,39,40,41,42,43,44
11.15	SG tubes secondary side including crevices Alloy 690 TT, PWR secondary (see 11.6 for 600 MA and 11.14 for 600 TT) 544°F to 620°F, 1000 psia	SCC WEAR FAT PIT						48,49 50,51,54,55 45,46,47,48,49,50,51,52,53,54,55 45,46,47,48,49,50,51,52,53,54,55
11.16	Dissimilar metal welds Alloys 82/182 (see 11.18 for external) 556°F to 620°F, 2250 psia	SCC FR FAT						61 61 61
11.17	Dissimilar metal welds Type 308/309 (see 11.7 for internal) External	SCC						61
11.18	Dissimilar metal welds Alloys 82/182 (see 11.16 for internal) External	SCC FAT						61
11.19	Channel head divider plate Alloy 690, PWR primary (see 11.9 for alloy 600) 556°F to 620°F, 2250 psia	FAT SCC						65 65
11.20	Tube supports and/or preheater baffles Carbon steel, drilled holes Secondary Water, 544°F to 620°F, 1000 psia	FAC SCC CREV FR						28,39,50 28,39,50 28,39,50 28,39,50
11.21	Tube supports Stainless steel, Line contact/drilled holes Secondary Water, 544°F to 620°F, 1000 psia	SCC CREV						29,40,51 29,40,51
11.22	SG tubes/roll transitions/sleeves/plugs Alloy 600, SA and sensitized, PWR primary 556°F to 620°F, 2250 psia For B&W OTSGs	SCC FAT						For B&W OTSGs For B&W OTSGs
11.23	SG tubes secondary side including crevices Alloy 600, SA and sensitized, PWR secondary and superheated steam 544°F to 620°F, 1000 psia For B&W OTSGs	SCC WEAR FAT PIT						For B&W OTSGs For B&W OTSGs For B&W OTSGs For B&W OTSGs

Group 12 RCS Reactor Vessel Internals

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility (1=low, 2=med, 3=high)	Confidence (1=low, 2=med, 3=high)	Knowledge (1=low, 2=med, 3=high)	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
12.1	Austenitic stainless steel plates/tubes Type 304, PWR primary, ≤0.5 dpa (see 12.8 for high fluence) 556°F to 620 °F, 2250 psia	FAT SCC						1,4,8,11,12,13,14,15,17,22,24,25 1,4,8,11,12,13,14,15,17,22,24,25
12.2	Austenitic weld HAZs Types 304, PWR primary, ≤0.5 dpa (see 12.9 for high fluence) 556°F to 620 °F, 2250 psia	SCC FAT						All welds All welds
12.3	Austenitic to austenitic weld metals Type 308, PWR primary, ≤0.5 dpa (see 12.10 for high fluence) 556°F to 620 °F, 2250 psia	FAT SCC FR						All welds
12.4	Cold worked austenitic stainless steel Type 316, PWR primary, ≤0.5 dpa (see 12.11 for high fluence) 556°F to 620 °F, 2250 psia	FAT CREEP SCC						3,9,16,18 3,9,16,18 3,9,16,18
12.5	Cast austenitics PWR primary 556°F to 620 °F, 2250 psia	FR SCC FAT						2,19,20 2,19,20 2,19,20
12.6	Austenitic solution annealed holdown spring Type 304, PWR primary 600°F, 2250 psia	CREEP FAT SCC						7 7 7
12.7	High strength fasteners/springs Alloys X750, 718, PWR primary 556°F to 620°F, 2250 psia	SCC IC FR						5,6,10,21,23 5,6,10,21,23 5,6,10,21,23
12.8	Austenitic stainless steel plates/tubes Type 304, PWR primary, >0.5 dpa (see 12.1 for low fluence) 556°F to 620 °F, 2250 psia	FAT SCC SW FR IC						15,24,25 15,24,25 15,24,25 15,24,25
12.9	Austenitic weld HAZs Types 304, PWR primary, >0.5 dpa (see 12.2 for low fluence) 556°F to 620 °F, 2250 psia Applicable to CE plants	SCC FAT SW FR						Applicable to CE plants Applicable to CE plants Applicable to CE plants Applicable to CE plants Applicable to CE plants Applicable to CE plants
12.10	Austenitic to austenitic weld metals Type 308, PWR primary, >0.5 dpa (see 12.3 for low fluence) 556°F to 620 °F, 2250 psia Applicable to CE plants	FAT SW FR SCC						Applicable to CE plants Applicable to CE plants Applicable to CE plants Applicable to CE plants
12.11	Cold worked austenitic stainless steel Type 316, PWR primary, >0.5 dpa (see 12.4 for low fluence) 556°F to 620 °F, 2250 psia	SCC IC FAT FR SW						16 16 16 16 16
12.12	High strength baffle bolts Type A286, alloy X750, PWR primary, >0.5 dpa 556°F to 620 °F, 2250 psia For B&W RVIs	SCC IC FAT FR SW						For B&W RVIs For B&W RVIs For B&W RVIs For B&W RVIs For B&W RVIs

Group 13 RCS Stop Valve Loop Bypass Piping

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility	Confidence	Knowledge	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
			1=low, 2=med, 3=high					
13.1	All stainless steel components External surfaces when at <150°C Normally dry when at low temp	SCC PIT						All All
13.2	Wrought austenitic stainless steel piping Types 304,316, PWR primary 600°F, 2250 psia	FAT SCC						7 7
13.3.1	Austenitic weld HAZs Types 304, PWR primary 600°F, 2250 psia	SCC FAT						3,7,10,15,17,19,22,24,27,30,33,37,38 3,7,10,15,17,19,22,24,27,30,33,37,38
13.3.2	Austenitic weld HAZs Types 316, PWR primary 600°F, 2250 psia	SCC FAT						3,7,10,15,17,19,22,24,27,30,33,37,38 3,7,10,15,17,19,22,24,27,30,33,37,38
13.4	Austenitic to austenitic weld metals Type 308, PWR primary 600°F, 2250 psia	FAT FR SCC						1,2,4,5,6,8, 9,11,12,13,14,16,18,20,21,23,25,26,28,29,31,32,34,35,36 1,2,4,5,6,8, 9,11,12,13,14,16,18,20,21,23,25,26,28,29,31,32,34,35,36 1,2,4,5,6,8, 9,11,12,13,14,16,18,20,21,23,25,26,28,29,31,32,34,35,36
13.5	Cast austenitics PWR primary 600 °F, 2250 psia	FR SCC FAT						38 38 38
13.6	Forged austenitic stainless steel nozzles Types 304, 316, PWR primary 600°F, 2250 psia	FAT SCC						3,10,15,17,19,22,24,27,30,33,37

Group 14 ECCS RWST Header Piping

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility	Confidence	Knowledge	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
			1=low, 2=med, 3=high					
14.1	All stainless steel components External surfaces Ambient Temp, 15 psia	SCC PIT						All All
14.2	Wrought austenitic stainless steel piping Types 304,316, Borated demin water (usually stagnant) 100°F, 15 psia	FAT MIC SCC						4,6,16,20,32,54,56 4,6,16,20,32,54,56 4,6,16,20,32,54,56
14.3	Austenitic weld HAZs Types 304,316, Borated demin water (usually stagnant) 100°F, 15 psia	SCC FAT MIC						4,6,16,20,22,26,28,32,34,50,54,56 4,6,16,20,22,26,28,32,34,50,54,56 4,6,16,20,22,26,28,32,34,50,54,56
14.4	Austenitic to austenitic weld metals Type 308, Borated demin water (usually stagnant) 100°F, 15 psia	FAT MIC SCC						1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,23,24,25,27,29,30,31,32,33, 35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,51,52,53,54,55,56 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,23,24,25,27,29,30,31,32,33, 35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,51,52,53,54,55,56 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,23,24,25,27,29,30,31,32,33, 35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,51,52,53,54,55,56
14.5	Forged austenitic stainless steel nozzles Types 304, 316, Borated demin water (usually stagnant) 100°F, 15 psia	FAT MIC SCC						22,26,28,34,50 22,26,28,34,50 22,26,28,34,50
14.6	Socket welds Type 304, Borated demin water (usually stagnant) 100°F, 15 psia	FAT SCC						9,11,12,18,39,40,42,55, <1 inch instrumentation piping and access plugs

