

TABLE 3.2-1 TABLE 1 ENGINEERED SAFETY FEATURES SYSTEMS**Engineered Safety Features**

<i>Material</i>	<i>Environment</i>	<i>Aging Effect/ Mechanism</i>	<i>Program</i>
1. Piping, fittings, and valves in emergency core cooling system			
<i>System No</i>	<i>2045</i>	<i>Residual Heat Removal System (RHR)</i>	
Stainless Steel	Treated Water (including steam)	Cracking from Thermal Fatigue	Fatigue is a TLAA to be evaluated
3. Components in containment spray (PWR only), standby gas treatment (BWR only), containment isolation, and emergency core cooling systems			
<i>System No</i>	<i>7060</i>	<i>Liquid Waste Processing System (WDS)</i>	
Stainless Steel	Raw Water	Loss of Material from Crevice Corrosion	Preventive Maintenance Program (Site Specific)
	Raw Water	Loss of Material from Pitting Corrosion	Preventive Maintenance Program (Site Specific)
<i>System No</i>	<i>8175</i>	<i>Isolation Valve Seal Water System (IVSW)</i>	
Stainless Steel	Raw Water	Loss of Material from Crevice Corrosion	Preventive Maintenance Program (Site Specific)
	Raw Water	Loss of Material from Pitting Corrosion	Preventive Maintenance Program (Site Specific)
4. Containment isolation valves and associated piping			
<i>System No</i>	<i>7060</i>	<i>Liquid Waste Processing System (WDS)</i>	
Stainless Steel	Raw Water	Loss of Material from MIC	Preventive Maintenance Program (Site Specific)
<i>System No</i>	<i>8175</i>	<i>Isolation Valve Seal Water System (IVSW)</i>	
Stainless Steel	Raw Water	Loss of Material from MIC	Preventive Maintenance Program (Site Specific)
6. External surface of carbon steel components			
<i>System No</i>	<i>2080</i>	<i>Safety Injection System</i>	
Carbon Steel	Indoor - Not Air Conditioned, Containment Air, Air & Gas, Borated Water Leakage	Loss of Material from Aggressive Chemical Attack	Systems Monitoring Program (Site Specific)
	Indoor - Not Air Conditioned, Containment Air, Borated Water Leakage	Loss of Mechanical Closure Integrity from Loss of Material due to Aggressive Chemical Attack	Systems Monitoring Program (Site Specific)

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8. Components serviced by open-cycle cooling system			
<i>System No</i>	<i>2080</i>	<i>Safety Injection System</i>	
Carbon Steel	Raw Water	Flow Blockage from Fouling	Open-Cycle Cooling Water System Program
	Raw Water	Loss of Heat Transfer Effectiveness from Fouling of Heat Transfer Surfaces	Open-Cycle Cooling Water System Program
	Raw Water	Loss of Material from Crevice Corrosion	Open-Cycle Cooling Water System Program
	Raw Water	Loss of Material from General Corrosion	Open-Cycle Cooling Water System Program
	Raw Water	Loss of Material from MIC	Open-Cycle Cooling Water System Program
	Raw Water	Loss of Material from Pitting Corrosion	Open-Cycle Cooling Water System Program
9. Components serviced by closed-cycle cooling system			
<i>System No</i>	<i>2045</i>	<i>Residual Heat Removal System (RHR)</i>	
Carbon Steel	Treated Water (including steam)	Loss of Material from Crevice Corrosion	Closed-Cycle Cooling Water System Program
	Treated Water (including steam)	Loss of Material from General Corrosion	Closed-Cycle Cooling Water System Program
	Treated Water (including steam)	Loss of Material from Pitting Corrosion	Closed-Cycle Cooling Water System Program
Stainless Steel	Treated Water (including steam)	Loss of Material from Crevice Corrosion	Closed-Cycle Cooling Water System Program
	Treated Water (including steam)	Loss of Material from Pitting Corrosion	Closed-Cycle Cooling Water System Program
<i>System No</i>	<i>2080</i>	<i>Safety Injection System</i>	
Carbon Steel	Treated Water (including steam)	Loss of Material from Crevice Corrosion	Closed-Cycle Cooling Water System Program
	Treated Water (including steam)	Loss of Material from General Corrosion	Closed-Cycle Cooling Water System Program
	Treated Water (including steam)	Loss of Material from Pitting Corrosion	Closed-Cycle Cooling Water System Program
Stainless Steel	Treated Water (including steam)	Loss of Material from Crevice Corrosion	Closed-Cycle Cooling Water System Program
	Treated Water (including steam)	Loss of Material from Pitting Corrosion	Closed-Cycle Cooling Water System Program

