

SURVEILLANCE REQUIREMENTS (Continued)

- d. At least once per 18 months by:
  - 1. Verifying the automatic interlock action to prevent opening of the suction of the RHR system from the Reactor Coolant System when the Reactor Coolant System pressure is above 600 psig.
  - 2. A visual inspection of the containment sump and verifying 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 abnormal corrosion
  
- e. At least once per 18 months by:
  - 1. Verifying that each automatic valve in the flow path actuates to its correct position on a Safety Injection test signal.
  - 2. Verifying that each of the following pumps start automatically upon receipt of a Safety Injection signal:
    - a) Centrifugal charging pump
    - b) Safety injection pump
    - c) Residual heat removal pump
  
- f. By verifying that each of the following pumps' developed head at the test flow point is greater than or equal to the required developed head when tested pursuant to specification 4.0 5.
  - 1. Centrifugal charging pumps
  - 2. Safety injection pumps
  - 3. Residual heat removal pumps
  
- g. By verifying the correct position of each mechanical stop for the following Emergency Core Cooling System throttle valves:
  - 1. Within 4 hours following completion of each valve stroking operation or maintenance on the valve when the ECCS subsystems are required to be OPERABLE.

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

CONTAINMENT SPRAY SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.2.1 Two independent containment spray systems shall be OPERABLE with each spray system capable of taking suction from the RWST and transferring suction to the containment sump.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With one containment spray system inoperable, restore the inoperable spray system to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours; restore the inoperable spray system to OPERABLE status within the next 48 hours or be in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.2.1 Each containment spray system shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying that each valve (manual, power operated or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position.
- b. By verifying that each containment spray pump's developed head at the test flow point is greater than or equal to the required developed head when tested pursuant to Specification 4.0.5.
- c. At least once per 18 months by:
  1. Verifying that each automatic valve in the flow path actuates to its correct position on a Containment Pressure -- High-High test signal.
  2. Verifying that each spray pump starts automatically on a Containment Pressure -- High-High test signal.
- d. At least once per 10 years by performing an air or smoke flow test through each spray header and verifying each spray nozzle is unobstructed.

SURVEILLANCE REQUIREMENTS (Continued)

- c. At least once per 18 months by verifying that each automatic valve in the flow path actuates to its correct position on a Containment Pressure -- High-High signal.
- d. At least once per 5 years by verifying the flow rate from the spray additive tank test line to each containment spray system with the spray pump operating on recirculation.

SURVEILLANCE REQUIREMENTS (Continued)

- 4.6.3.1.2 Each containment isolation valve shall be demonstrated OPERABLE at least once per 18 months by:
- a. Verifying that on a Phase A containment isolation test signal, each Phase A isolation valve actuates to its isolation position.
  - b. Verifying that on a Phase B containment isolation test signal, each Phase B isolation valve actuates to its isolation position.
  - c. Verifying that on a Containment Purge and Exhaust isolation signal, each Purge and Exhaust valve actuates to its isolation position.
- 4.6.3.1.3 The isolation time of each power operated or automatic containment isolation valve shall be determined to be within its limit when tested pursuant to Specification 4.0.5.

SURVEILLANCE REQUIREMENTS (Continued)

- 4.7.1.2 Each auxiliary feedwater pump shall be demonstrated OPERABLE when tested pursuant to Specification 4.0.5 by:
- a. Verifying that each motor driven auxiliary feedwater pump's developed head at the test flow point is greater than or equal to the required developed head.
  - b. Verifying that the turbine driven auxiliary feedwater pump's developed head at the test flow point is greater than or equal to the required developed head. The provisions of Specification 4.0.4 are not applicable for entry into MODE 3.
  - c. Verifying that each non-automatic valve in the flow path that is not locked, sealed, or otherwise secured in position is in its correct position.
  - d. Verifying that each automatic valve in the flow path is in the correct position whenever the auxiliary feedwater system is placed in automatic control or when above 10% RATED THERMAL POWER. This requirement is not applicable for those portions of the auxiliary feedwater system being used intermittently to maintain steam generator water level.
  - e. Verifying at least once per 18 months that each automatic valve in the flow path actuates to its correct position upon receipt of the appropriate engineered safety features actuation test signal required by Specification 3/4.3.2.
  - f. Verifying at least once per 18 months that each auxiliary feedwater pump starts as designed automatically upon receipt of the appropriate engineered safety features actuation test signal required by Specification 3/4.3.2.
  - g. Verifying at least once per 18 months that the unit cross-tie valves can cycle full travel. Following cycling, the valves will be verified to be in their closed positions.

3/4.7.3 COMPONENT COOLING WATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.3.1

- a. At least two independent component cooling water loops shall be OPERABLE.
- b. At least one component cooling water flowpath in support of Unit 2 shutdown functions shall be available.

APPLICABILITY: Specification 3.7.3 1.a - MODES 1, 2, 3 and 4.  
Specification 3.7.3.1.b - At all times when Unit 2 is in MODES 1, 2, 3, or 4.