Group 15 ECCS CVCS Pump Suction Piping

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility	Confidence	Knowledge	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
			1=low, 2=med, 3=high					
15.1	All stainless steel components External surfaces Ambient, 15 psia	SCC PIT						All All
15.2	Wrought austenitic stainless steel piping Types 304,316, Borated demin water 100-200°F, 15-50 psia	FAT MIC SCC						6,31 6,31 6,31
15.3	Austenitic weld HAZs Types 304,316, Borated demin water 100-200°F, 15-50 psia	SCC FAT MIC						3,4,6,8,13,16,19,22,27,29,31,34,40,48,57 3,4,6,8,13,16,19,22,27,29,31,34,40,48,57 3,4,6,8,13,16,19,22,27,29,31,34,40,48,57
15.4	Austenitic to austenitic weld metals Type 308, Borated demin water 100-200°F, 15-50 psia	FAT MIC SCC						1,2,5,6,7,9,10,11,12,14,15,17,18,20,21,23,24,25,26,28,30,31,32,33,35,36,37,38,39 ,41,42,43,44,45,46,47,49,50,51,52,53,54,55,56 1,2,5,6,7,9,10,11,12,14,15,17,18,20,21,23,24,25,26,28,30,31,32,33,35,36,37,38,39 ,41,42,43,44,45,46,47,49,50,51,52,53,54,55,56 1,2,5,6,7,9,10,11,12,14,15,17,18,20,21,23,24,25,26,28,30,31,32,33,35,36,37,38,39 ,41,42,43,44,45,46,47,49,50,51,52,53,54,55,56
15.5	Forged austenitic stainless steel nozzles Types 304, 316, Borated demin water 100-200°F, 15-50 psia	FAT MIC SCC						3,4,8,13,16,19,22,27,29,34,40,48,57 3,4,8,13,16,19,22,27,29,34,40,48,57 3,4,8,13,16,19,22,27,29,34,40,48,57
15.6	Socket welds Type 304, Borated demin water 100-200°F, 15-50 psia	FAT						<1 inch instrumentation piping and access plugs

Group 16 ECCS SI Pump Suction Piping

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility	Confidence	Knowledge	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
			1=low, 2=med, 3=high					
16.1	All stainless steel components External surfaces Ambient, 15-100 psia	SCC PIT						All All
16.2	Wrought austenitic stainless steel piping Types 304,316, Borated demin water (normally stagnant) Ambient, 15-100 psia	FAT MIC SCC						2,16 2,16 2,16
16.3	Austenitic weld HAZs Types 304,316, Borated demin water (normally stagnant) Ambient, 15-100 psia	SCC FAT MIC						2,4,7,9,12,14,16,18,22,24,28,34,40,44,48 2,4,7,9,12,14,16,18,22,24,28,34,40,44,48 2,4,7,9,12,14,16,18,22,24,28,34,40,44,48
16.4	Austenitic to austenitic weld metals Type 308, Borated demin water (normally stagnant) Ambient, 15-100 psia	FAT MIC SCC						1,2,3,5,6,8,10,11,13,15,16,17,19,20,21,23,25,26,27,29,30,31,32,33,35,36,37,38,39,41,42,43, 45,46,47 1,2,3,5,6,8,10,11,13,15,16,17,19,20,21,23,25,26,27,29,30,31,32,33,35,36,37,38,39,41,42,43, 45,46,47 1,2,3,5,6,8,10,11,13,15,16,17,19,20,21,23,25,26,27,29,30,31,32,33,35,36,37,38,39,41,42,43, 45,46,47
16.5	Forged austenitic stainless steel nozzles Types 304, 316, Borated demin water (normally stagnant) Ambient, 15-100 psia	FAT MIC SCC						4,7,9,12,14,18,22,24,28,34,40,44,48 4,7,9,12,14,18,22,24,28,34,40,44,48 4,7,9,12,14,18,22,24,28,34,40,44,48
16.6	Socket welds Type 304, Borated demin water (normally stagnant) Ambient, 15-100 psia	FAT						<1 inch instrumentation piping and access plugs

Group 17 ECCS RHR Pump Suction Piping

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility	Confidence	Knowledge	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
			1=low, 2=med, 3=high					
17.1	All stainless steel components External surfaces 100°F to 350°F, 15 to 400 psia	SCC PIT						All All
17.2	Wrought austenitic stainless steel piping Types 304,316, Borated demin water (normally stagnant) 100°F to 350°F, 15 to 400 psia	FAT SCC						20,46,53 20,46,53
17.3	Austenitic weld HAZs Types 304,316, Borated demin water (normally stagnant) 100°F to 350°F, 15 to 400 psia	SCC FAT						6,10,15,18,20,25,35,43,46,53,59,76,77 6,10,15,18,20,25,35,43,46,53,59,76,77
17.4	Austenitic to austenitic weld metals Type 308, Borated demin water (normally stagnant) 100°F to 350°F, 15 to 400 psia	FAT SCC						1,2,3,4,5,7,8,9,11,12,13,14,16,17,19,20,21,22,23,24,26,27,28,29,30,31,32,33,34,36,37,38,39,40,41,42,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75 1,2,3,4,5,7,8,9,11,12,13,14,16,17,19,20,21,22,23,24,26,27,28,29,30,31,32,33,34,36,37,38,39,40,41,42,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75
17.5	Cast austenitics Borated demin water (normally stagnant) 100°F to 350°F, 15 to 400 psia	FAT SCC FR						76 76 76
17.6	Forged austenitic stainless steel nozzles Types 304, 316, Borated demin water (normally stagnant) 100°F to 350°F, 15 to 400 psia	FAT SCC						6, 10, 15, 18, 25, 35, 43, 59, 77 6, 10, 15, 18, 25, 35, 43, 59, 77
17.7	Socket welds Type 304, Borated demin water (normally stagnant) Ambient, <100 psia	FAT						<1 inch instrumentation piping and access plugs

Group 18 ECCS Accumulator Piping to RCS Cold Leg

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility (1=low, 2=med, 3=high)	Confidence (1=low, 2=med, 3=high)	Knowledge (1=low, 2=med, 3=high)	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
18.1	All stainless steel components External surfaces 100°F to 150°F, 640 psia	SCC PIT						All All
18.2	Wrought austenitic stainless steel piping Types 304,316, Borated demin water (normally stagnant) 100°F to 150°F, 640 psia	FAT MIC SCC						2,5,17,35 2,5,17,35 2,5,17,35
18.3	Austenitic weld HAZs Types 304,316, Borated demin water (normally stagnant) 100°F to 150°F, 640 psia	SCC FAT MIC						1,2,5,9,12,15,17,20,24,27,35,38 1,2,5,9,12,15,17,20,24,27,35,38 1,2,5,9,12,15,17,20,24,27,35,38
18.4	Austenitic to austenitic weld metals Type 308, Borated demin water (normally stagnant) 100°F to 150°F, 640 psia	FAT MIC SCC						2,3,4,5,6,7,8,10,11,13,14,16,18,19,21,22,23,25,26,34,36,37,39,40 2,3,4,5,6,7,8,10,11,13,14,16,18,19,21,22,23,25,26,34,36,37,39,40 2,3,4,5,6,7,8,10,11,13,14,16,18,19,21,22,23,25,26,34,36,37,39,40
18.5	Dissimilar metal welds Type 308/309, Alloys 82/182 (see 18.8 for external) 100°F to 150°F, 640 psia	FAT SCC MIC FR						1 1 1 1
18.6	Forged austenitic stainless steel nozzles Types 304, 316, Borated demin water (normally stagnant) 100°F to 150°F, 640 psia	FAT MIC SCC						9, 12, 15, 20, 24, 27, 38 9, 12, 15, 20, 24, 27, 38 9, 12, 15, 20, 24, 27, 38
18.7	Socket welds Type 304, Borated demin water (normally stagnant) 100°F to 150°F, 640 psia	FAT						2" branch lines and <1 inch instrumentation piping and access plugs
18.8	Dissimilar metal welds Type 308/309, Alloys 82/182 (see 18.5 for internal) External cracking	SCC						1
18.9	All stainless steel components External surfaces when at <150C Normally dry when at low temp	SCC PIT						All All
18.10.1	Austenitic weld HAZs Types 304, Primary water 600°F, 2250 psia	SCC FAT						30 30
18.10.2	Austenitic weld HAZs Types 316, Primary water 600°F, 2250 psia	SCC FAT						30 30
18.11	Austenitic to austenitic weld metals Type 308, Primary water 600°F, 2250 psia	FAT SCC FR						28,29,31,32,33 28,29,31,32,33 28,29,31,32,33
18.12	Forged austenitic stainless steel nozzles Types 304, 316, Primary water 600°F, 2250 psia	FAT SCC						30 30
18.13	Dissimilar metal welds Type 308/309, Alloys 82/182 600°F, 2250 psia For CE and B&W plants	FAT SCC FR						For CE and B&W plants For CE and B&W plants