10. Pumps, valves, piping, and fittings in containment spray and emergency core cooling systems

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10. Pumps, valves, piping, and fittings in containment spray and emergency core cooling systems			
<i>System No</i>	<i>2045</i>	<i>Residual Heat Removal System (RHR)</i>	
Stainless Steel	Treated Water (including steam)	Cracking from SCC	Water Chemistry Program
11. Carbon steel components			
<i>System No</i>	<i>2045</i>	<i>Residual Heat Removal System (RHR)</i>	
Carbon Steel	Indoor - Not Air Conditioned	Loss of Material from Aggressive Chemical Attack	Boric Acid Corrosion Program
<i>System No</i>	<i>2075</i>	<i>Post Accident Hydrogen System</i>	
Carbon Steel	Indoor - Not Air Conditioned, Containment Air, Borated Water Leakage	Loss of Mechanical Closure Integrity from Loss of Material due to Aggressive Chemical Attack	Boric Acid Corrosion Program
<i>System No</i>	<i>2080</i>	<i>Safety Injection System</i>	
Carbon Steel	Indoor - Not Air Conditioned	Loss of Material from Aggressive Chemical Attack	Boric Acid Corrosion Program
	Indoor - Not Air Conditioned, Containment Air, Air & Gas, Borated Water Leakage	Loss of Material from Aggressive Chemical Attack	Boric Acid Corrosion Program
<i>System No</i>	<i>6140</i>	<i>Service Air System (SA)</i>	
Carbon Steel	Indoor - Not Air Conditioned, Containment Air, Borated Water Leakage	Loss of Material from Aggressive Chemical Attack	Boric Acid Corrosion Program
	Indoor - Not Air Conditioned, Containment Air, Borated Water Leakage	Loss of Mechanical Closure Integrity from Loss of Material due to Aggressive Chemical Attack	Boric Acid Corrosion Program
<i>System No</i>	<i>7060</i>	<i>Liquid Waste Processing System (WDS)</i>	
Carbon Steel	Indoor - Not Air Conditioned	Loss of Material from Aggressive Chemical Attack	Boric Acid Corrosion Program
	Indoor - Not Air Conditioned	Loss of Mechanical Closure Integrity from Loss of Material due to Aggressive Chemical Attack	Boric Acid Corrosion Program
<i>System No</i>	<i>8050</i>	<i>Containment Pressure Relief System (CVPRS)</i>	

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11. Carbon steel components			
Carbon Steel	Indoor - Not Air Conditioned, Containment Air, Borated Water Leakage	Loss of Material from Aggressive Chemical Attack	Boric Acid Corrosion Program
	Indoor - Not Air Conditioned, Containment Air, Borated Water Leakage	Loss of Mechanical Closure Integrity from Loss of Material due to Aggressive Chemical Attack	Boric Acid Corrosion Program
<i>System No</i>	<i>8060</i>	Containment Vacuum Breaker System (CV VBS)	
Carbon Steel	Indoor - Not Air Conditioned, Containment Air, Borated Water Leakage	Loss of Material from Aggressive Chemical Attack	Boric Acid Corrosion Program
	Indoor - Not Air Conditioned, Containment Air, Borated Water Leakage	Loss of Mechanical Closure Integrity from Loss of Material due to Aggressive Chemical Attack	Boric Acid Corrosion Program
<i>System No</i>	<i>8100</i>	Penetration Pressurization Local Leak Rate Test	
Carbon Steel	Indoor - Not Air Conditioned, Containment Air, Borated Water Leakage	Loss of Material from Aggressive Chemical Attack	Boric Acid Corrosion Program
	Indoor - Not Air Conditioned, Containment Air, Borated Water Leakage	Loss of Mechanical Closure Integrity from Loss of Material due to Aggressive Chemical Attack	Boric Acid Corrosion Program