

SURVEILLANCE REQUIREMENTS

- b. At least once per 18 months, or prior to operation after ECCS piping has been drained by verifying that the ECCS piping is full of water by venting the ECCS pump casings and discharge piping high points.
- c. By a visual inspection which verifies that no loose debris (rags, trash, clothing, etc.) is present in the containment which could be transported to the containment emergency sump and cause restriction of the pump suction during LOCA conditions. This visual inspection shall be performed:
1. For all accessible areas of the containment prior to establishing CONTAINMENT INTEGRITY, and
 2. Of the areas affected within containment at the completion of each containment entry when CONTAINMENT INTEGRITY is established.
- d. At least once per 18 months by:
1. Verifying that the interlocks:
 - a) Close DH-11 and DH-12 and deenergize the pressurizer heaters, if either DH-11 or DH-12 is open and a simulated reactor coolant system pressure which is greater than the trip setpoint (<438 psig) is applied.
 - b) Prevent the opening of DH-11 and DH-12 when a simulated or actual reactor coolant system pressure which is greater than the trip setpoint (<438 psig) is applied.
 2. (a) A visual inspection of the containment emergency sump which verifies that the subsystem suction inlets are not restricted by debris and that the sump components (trash racks, screens, etc.) show no evidence of structural distress or corrosion.
 (b) *see attached sheet.*
 3. Verifying a total leak rate \leq 20 gallons per hour for the LPI system at:
 - a) Normal operating pressure or hydrostatic test pressure of $>$ 150 psig for those parts of the system downstream of the pump suction isolation valve, and
 - b) $>$ 45 psig for the piping from the containment emergency sump isolation valve to the pump suction isolation valve.
 4. Verifying that a minimum of 72 cubic-feet of solid granular trisodium phosphate dodecahydrate (TSP) is contained within the TSP storage baskets.

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- (b) Verifying that on a Borated Water Storage Tank (BWST) Low-Low Level interlock trip, the BWST Outlet Valve HV-DH7A (HV-DH7B) automatically close in ≤ 75 seconds after the operator manually pushes the control switch to open the Containment Emergency Sump Valve HV-DH9A (HV-DH9B) which should be verified to open in ≤ 75 seconds.

TABLE 3.3-3

SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. OF UNITS</u>	<u>UNITS TO TRIP</u>	<u>MINIMUM UNITS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ACTION</u>
1. INSTRUMENT STRINGS					
a. Containment Radiation - High	4	2	3	All MODES	9#
b. Containment Pressure - High	4	2	3	1, 2, 3	9#
c. Containment Pressure - High-High	4	2	3	1, 2, 3	9#
d. RCS Pressure - Low	4	2	3	1, 2, 3*	9#
e. RCS Pressure - Low-Low	4	2	3	1, 2, 3**	9#
f. BWST Level - Low — LOW	4	2	3	1, 2, 3	9#
2. OUTPUT LOGIC					
a. Incident Level #1: Containment Isolation	2	1	2	All MODES	10
b. Incident Level #2: High Pressure Injection and Starting Diesel Generators	2	1	2	1, 2, 3, 4	10
c. Incident Level #3: Low Pressure Injection	2	1	2	1, 2, 3, 4	10
d. Incident Level #4: Containment Spray	2	1	2	1, 2, 3, 4	10
e. Incident Level #5: Containment Sump Recirculation PERMISSIVE	2	1	2	1, 2, 3, 4	10

TABLE 3.3-5 (Continued)

SAFETY FEATURES SYSTEM RESPONSE TIMES

<u>INITIATING SIGNAL AND FUNCTION</u>	<u>RESPONSE TIME IN SECONDS</u>
6. Containment Radiation - High	
a. Emergency Vent Fans	≤ 25*
b. HV & AC Isolation Valves	
1. ECCS Room	≤ 75*
2. Emergency Ventilation	≤ 75*
3. Containment Air Sample	≤ 30*
4. Containment Purge	≤ 15*
5. Penetration Room Purge	≤ 75*
c. Control Room HV & AC Units	≤ 10*
7. Borated Water Storage Tank-Low	
a. Containment Sump Suction Valves	≤ 90*
b. BWST Outlet Valves	≤ 90*

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TABLE NOTATION

* Diesel generator starting and sequence loading delays included when applicable. Response time limit includes movement of valves and attainment of pump or blower discharge pressure.

TABLE 4.3-2

SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES IN WHICH SURVEILLANCE REQUIRED</u>
1. INSTRUMENT STRINGS				
a. Containment Radiation - High	S	R	M	ALL MODES
b. Containment Pressure - High	S	R	M(2)	1, 2, 3
c. Containment Pressure - High-High	S	R	M(2)	1, 2, 3
d. RCS Pressure - Low	S	R	M	1, 2, 3
e. RCS Pressure - Low-Low	S	R	M	1, 2, 3
f. BWST Level - Low - LOW	S	R	M	1, 2, 3
2. OUTPUT LOGIC				
a. Incident Level #1: Containment Isolation	S	R	M	ALL MODES
b. Incident Level #2: High Pressure Injection and Starting Diesel Generators	S	R	M	1, 2, 3, 4
c. Incident Level #3: Low Pressure Injection	S	R	M	1, 2, 3, 4
d. Incident Level #4: Containment Spray	S	R	M	1, 2, 3, 4
e. Incident Level #5: Containment Sump Recirculation PERMISSIVE	S	R	M	1, 2, 3, 4
3. MANUAL ACTUATION				
a. SFAS (Intercept Containment Spray and Emergency Sump Recirculation)	NA	NA	M(1)	ALL MODES
b. Containment Spray	NA	NA	M(1)	1, 2, 3
4. SEQUENCE LOGIC CHANNELS	S	NA	M	1, 2, 3, 4