Group 19 ECCS SI/RHR Piping to RCS Hot Leg

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility	Confidence	Knowledge	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
			1=low, 2=med, 3=high					
19.1	All stainless steel components External surfaces 100°F to 350°F, 15 to 400 psia	SCC PIT						All All
19.2	Wrought austenitic stainless steel piping Types 304,316, Borated demin water (normally stagnant) 100°F to 350°F, 15 to 400 psia	FAT SCC						2,12,20 2,12,20
19.3	Austenitic weld HAZs Types 304,316, Borated demin water (normally stagnant) 100°F to 350°F, 15 to 400 psia	SCC FAT						2,4,7,10,12,16,18,20,37,41,53,54,56 2,4,7,10,12,16,18,20,37,41,53,54,56
19.4	Austenitic to austenitic weld metals Type 308, Borated demin water (normally stagnant) 100°F to 350°F, 15 to 400 psia	FAT SCC						1,3,5,6,8,9,11,13,14,15,17,19,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,38,39,40,42,43,44,45,46,47,48,49,50,51,52,55,57,58 1,3,5,6,8,9,11,13,14,15,17,19,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,38,39,40,42,43,44,45,46,47,48,49,50,51,52,55,57,58
19.5	Forged austenitic stainless steel nozzles Types 304, 316, Borated demin water (normally stagnant) 100°F to 350°F, 15 to 400 psia	FAT SCC						4,7,10,16,18,22,37,41,53,54,56 4,7,10,16,18,22,37,41,53,54,56
19.6	Socket welds Type 304, Borated demin water (normally stagnant) 100°F to 350°F, 15 to 400 psia	FAT SCC						13 and <1 inch instrumentation piping and access plugs 13 and <1 inch instrumentation piping and access plugs
19.7	All stainless steel components External surfaces when at <150C Normally dry when at low temp	SCC PIT						19-28,46-48 19-28,46-48
19.8.1	Austenitic weld HAZs Types 304, Primary water 600°F , 2250 psia	SCC FAT						19-28,46-48 19-28,46-48
19.8.2	Austenitic weld HAZs Types 316, Primary water 600°F , 2250 psia	SCC FAT						19-28,46-48 19-28,46-48
19.9	Austenitic to austenitic weld metals Type 308, Primary water 600°F , 2250 psia	FAT SCC FR						19-28,46-48 19-28,46-48 19-28,46-48
19.10	Dissimilar metal welds Type 308/309, Alloys 82/182 600°F , 2250 psia For CE and B&W plants	FAT SCC FR						28,48 28,48
19.11	Forged austenitic stainless steel nozzles Types 304, 316, Primary water 600°F , 2250 psia	FAT SCC						19-28,46-48 19-28,46-48

Group 20 ECCS RHR Pump Discharge Piping

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility	Confidence	Knowledge	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
			1=low, 2=med, 3=high					
20.1	All stainless steel components External surfaces 100°F to 350°F, 15 to 400 psia	SCC PIT						All All
20.2	Wrought austenitic stainless steel piping Types 304,316, Borated demin water 100°F to 350°F, 15 to 400 psia	FAT SCC						7 7
20.3	Austenitic weld HAZs Types 304,316, Borated demin water 100°F to 350°F, 15 to 400 psia	SCC FAT						4,7,11,14,16,18,21,23,27,28,30,33,42,44,47 4,7,11,14,16,18,21,23,27,28,30,33,42,44,47
20.4	Austenitic to austenitic weld metals Type 308, Borated demin water 100°F to 350°F, 15 to 400 psia	FAT SCC						1,2,3, 5,6,7,8,9,10,12,13,15,17,18,19,20,22,24,25,26,28,29,31,32,34,35,36,37,38,39,40,4 1,43,45,46,48,49,50,51,52 1,2,3, 5,6,7,8,9,10,12,13,15,17,18,19,20,22,24,25,26,28,29,31,32,34,35,36,37,38,39,40,4 1,43,45,46,48,49,50,51,52
20.5	Forged austenitic stainless steel nozzles Types 304, 316, Borated demin water 100°F to 350°F, 15 to 400 psia	FAT SCC						4,11,14,16,21,23,27,30,33,42,44,47 4,11,14,16,21,23,27,30,33,42,44,47
20.6	Socket welds Type 304, Borated demin water 100°F to 350°F, 15 to 400 psia	FAT SCC						2" branch lines and <1 inch instrumentation piping and access plugs 2" branch lines and <1 inch instrumentation piping and access plugs

Group 21 ECCS RHR Piping to RCS Cold Leg Accumulator

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility (1=low, 2=med, 3=high)	Confidence (1=low, 2=med, 3=high)	Knowledge (1=low, 2=med, 3=high)	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
21.1	All stainless steel components External surfaces 100°F to 350°F, 15 to 400 psia	SCC PIT						All All
21.2	Wrought austenitic stainless steel piping Types 304,316, Borated demin water 100°F to 350°F, 15 to 400 psia	FAT SCC						6 6
21.3	Austenitic weld HAZs Types 304,316, Borated demin water 100°F to 350°F, 15 to 400 psia	SCC FAT						2,6,9,12,18,20,26 2,6,9,12,18,20,26
21.4	Austenitic to austenitic weld metals Type 308, Borated demin water 100°F to 350°F, 15 to 400 psia	FAT SCC						1, 3,4,5,6,7,8,10,11,13,14,15,16,17,19,21,22,23,24,25,2728,29,30 1, 3,4,5,6,7,8,10,11,13,14,15,16,17,19,21,22,23,24,25,2728,29,30
21.5	Forged austenitic stainless steel nozzles Types 304, 316, Borated demin water 100°F to 350°F, 15 to 400 psia	FAT SCC						2,9,12,18,20,26 2,9,12,18,20,26
21.6	Socket welds Type 304, Borated demin water 100°F to 350°F, 15 to 400 psia	FAT SCC						24 and <1 inch instrumentation piping and access plugs 24 and <1 inch instrumentation piping and access plugs

Group 22 ECCS CVCS Piping to RCS Cold Leg

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility	Confidence	Knowledge	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
			1=low, 2=med, 3=high					
22.1	All stainless steel components External surfaces 200°F, 2250 psia	SCC PIT						All All
22.2	Wrought austenitic stainless steel piping Types 304,316, Borated demin water 200°F, 2250 psia	FAT SCC						10,22,43,53,64 10,22,43,53,64
22.3	Austenitic weld HAZs Types 304,316, Borated demin water 200°F, 2250 psia	SCC FAT						3,8,10,12,14,19,22,24,27,29,30,33,37,41,43,53,64,66,69,84 3,8,10,12,14,19,22,24,27,29,30,33,37,41,43,53,64,66,69,84
22.4	Austenitic to austenitic weld metals Type 308, Borated demin water 200°F, 2250 psia	FAT SCC						1,2,4,5,6,7,9,11,13,15,16,17,18,20,21,23,25,26,28,31,32,34,35,36,38,39,40,42,44, 45,46,47,48,49,50,51,52,54,55,56,57,58,59,60,61,62,63,65,67,68,70,71,72,73,74,7 5,76,77,78,79,80,83,84 1,2,4,5,6,7,9,11,13,15,16,17,18,20,21,23,25,26,28,31,32,34,35,36,38,39,40,42,44, 45,46,47,48,49,50,51,52,54,55,56,57,58,59,60,61,62,63,65,67,68,70,71,72,73,74,7 5,76,77,78,79,80,83,84
22.5	Austenitic to austenitic weld metals Type 308, PWR primary 560°F, 2250 psia	FAT SCC FR						80,81,82,83 80,81,82,83 80,81,82,83
22.6	Forged austenitic stainless steel nozzles Types 304, 316, Borated demin water 200°F, 2250 psia	FAT SCC						3,8,12,14,19,24,27,29,30,33,37,41,66,69 3,8,12,14,19,24,27,29,30,33,37,41,66,69
22.7	Socket welds Type 304, Borated demin water 200°F, 2250 psia	FAT SCC						6,21 and <1 inch instrumentation piping and access plugs 6,21 and <1 inch instrumentation piping and access plugs
22.8	Dissimilar metal welds Type 308/309, Alloys 82/182 600°F , 2250 psia For CE and B&W plants	FAT SCC FR						For CE and B&W plants For CE and B&W plants

Group 23 ECCS Safety Injection Pump Discharge Piping

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility (1=low, 2=med, 3=high)	Confidence (1=low, 2=med, 3=high)	Knowledge (1=low, 2=med, 3=high)	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
23.1	All stainless steel components External surfaces 100°F, 1500-1700 psia	SCC PIT						All All
23.2	Wrought austenitic stainless steel piping Types 304,316, Borated demin water 100°F, 1500-1700 psia	FAT SCC MIC						2,4,8,16,21,24,31,47 2,4,8,16,21,24,31,47 2,4,8,16,21,24,31,47
23.3	Austenitic weld HAZs Types 304,316, Borated demin water 100°F, 1500-1700 psia	SCC FAT MIC						1,2,4,5,7,8,11,14,16,18,21,22,24,27,29,31,33,35,37,38,42,45,46,47 1,2,4,5,7,8,11,14,16,18,21,22,24,27,29,31,33,35,37,38,42,45,46,47 1,2,4,5,7,8,11,14,16,18,21,22,24,27,29,31,33,35,37,38,42,45,46,47
23.4	Austenitic to austenitic weld metals Type 308, Borated demin water 100°F, 1500-1700 psia	FAT SCC MIC						1,2,3,4,6,9,10,12,13,15,16,17,19,20,21,23,25,26,28,30,32,34,36,39,40,41,43,44,48 ,49,50,51,52,53 1,2,3,4,6,9,10,12,13,15,16,17,19,20,21,23,25,26,28,30,32,34,36,39,40,41,43,44,48 ,49,50,51,52,53 1,2,3,4,6,9,10,12,13,15,16,17,19,20,21,23,25,26,28,30,32,34,36,39,40,41,43,44,48 ,49,50,51,52,53
23.5	Forged austenitic stainless steel parts Types 304, 316, Borated demin water 100°F, 1500-1700 psia	FAT SCC MIC						5,7,11,14,18,22,27,29,33,35,37,38,42,45,46 5,7,11,14,18,22,27,29,33,35,37,38,42,45,46 5,7,11,14,18,22,27,29,33,35,37,38,42,45,46
23.6	Socket welds Type 304, Borated demin water 100°F, 1500-1700 psia	FAT SCC						7,39 and <1 inch instrumentation piping and access plugs 7,39 and <1 inch instrumentation piping and access plugs

Group 24 PCS Main Steam

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility	Confidence	Knowledge	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
			1=low, 2=med, 3=high					
24.1	All carbon and low-alloy steel components External surfaces (normally dry) 445-530°F, 1035-1235 psia	PIT BAC SCC						All All All
24.2	All carbon steel components and weldments Saturated steam (<0.25% moisture) 445-530°F, 1035-1235 psia	FAC FAT SCC						All except for #1 All except for #1 All except for #1
24.3	Low alloy steel components Saturated steam (<0.25% moisture) 445-530°F, 1035-1235 psia	SCC FAC						1 1

Group 25 PCS Main Feedwater

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility (1=low, 2=med, 3=high)	Confidence (1=low, 2=med, 3=high)	Knowledge (1=low, 2=med, 3=high)	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
25.1	All carbon steel components/welds/HAZ External surfaces (containment or valve room, Some plants outdoor) 400°F max (external), 1200psia	PIT SCC FAT						all all all
25.2	I690 forging and associated weld/HAZ External surfaces (containment) 400°F max (external), 1200psia	PIT FR						2 2
25.3	I690 forging and associated weld/HAZ Demineralized pH 9-10 water; 450°F,1200 psia	SCC FAT FR						2 2 2
25.4	All carbon steel components/welds/HAZ Demineralized pH 9-10 water; 450°F,1200 psia	FAC SCC FAT						all all all

Group 26 PCS Auxiliary Feedwater

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility	Confidence	Knowledge	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
			1=low, 2=med, 3=high					
26.1	All carbon steel components/welds/HAZ External surfaces (aux bldg air) 100°F max, 1200psia	PIT SCC CREV						all all all
26.2	All carbon steel components/welds/HAZ Condensate Water 100°F, 1200 psia	PIT MIC SCC FAT CREV						all all all all all

Group 27 PCS Steam Generator Blowdown

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility	Confidence	Knowledge	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
			1=low, 2=med, 3=high					
27.1	All carbon steel components/welds/HAZ External surfaces (containment/valve room air) 400°F max (external), 1200psia	PIT MIC SCC						all all all
27.2	All carbon steel components/welds/HAZ Saturated water from Steam Generator 550°F, 1200 psia	SCC FAT FAC						all all all
27.3	All carbon steel components/welds/HAZ Wet Layup Line, Demin. Water 60-100°F, 100 psia	MIC PIT SCC						all all all

Group 28 SS Service Water Suction Piping from Pond

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility (1=low, 2=med, 3=high)	Confidence (1=low, 2=med, 3=high)	Knowledge (1=low, 2=med, 3=high)	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
28.1	All carbon steel components/welds/HAZ External surfaces (aux bldg air/valve room air) 100°F max, 35 to 125psia design max	PIT MIC SCC						1 to 6, 30 to 49 1 to 6, 30 to 49
28.2	All carbon steel components/welds/HAZ External surface - Buried pipe with cathodic protection Ambient temperature, 35 to 125psia max	PIT MIC SCC GC FAT						7 to 29 7 to 29 7 to 29 7 to 29
28.3	All carbon steel components/welds/HAZ Pond water (raw water) 100°F, 35 to 125psia design	PIT MIC SCC FAC						all all all all
28.4	All carbon steel components/welds/HAZ Salt water in coated/lined pipe 100°F, 35 to 125psia design	PIT CREV MIC						Other Plants Other Plants

Group 29 SS Service Water Pump Discharge Piping

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility	Confidence	Knowledge	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
			1=low, 2=med, 3=high					
29.1	All carbon steel components/welds/HAZ External surfaces (auxiliary building air) Rubber insulated at some plants 100°F max, 125psia design max	PIT MIC SCC						1 to 66 1 to 66 1 to 66
29.2	All carbon steel components/welds/HAZ Pond water 100°F max, 125psia design	PIT MIC SCC FAT FAC						1 to 66 1 to 66 1 to 66 1 to 66 1 to 66
29.3	CCW HX Copper Zinc tubes internal CCW water external pond water 100°F max, 125psia design	FAC SCC PIT MIC						Other Plants
29.4	CCW HX Carbon Steel Shell and Tubesheets and fittings Pond Water 100°F max, 125psia design	PIT MIC CREV GC						67 67 67 67
29.5	CCW HX stainless steel tubes internal CCW water external pond or sea water 100°F max, 125psia design	SCC PIT CREV MIC						Other Plants Other Plants Other Plants Other Plants
29.6	CCW HX Copper Nickel tubes internal CCW water external pond (or sea) water 100°F max, 125psia design	FAC SCC PIT MIC						67 67 67 67

Group 30 SS Service Water Piping Inside Containment								
Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility	Confidence	Knowledge	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
			1=low, 2=med, 3=high					
30.1	All carbon steel components/welds/HAZ External surfaces (containment building air) 100°F max, 125psia design max	PIT MIC SCC						all all all
30.2	All carbon steel components/welds/HAZ Pond water 100°F max, 125psia design	PIT MIC SCC FAT EC CREV FAC						all all all all all all

Group 31 CVCS Pump Piping to Crossover Leg Injection (≤2" NPS)

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility	Confidence	Knowledge	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
			1=low, 2=med, 3=high					
31.1	All stainless steel components External surfaces at <130°F Normally dry	SCC PIT						All All
31.2	Wrought austenitic stainless steel piping Types 304,316, PWR primary water 130°F, 2250 psia	FAT SCC						3,13,19,28,38,41
31.3	Austenitic weld HAZs Types 304,316, PWR primary water 130°F, 2250 psia	SCC FAT						1,3,5,7,9,11,12,13,15,17,19,21,22,23,25,27,28,30,32,34,36,38,40,41,42
31.4	Austenitic to austenitic weld metals Type 308, PWR primary water 130°F, 2250 psia	FAT SCC						4,6,8,10,14,16,18,20,24,26,29,31,33,35,37,39
31.5	Forged austenitic stainless steel components Types 304, 316, PWR primary water 130°F, 2250 psia	FAT SCC						1,5,7,9,11,12,15,17,21,22,23,25,27,30,32,34,36,40,42
31.6	Socket welds Type 304, PWR primary water 130°F, 2250 psia	FAT SCC						2
31.7	Wrought austenitic stainless steel piping Types 304,316, PWR primary water 557°F, 2250 psia	FAT SCC						45,48
31.8	Austenitic weld HAZs Types 304,316, PWR primary water 557°F, 2250 psia	SCC FAT FR						43,45,47,48
31.9	Austenitic to austenitic weld metals Type 308, PWR primary water 557°F, 2250 psia	FAT SCC FR						44,46
31.10	Forged austenitic stainless steel components Types 304, 316, PWR primary water 557°F, 2250 psia	FAT SCC						43,47
31.11	Socket welds Type 304, PWR primary water 557°F, 2250 psia	FAT SCC						49
31.12	Flange retaining bolts SA-194 Gr B16 Air, Low temperature	FAT SCC						11

Group 32 CVCS Normal Letdown Piping (≤3" NPS)

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility	Confidence	Knowledge	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
			1=low, 2=med, 3=high					
32.1	All stainless steel components External surfaces at <557°F Normally dry	SCC PIT						1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,35
32.2	Wrought austenitic stainless steel piping Types 304,316, PWR primary water 115 to 560°F, 2250 psia	FAT SCC						4,32
32.3	Austenitic weld HAZs Types 304,316, PWR primary water 115 to 560°F, 2250 psia	SCC FAT FR						2,4,6,8,9,12,14,16,18,19,21,32,33,34
32.4	Austenitic to austenitic weld metals Type 308, PWR primary water 115 to 560°F, 2250 psia	FAT SCC FR						1,3,5,7,10,11,15,17,20,23,24,25,26,27,28,29,30,31
32.5	Forged austenitic stainless steel components Types 304, 316, PWR primary water 115 to 560°F, 2250 psia	FAT SCC						2,6,8,9,12,14,16,18,19,21,33,34
32.6	Socket welds Type 304, PWR primary water 115 to 560°F, 2250 psia	FAT SCC						13.22

Group 33 CVCS Regenerative HX Piping to Letdown HX (≤3" NPS)

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility (1=low. 2=med. 3=high)	Confidence (1=low. 2=med. 3=high)	Knowledge (1=low. 2=med. 3=high)	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
33.1	All stainless steel components External surfaces at <290°F Normally dry	SCC PIT						1.2.3.4.5.6.7.8.9.10.11.12.13.14.15.16.17.18.19.20.21.22.23.24.25.26.27.28.29.30. 31.32.33.34.35.36.37.38.39.40.41.42.43.44.45.46.47.48.49. 50.54
33.2	Wrought austenitic stainless steel piping Types 304.316. PWR primary water 115 to 290°F. 285 to 2235 psia	FAT SCC						3.23.32.55.56
33.3	Austenitic weld HAZs Types 304.316. PWR primary water 115 to 290°F. 285 to 2235 psia	SCC FAT FR						3.5.7.9.11.12.14.17.19.22.23.25.29.31.32.35.38.40.41.43.45.46.48.49.54.55.56
33.4	Austenitic to austenitic weld metals Type 308. PWR primary water 115 to 290°F. 285 to 2235 psia	FAT SCC						1.2.4.6.10.13.15.16.18.20.21.24.26.27.28.30.33.34.36.37.39.42.44.47.50
33.5	Forged austenitic stainless steel components Types 304. 316. PWR primary water 115 to 290°F. 285 to 2235 psia	FAT SCC						5.7.9.11.12.14.17.19.22.25.29.31.35.38.40.41.43.45.46.48.49.54
33.6	Socket welds Type 304. PWR primary water 115 to 290°F. 285 to 2235 psia	FAT SCC						8
33.7	Carbon steel shell, nozzles & fittings (LDHX) Treated water (CCW) 105 to 137°F. 150 psia	FAT SCC PIT						51.52.53

Group 34 CVCS Letdown HX Piping to VCT (≤3" NPS)

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility	Confidence	Knowledge	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
			1=low, 2=med, 3=high					
34.1	All stainless steel components External surfaces at <115°F Normally dry	SCC PIT						1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,49,50,51,52,53
34.2	Wrought austenitic stainless steel piping (≤3" NPS Types 304,316, PWR primary water 115°F, 75 or 285 psia	FAT SCC						4,10
34.3	Austenitic weld HAZs Types 304,316, PWR primary water 115°F, 75 or 285 psia	SCC FAT						2,4,6,8,10,11,14,16,18,21,22,23,24,26,28,29,32,34,35,38,39,40,41,42,43
34.4	Austenitic to austenitic weld metals Type 308, PWR primary water 115°F, 75 or 285 psia	FAT SCC						1,3,9,12,13,15,17,19,20,27,30,31,36,37,44,45,46,47,49,50,51,52,53
34.5	Forged austenitic stainless steel components Types 304, 316, PWR primary water 115°F, 75 or 285 psia	FAT SCC						2,6,8,11,14,16,18,21,22,23,24,26,28,29,32,34,35,38,39,40,41,42,43
34.6	Socket welds Type 304, PWR primary water 115°F, 75 or 285 psia	FAT SCC						5,7,33
34.7	Bolted flanged joint Flange bolts SA193 Gr B16 or B7 bolts Air Environment	FAT SCC GC						1,21,25
34.8	Bolted flanged joint Studs SA453 Gr 660 (13-16% CR SS) Air Environment	FAT SCC						48

Group 35 CVCS Mixed Bed Piping to Filters (≤3" NPS)

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility (1=low, 2=med, 3=high)	Confidence (1=low, 2=med, 3=high)	Knowledge (1=low, 2=med, 3=high)	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
35.1	All stainless steel components External surfaces at <115°F Normally dry	SCC PIT						All
35.2	Wrought austenitic stainless steel piping Types 304,316, PWR primary water 115°F, 285 psia Part 24 with 90° bend (cold worked)	FAT SCC						4,23,24
35.3	Austenitic weld HAZs Types 304,316, PWR primary water 115°F, 285 psia	SCC FAT						2,4,6,8,9,12,15,17,19,21,23,24,26,28,30,31,36,37,38,39
35.4	Austenitic to austenitic weld metals Type 308, PWR primary water 115°F, 285 psia	FAT SCC						1,3,5,7,10,11,14,18,20,22,25,27,29,32,33,34,35,40,41,42,43,44,45,46,47,48
35.5	Forged austenitic stainless steel components Types 304, 316, PWR primary water 115°F, 75 to 285 psia	FAT SCC						2,6,15,19,21,26,28,31
35.6	Socket welds Type 304, PWR primary water 115°F, 285 psia	FAT SCC						16
35.7	Bolted flanged joint Flange bolts SA193 Gr B7 bolts Air Environment	GC SCC FAT FR BAC						26
35.8	Cast austenitic Types CF8, PWR primary water 115°F, 285 psia	FAT SCC FR						8,9,12,17,30,36,37,38,39
35.9	Dissimilar metal weld (Support lug) Aux Bldg. Air	PIT SCC						13

Group 36 CVCS VCT Piping to Charging Pump Suction (≤4" NPS)

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility (1=low, 2=med, 3=high)	Confidence (1=low, 2=med, 3=high)	Knowledge (1=low, 2=med, 3=high)	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
36.1	All stainless steel components External surfaces at <160°F Normally dry	SCC PIT						All
36.2	Wrought austenitic stainless steel piping Types 304,316, PWR primary water 160 or 115°F, 95 or 2250 psia Parts 56 & 68 have a 90° bend (cold worked)	FAT SCC						3,19,56,61,68
36.3	Austenitic weld HAZs Types 304,316, PWR primary water 160 or 115°F, 95 or 2250 psia	SCC FAT						2,3,5,7,11,13,15,17,19,24,34,35,36,40,44,49,50,55,56,58,59,61,62,64,65,67,68,69,70
36.4	Austenitic to austenitic weld metals Type 308, PWR primary water 160 or 115°F, 95 or 2250 psia	FAT SCC						1,4,6,8,10,12,14,16,18,20,21,23,25,26,27,28,29,30,32,33,37,39,42,43,45,46,47,48,53,57,60,63,66
36.5	Forged austenitic stainless steel components Types 304, 316, PWR primary water 160 or 115°F, 95 or 2250 psia	FAT SCC						2,5,7,11,13,15,17,24,34,35,36,40,44,49,50,55,58,59,62,64,65,67,69,70
36.6	Bolted flanged joint Flange bolts SA193 Gr B7 bolts Air Environment	GC SCC BAC FAT FR						39.58
36.7	Cast austenitic Types CF8, PWR primary water 160 or 115°F, 95 or 2250 psia	FAT SCC FR						9,22,31,41,51,52,54

Group 37 CVCS Charging Pump Piping to Regenerative HX (≤4" NPS)

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility	Confidence	Knowledge	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
			1=low, 2=med, 3=high					
37.1	All stainless steel components External surfaces at <130°F Normally dry	SCC PIT						All
37.2	Wrought austenitic stainless steel piping Types 304,316, PWR primary water 130°F, 2235 psia	FAT SCC						11,28,42
37.3	Austenitic weld HAZs Types 304,316, PWR primary water 130°F, 2235 psia	SCC FAT						2,5,8,10,11,13,15,19,22,24,25,27,28,31,34,36,37,38,40,41,42,44,47,49,51,52
37.4	Austenitic to austenitic weld metals Type 308, PWR primary water 130°F, 2235 psia	FAT SCC						1,3,4,6,7,9,16,17,18,20,21,23,26,29,30,32,33,35,39,43,45,46,48,50,53
37.5	Forged austenitic stainless steel components Types 304, 316, PWR primary water 130°F, 2235 psia	FAT SCC						2,5,8,10,13,15,19,22,24,25,27,31,34,36,37,38,40,41,44,47,49,51,52
37.6	Socket welds Type 304, PWR primary water 130°F, 2235 psia	FAT SCC						12.14
37.7	Bolted flanged joint Flange bolts SA193 Gr B7 bolts Air Environment	FAT SCC GC BAC FR						34

Group 38 CVCS Regenerative HX Piping to Cold Leg (≤3" NPS)

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility	Confidence	Knowledge	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
			1=low, 2=med, 3=high					
38.1	All stainless steel components External surfaces at <517°F Normally dry	SCC PIT						All
38.2	Wrought austenitic stainless steel piping Types 304,316, PWR primary water 517°F, 2305 psia	FAT SCC						6,19
38.3	Austenitic weld HAZs Types 304,316, PWR primary water 517°F, 2305 psia	SCC FAT FR						2,5,6,8,9,12,15,17,19,20,21,22,23
38.4	Austenitic to austenitic weld metals Type 308, PWR primary water 517°F, 2305 psia	FAT SCC FR						1,3,4,7,10,11,13,16,18,24
38.5	Forged austenitic stainless steel components Types 304, 316, PWR primary water 517°F, 2305 psia	FAT SCC						2,5,8,9,12,15,17,20,21,22,23
38.6	Socket welds Type 304, PWR primary water 517°F, 2305 psia	FAT SCC						14

Group 39 CVCS Injection Filter Piping to RCP Seals (≤3" NPS)

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility	Confidence	Knowledge	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
			1=low, 2=med, 3=high					
39.1	All stainless steel components External surfaces at <130°F Normally dry	SCC PIT						All
39.2	Wrought austenitic stainless steel piping Types 304,316, PWR primary water 130°F, 2550 psia Component 49 has a bend	FAT SCC						1,9,22,40,48,49,63
39.3	Austenitic weld HAZs Types 304,316, PWR primary water 130°F, 2550 psia	SCC FAT						1,3,5,7,9,10,13,15,18,19,20,22,24,26,28,30,34,36,38,40,42,43,45,47,48,49,51,53,54,57,58,59,61,63,65
39.4	Austenitic to austenitic weld metals Type 308, PWR primary water 130°F, 2550 psia	FAT SCC						2,4,8,11,12,14,16,17,21,23,25,27,29,31,32,33,35,37,39,41,44,46,50,52,55,56,60,62,64
39.5	Forged austenitic stainless steel components Types 304, 316, PWR primary water 130°F, 2550 psia	FAT SCC						3,5,7,10,13,15,18,19,20,24,26,28,30,34,36,38,42,43,45,47,51,53,54,57,58,59,61,65
39.6	Socket welds Type 304, PWR primary water 130°F, 2550 psia	FAT SCC						6
39.7	Bolted flanged joint Flange bolts SA193 Gr B16 bolts Air Environment	FAT SCC GC BAC FR						36.65

Group 40 CVCS RCP Seals Return Piping to Filter (≤2" NPS)

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility	Confidence	Knowledge	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
			1=low, 2=med, 3=high					
40.1	All stainless steel components External surfaces at <250°F Normally dry	SCC PIT						All
40.2	Wrought austenitic stainless steel piping Types 304,316, PWR primary water 250 to 160°F, 2185 or 95 psia Parts 3 & 39 have a bend	FAT SCC						3,4,20,25,31,39,44
40.3	Austenitic weld HAZs Types 304,316, PWR primary water 250 to 160°F, 2185 or 95 psia	SCC FAT FR						1,3,4,6,8,10,12,14,16,18,20,22,23,25,27,29,31,33,35,36,38,39,41,43,44,46
40.4	Austenitic to austenitic weld metals Type 308, PWR primary water 250 to 160°F, 2185 or 95 psia	FAT SCC FR						2,5,7,9,11,13,15,17,19,21,24,26,28,30,32,34,37,40,42,45
40.5	Forged austenitic stainless steel components Types 304, 316, PWR primary water 250 to 160°F, 2185 or 95 psia	FAT SCC						1,6,8,10,12,14,16,18,22,23,27,29,33,35,36,38,41,43,46
40.6	Bolted flanged joint Flange bolts SA193 Gr B16 bolts Air Environment	FAT SCC GC BAC FR						1.22

Group 41 SS CCW Surge Tank Piping to CCW HX (≤16" NPS)

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility (1=low, 2=med, 3=high)	Confidence (1=low, 2=med, 3=high)	Knowledge (1=low, 2=med, 3=high)	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
41.1	All outside surfaces (Aux Bldg. air) Low alloy steels and carbon steel: SA53, SA106, SA 234, SA 285 130°F and 150 psi.	SCC FAT GC CREV PIT MIC						All except inside surfaces in HX
41.2	Elbows Carbon steel and low alloy steels, SA53, SA106, SA 234, SA 285 Treated water. Surge Tank portion (4" NPS) stagnant. 130°F, 150 psi	SCC FAT GC CREV PIT MIC						2, 3, 5, 11, 12, 19, 20, 22, 22, 24, 27, 32, 33, 42, 47, 51, 61, 62, 63
41.3	Tees, weldolets, reducers, and nozzles Carbon steel and low alloy steels, SA53, SA106, SA 234, SA 285 Treated water. Surge Tank portion (4" NPS) stagnant. 130°F, 150 psi	SCC FAT GC CREV PIT MIC						1, 6, 7, 14, 15,16, 25, 26, 27, 28, 30,36, 37, 38, 52, 53, 54,58, 61, 71 69
41.4	Valves Carbon steel and low alloy steels, SA53, SA106, SA 234, SA 285 Treated water. Surge Tank portion (4" NPS) stagnant. 130°F, 150 psi	SCC FAT GC CREV PIT MIC						8, 9, 29, 34, 35, 43, 44, 45, 46, 47, 50, 54, 55,56
41.5	Straight pipe Carbon steel and low alloy steels, SA53, SA106, SA 234, SA 285 Treated water. Surge Tank portion (4" NPS) stagnant. 130°F, 150 psi	SCC FAT GC CREV PIT FAC MIC						4, 13, 17, 18, 23, 31, 32, 40, 43, 49, 50, 56, 57, 59, 60, 63,64
41.6	Flanges and surge tank hatch Low alloy steels SA182, SA 234, SA312, SA376 Treated water. Surge Tank portion (4" NPS) stagnant. 130°F, 150 psi Flow about 12,000 gpm (max).	SCC FAT GC CREV PIT FAC MIC						38, 39, 41, 42, 67
41.7	Surge tank comp, heads, shells SA 285, Carbon steel Surge tank water is normally stagnant Treated water. 130°F, 150 psi	SCC FAT GC CREV PIT MIC						65, 68, 72, 73
41.8	Surge tank weld seam SA285 Surge tank water is normally stagnant Treated water. 130°F, 150 psi	SCC FAT GC CREV PIT MIC						66
41.9	CCW Pump casing Cast iron Flow 4800gpm Treated water. 130°F, 150 psi	FAT GC PIT FR FAC MIC						70
41.10	CCWHX Nozzles 30" Carbon steel SW Flow 9.98x10*6 lb/hr 130°F, 150 psia	SCC FAT GC PIT FAC MIC CREV						74

Group 42 SS CCW HX Piping to RHR HX

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility	Confidence	Knowledge	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
			1=low, 2=med, 3=high					
42.1	All outside surfaces (Aux bldg. air) Low alloy steels and carbon steel 130°F and 150 psi.	SCC FAT GC CREV PIT MIC						All
42.2	Elbows Low alloy steels, SA105, SA 106, SA234, SA403 Treated water. 130°F, 150 psi Flows approximately 3x10*6 lb/hr	SCC FAT GC CREV PIT MIC FAC						1, 2, 3, 11, 12, 13, 15, 16, 18, 19, 23, 24, 27, 29, 34, 40, 41, 44, 45
42.3	Tees, weldolets, reducers, and nozzles Low alloy steels, SA105, SA 106, SA234, SA403 Treated water. 130°F, 150 psi Flows approximately 3x10*6 lb/hr	SCC FAT GC CREV PIT MIC FAC						1, 3, 4, 5, 9, 10, 11, 20, 29, 31, 35, 36, 37, 38, 42, 43, 50
42.4	Valves Low alloy steels, SA105, SA 106, SA234, SA403 Treated water. 130°F, 150 psi Flows approximately 3x10*6 lb/hr	SCC FAT GC CREV PIT MIC FAC						7, 8, 9, 17, 18, 21, 27, 28, 33, 47
42.5	Straight pipe Low alloy steels, SA105, SA 106, SA234, SA403 Treated water. 130°F, 150 psi Flows approximately 3x10*6 lb/hr	SCC FAT GC CREV PIT MIC FAC						5, 6, 7, 12, 14, 15, 20, 22, 23, 25, 26, 35, 37, 38, 39, 40, 42, 44, 46, 48, 50
42.6	Flanges, Lugs on 12, 16, 18" pipe Carbon steel (lug) Low alloy steels, SA105, SA 106, SA234, SA403 Treated water. 130°F, 150 psi Flows approximately 3x10*6 lb/hr	SCC FAT GC CREV PIT FAC MIC						25, 31, 32, 48, 49

Group 43 SS CCW Piping to Other Loads Outside Containment (CCWLDS)

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility	Confidence	Knowledge	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
			1=low, 2=med, 3=high					
43.1	All outside surfaces (Aux bldg air) Low alloy steels and carbon steel 105°F and 150 psi.	SCC FAT GC CREV PIT MIC						All
43.2	Elbows Low alloy steels, SA105, SA 106, SA234, SA403 Treated water. 105°F, 150 psi Flows approximately 200,000lb/hr	SCC FAT GC CREV PIT FAC MIC						1,2, 7, 8, 14, 15, 16, 17, 20, 21, 22, 35, 36, 41, 43, 50, 51, 52
43.3	Tees, weldolets, reducers, and nozzles Low alloy steels, SA105, SA 106, SA234, SA403 Treated water. 105°F, 150 psi Flows approximately 200,000lb/hr	SCC FAT GC CREV PIT FAC MIC						5, 6, 9, 10,18, 19 20, 21, 22, 23, 32, 38,40, 53, 55, 56
43.4	Valves Low alloy steels, SA105, SA 106, SA234, SA403 Treated water. 105°F, 150 psi Flows approximately 200,000lb/hr	SCC FAT GC CREV PIT FAC MIC						12, 13, 14, 29, 30, 45, 46
43.5	Straight pipe Low alloy steels, SA105, SA 106, SA234, SA403 Treated water. 105°F, 150 psi Flows approximately 200,000lb/hr	SCC FAT GC CREV PIT FAC MIC						3, 4, 6, 7, 9, 11, 18, 23, 27, 32, 33, 34, 35, 40, 49, 53
43.6	Flanges, Lugs Carbon steel (lug) Low alloy steels, SA105, SA 106, SA234, SA403 Treated water. 105°F, 150 psi Flows approximately 200,000lb/hr	SCC FAT GC CREV PIT FAC MIC						27, 28, 37, 38, 46, 48, 49
43.7	Sockolets, plugs on 1" pipe Low alloy steels, SA105, SA 106 Treated water. 105°F, 150 psi Normally stagnant	SCC FAT GC CREV PIT MIC FAC						23, 24, 25, 26

Group 44 SS CCW Piping to RCPs Inside Containment

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility	Confidence	Knowledge	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
			1=low, 2=med, 3=high					
44.1	All outside surfaces (Aux and Cont bldg air) Low alloy steels and carbon steel Treated water. 105°F, 150 psi	SCC FAT GC CREV PIT MIC						1-58
44.2	Elbows Low alloy steels, SA105, SA 106, SA234 Treated water. 105°F, 150 psi Flows approximately 40-700 gpm	SCC FAT GC CREV PIT FAC MIC						5, 6, 7, 11, 12, 13, 32, 33, 34, 39, 40
44.3	Tees, weldolets, reducers, threaded caps, and nozzles Low alloy steels, SA105, SA 106, SA234, SA403 Treated water. 105°F, 150 psi Flows approximately 40-700 gpm	SCC FAT GC CREV PIT FAC MIC						15, 16, 17, 18, 19, 20, 24, 25, 26, 27, 28, 30, 31, 32, 41, 42, 43, 44, 45
44.4	Valves Low alloy steels, SA105, SA 106, SA234, SA403 Treated water. 105°F, 150 psi Flows approximately 40-700 gpm	SCC FAT GC CREV PIT FAC MIC						1, 2, 4, 5, 9, 10, 11, 21, 22, 37, 51, 52, 53
44.5	Straight pipe Low alloy steels, SA105, SA 106, SA234, SA403 Treated water. 105°F, 150 psi Flows approximately 40-700 gpm	SCC FAT GC CREV PIT MIC FAC						2, 3, 7, 8,9, 13, 14, 15, 16, 22, 23, 27, 28, 29, 30, 34, 35. 36, 38, 40, 41, 45, 46, 47, 49, 51, 54, 55
44.6	Flanges, Lugs Carbon steel (lug) Low alloy steels, SA105, SA 106, SA234, SA403 Treated water. 105°F, 150 psi Flows approximately 40-700 gpm	SCC FAT GC CREV PIT FAC MIC						47, 48, 56, 57
44.7	Flexible 2" hose Low alloy steels, SA105, carbon steel Treated water, 105°F, 2485 psi Flow 40 gpm	SCC FAT GC CREV PIT MIC						58

Group 45 SS Spent Fuel Pool Cooling Piping

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility	Confidence	Knowledge	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
			1=low, 2=med, 3=high					
45.1	Outside surfaces (Fuel Handling Building air) Stainless steel or T 304 Borated water, 70-110°F and 65 psi.	SCC FAT GC CREV PIT MIC						1-66 except buried in concrete
45.2	Outside surfaces embedded in concrete (Aux bldg air) Stainless steel or T 304 Borated water, 70-110°F and 65 psi.	CREV PIT MIC						56
45.3	Elbows Stainless steel or T 304 Borated water, oxygenated, 70-110°F and 65 psi. Design flow about 4350 lb/hr	PIT MIC CREV FAT SCC						2, 4, 13, 18, 19, 20, 26, 27, 28, 31, 34, 36, 37, 38, 39, 42, 43, 53, 54, 55
45.4	Tees, weldolets, reducers, threaded caps, and nozzles Stainless steel or T 304 Borated water, oxygenated, 70-110°F and 65 psi. Design flow about 4350 lb/hr	PIT MIC CREV FAT SCC						1, 16, 18, 23, 24, 25, 35, 36, 44, 45, 46, 47, 48, 49
45.5	Valves on 10, 12, 14, 16, 18" pipe Stainless steel or T 304 Borated water, oxygenated, 70-110°F and 65 psi. Design flow about 4350 lb/hr	PIT MIC CREV FAT SCC						11, 12, 13, 28, 29, 30, 31, 33, 34, 41, 51
45.6	Straight pipe Stainless steel or T 304 Borated water, oxygenated, 70-110°F and 65 psi. Design flow about 4350 lb/hr	PIT MIC CREV FAT SCC						1, 2, 3, 11, 14, 25, 26, 30, 32, 33, 44, 48, 52, 53, 56
45.7	Flanges, Lugs Stainless steel or T 304; lug on part 32 may be carbon steel Borated water, oxygenated, 70-110°F and 65 psi. Design flow about 4350 lb/hr	PIT MIC CREV FAT SCC						14, 21, 22, 23, 32, 39, 40, 49, 50
45.8	Weldolet, pipe, caps Stainless steel or T 304 Stagnant, capped line Borated water, oxygenated, 70-110°F and 65 psi.	PIT MIC CREV FAT SCC						5, 6, 7, 8, 9, 10
45.9	SFP HX tubesheet nozzles, tubesheet, tubes, Stainless steel Design flow 4350 gpm Borated water, oxygenated, 70-110°F and 65 psi.	FAT GALV PIT MIC CREV SCC						57, 58, 59
45.10	SFP pump and associated: pump casing, strainer, strainer screen, strainer supports, strainer bottom ring. Stainless steel Design flow 4350 gpm Borated water, oxygenated, 70-110°F and 65 psi.	GALV PIT CREV MIC FAT SCC						62, 63, 64, 65, 66
45.11	SPF Shellside: shell, nozzles 18"; Lug on part 32 Carbon steel Design flow 4350 gpm CCW water, deoxygenated, 70-110°F, 65 psi,	GC PIT SCC FAT MIC CREV FAC						32, 60, 61

Group 46 SS Spent Fuel Pool Cleaning Piping

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility	Confidence	Knowledge	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
			1=low, 2=med, 3=high					
46.1	Outside surfaces (Aux Building air) Stainless steel or T 304 Borated water, 70-110°F and 65 psi.	SCC PIT MIC CREV FAT GC						All
46.2	Elbows SS T304/316 Borated water, 70-110°F and 65 psi. Operating flow about 80gpm	PIT FAT MIC CREV SCC						7, 8,10, 11, 16, 17, 22, 30, 31, 35,
46.3	Tees, weldolets, reducers, threaded caps, and nozzles SS T304/316 Borated water, 70-110°F and 65 psi. Operating flow about 80gpm	PIT FAT CREV SCC						1, 2, 3, 12, 13, 14, 19, 20, 22, 23, 24, 25, 26, 27, 28, 32, 33, 35
46.4	Valves SS T304/316 Borated water, 70-110°F and 65 psi. Operating flow about 80gpm	PIT FAT CREV SCC						5,6, 14, 15, 18, 21, 34, 38
46.5	Straight pipe SS T304/316 Borated water, 70-110°F and 65 psi. Operating flow about 80gpm	PIT FAT CREV SCC						1, 2, 3, 4, 5, 7, 9, 10, 12, 19, 20, 23, 24, 28, 29, 30, 32, 36
46.6	Flanges SS T304/316 Borated water, 70-110°F and 65 psi. Operating flow about 80gpm	PIT FAT CREV SCC						36, 37
46.7	Mixed bed compondents (3" unless noted): Mixed Bed (MB) Inlet Nozzle, head; MB head (32"), shell; MB shell, head (32"); MB head outlet nozzle; filter cover, head; filter head, shell; filter shell, head; filter shell, outlet nozzle SS T304/316 Borated water, 70-110°F and 65 psi. Operating flow about 80gpm	PIT FAT MIC CREV SCC						39, 40, 41, 42, 43, 44, 45, 46, 47

Group 47 SS Spent Fuel Pool and Fuel Racks

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility	Confidence	Knowledge	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
			1=low, 2=med, 3=high					
47.1	Spent fuel pool liner, Storage Rack, Typical cell, Storage Rack, Storage Rack Supports TP 304 SS High purity Borated water with oxygen, 100 - 150F, Ambient pressure	SCC CREV PIT GC WEAR						
47.2	Spent fuel pool liner, Storage Rack, Typical cell, Storage Rack, Storage Rack Supports TP 304 SS weld HAZ High purity Borated water with oxygen, 100 - 150F, Ambient pressure	SCC CREV PIT FAT						
47.3	Spent fuel pool liner, Storage Rack, Typical cell, Storage Rack, Storage Rack Supports SS weld metal High purity Borated water with oxygen, 100 - 150F, Ambient pressure	SCC CREV PIT FAT						
47.4	Boral panels Aluminum High purity Borated water with oxygen, 100 - 150F, Ambient pressure	GC CREV PIT						
47.5	Fuel Assembly Fuel rods/cladding matls. Zr- alloy High purity Borated water with oxygen, 100 - 150F, Ambient pressure	SCC GC						
47.6	Spent Fuel Pool floor with SS liner High purity Borated water with oxygen, 100 - 150F, Ambient pressure Inside	SCC CREV PIT FAT MIC						
47.7	Spent Fuel Pool floor with SS liner High purity Borated water with oxygen, 100 - 150F, Ambient pressure Outside	SCC CREV PIT						

Group 48 Containment Penetrations for Process Piping (CONTPEN)

Identification	Material/Environment combination / Full power temperature/pressure	Degradation mechanisms considered	Susceptibility	Confidence	Knowledge	Rationale for scoring	Critical factors controlling occurrence in plant	Components in this sub-group
			1=low, 2=med, 3=high					
48.1	Liner, Sleeves, Penetration pipes, Flued head/piping, Leak chase channel plugs, Flange, Necked flange, Fastner bolts/nuts Ambient air and pressure, possible concentration of impurities such as Cl(outside) TP 304, LAS, CS(Base metal, HAZ and Weld Metal except 304. See below)	SCC FAT GC CREV PIT MIC						
48.2	Liner material, TP304/sleeves(SA-316, Gr. 60 & SA-335, Gr.6) dissimilar weld Ambient air and pressure, possible concentration of impurities such as Cl Possible use of buttering by Ni-base alloy	SCC FAT GC CREV PIT MIC						
48.3.1	Penetration pipes(Main Steam Line Penetration and Feedwater Line Penetration) SA155 GR. NCGS and SA106, GR.B Inside:Main steam/Feed water, Temperature 557F and pressure 1092-1185psi	SCC FAT GC CREV PIT MIC						
48.3.2	Penetration pipes(Main Steam Line Penetration and Feedwater Line Penetration) SA155 GR. NCGS and SA106, GR.B Outside:Cooled air, Temperature below 150 F(?) and ambient pressure	SCC FAT GC CREV PIT MIC						
48.4.1	Penetration pipes(RHR Line, Safety Injection Lines, CVCS Lines) TP304, TP316L Inside:Primary water, Temp. 350F - 165F, Pressure 450 - 75/100 psi	SCC FAT GC CREV PIT MIC						
48.4.2	Penetration pipes(RHR Line, Safety Injection Lines, CVCS Lines) TP304, TP316L Outside:Cooled air, Temperature below 150 F(?) and ambient pressure	SCC FAT GC CREV PIT MIC						
48.5.1	Penetration pipes(Service Water Line, & Component Cooling Water Line) SA106, GR.B Temp. 130 F, Pressure 75/100 - 150 psi Internal	SCC FAT GC CREV PIT MIC						
48.5.2	Penetration pipes(Service Water Line, & Component Cooling Water Line) SA106, GR.B Temp. 130 F, Pressure 75/100 - 150 psi External	SCC FAT GC CREV PIT						
48.6	Penetration pipes/sleeves dissimilar weld, HAZ(Service Water Line, & Component Cooling Water Line) TP 304 & 316L/LAS & CS Ambient temperature and ambient Pressure	SCC FAT GC CREV PIT MIC						
48.7	Penetration sleevs & Flued Head(LAS & CS) SA-316, Gr. 60, SA-335, Gr.6, SA-350 GR LF-1, SA-240, GR.304 & SA516 GR. 60 Ambient temperature and ambient Pressure	SCC FAT GC CREV PIT MIC						
48.8	Penetration sleevs/Flued Head HAZ(LAS & CS) SA-316, Gr. 60, SA-335, Gr.6, SA-350 GR LF-1, SA-240, GR.304 & SA516 GR. 60 Ambient temperature and ambient Pressure	SCC FAT GC CREV PIT MIC						
48.9	Penetration sleevs/Flued Head weld(LAS & CS) SA-316, Gr. 60, SA-335, Gr.6, SA-350 GR LF-1, SA-240, GR.304 & SA516 GR. 60 Ambient temperature and ambient Pressure	SCC FAT GC CREV PIT MIC						
48.10	Leak chase channel plug Ambient temperature and ambient Pressure	SCC FAT GC CREV PIT MIC						
48.11	Flange and necked flange Ambient temperature and ambient Pressure SA 105 or SA 305 GR. LF2	SCC FAT GC CREV PIT MIC						
48.12	Flange and necked flange/sleeves weld HAZ Ambient temperature and ambient Pressure SA 105 or SA 305 GR. LF2	SCC FAT GC CREV PIT MIC						
48.13	Flange and necked flange/sleeves weld metal Ambient temperature and ambient Pressure SA 105 or SA 305 GR. LF2	SCC FAT GC CREV PIT MIC						
48.14	Bellows Carbon steel Outside or aux bldg. air environment	FAT CREV GC MIC PIT SCC						