ACTION:

When Specification 3.7.3.1.a is applicable:

With only one component cooling water loop OPERABLE, restore at least two loops to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

When Specification 3.7.3.1.b is applicable:

With no flowpath to Unit 2 available, return at least one flow path to available status within 7 days, or provide equivalent shutdown capability in Unit 2 and return at least one flow path to available status within the next 60 days, or have Unit 2 in HOT STANDBY within the next 12 hours and HOT SHUTDOWN within the following 24 hours. The requirements of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

- 4.7.3.1 At least two component cooling water loops shall be demonstrated OPERABLE:
- a. At least once per 31 days by verifying that each valve (manual, power operated or automatic) servicing safety related equipment that is not locked, sealed, or otherwise secured in position, is in its correct position.
  - b. At least once per 18 months by verifying that each automatic valve servicing safety related equipment actuates to its correct position on a Safety Injection test signal.
  - c. By verifying pump performance pursuant to Specification 4.0.5.
  - d. At least once per 18 months by verifying that the unit cross-tie valves can cycle full travel. Following cycling, the valves will be verified to be in their closed positions.

3/4.7.4 ESSENTIAL SERVICE WATER SYSTEM

LIMITING CONDITION FOR OPERATION

- 3.7.4.1 a. At least two independent essential service water loops shall be OPERABLE.
- b. At least one essential service water flowpath associated with support of Unit 2 shutdown functions shall be available.

APPLICABILITY: Specification 3.7.4.1.a – Either Unit in MODES 1, 2, 3, and 4.  
Specification 3.7.4.1.b - At all times when Unit 2 is in MODES 1, 2, 3 or 4.

ACTION:

- a. When Unit 1 is in MODES 1, 2, 3, and 4:

With only one essential service water loop OPERABLE, restore at least two loops to OPERABLE status within 72 hours, or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

- b. When Unit 2 is in MODES 1, 2, 3 and 4:

1. With any Unit 1 essential service water pump not OPERABLE, within one hour close at least one crosstie valve on the associated header or have Unit 2 enter ACTION a for Unit 2 Specification 3.7.4.1 for the Unit 2 essential service water pump sharing the same header with the inoperable Unit 1 essential service water pump.
2. With no essential service water flow path available in support of Unit 2 shutdown functions, return at least one flow path to available status within 7 days, or have Unit 2 in HOT STANDBY within the next 12 hours and HOT SHUTDOWN within the following 24 hours. The requirements of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.4.1 At least two essential service water loops shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying that each valve (manual, power operated or automatic) servicing safety related equipment that is not locked, sealed, or otherwise secured in position, is in its correct position.
- b. At least once per 18 months by verifying that each automatic valve servicing safety related equipment actuates to its correct position on a Safety Injection test signal.
- c. By verifying pump performance pursuant to Specification 4.0.5.
- d. At least once per 92 days by verifying that each closed crosstie valve, in the available essential service water flowpath associated with support of Unit 2 shutdown functions, can be cycled from the control room.

- d. At least once per 18 months by:
  - 1. Verifying the automatic interlock action to prevent opening of the suction of the RHR system from the Reactor Coolant System when the Reactor Coolant System pressure is above 600 psig.
  - 2. A visual inspection of the containment sump and verifying 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.
  
- e. At least once per 18 months by:
  - 1. Verifying that each automatic valve in the flow path actuates to its correct position on a Safety Injection test signal.
  - 2. Verifying that each of the following pumps start automatically upon receipt of a Safety Injection signal:
    - a) Centrifugal charging pump
    - b) Safety injection pump
    - c) Residual heat removal pump
  
- f. By verifying that each of the following pumps' developed head at the test flow point is greater than or equal to the required developed head when tested pursuant to Specification 4 0.5.
  - 1. Centrifugal charging pumps
  - 2. Safety Injection pumps
  - 3. Residual heat removal pumps
  
- g. By verifying the correct position of each mechanical stop for the following Emergency Core Cooling System throttle valves:
  - 1. Within 4 hours following completion of each valve stroking operation or maintenance on the valve when the ECCS subsystems are required to be OPERABLE.

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

CONTAINMENT SPRAY SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.2.1 Two independent containment spray systems shall be OPERABLE with each spray system capable of taking suction from the RWST and transferring suction to the containment sump.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With one containment spray system inoperable, restore the inoperable spray system to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours; restore the inoperable spray system to OPERABLE status within the next 48 hours or be in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.2.1 Each containment spray system shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying that each valve (manual, power operated or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position.
- b. By verifying that each containment spray pump's developed head at the test flow point is greater than or equal to the required developed head when tested pursuant to Specification 4.0.5.
- c. At least once per 18 months by:
  1. Verifying that each automatic valve in the flow path actuates to its correct position on a Containment Pressure -- High-High test signal.
  2. Verifying that each spray pump starts automatically on a Containment Pressure -- High-High test signal.
- d. At least once per 10 years by performing an air or smoke flow test through each spray header and verifying each spray nozzle is unobstructed.

SURVEILLANCE REQUIREMENTS (Continued)

- c. At least once per 18 months by verifying that each automatic valve in the flow path actuates to its correct position on a Containment Pressure--High-High test signal.
- d. At least once per 5 years by verifying the flow rate from the spray additive tank test line to each containment spray system with the spray pump operating on recirculation.

SURVEILLANCE REQUIREMENTS (Continued)

- 4.6.3.1.2 Each containment isolation valve specified shall be demonstrated OPERABLE at least once per 18 months by:
- a. Verifying that on a Phase A containment isolation test signal, each Phase A isolation valve actuates to its isolation position.
  - b. Verifying that on a Phase B containment isolation test signal, each Phase B isolation valve actuates to its isolation position.
  - c. Verifying that on a Containment Purge and Exhaust isolation signal, each Purge and Exhaust valve actuates to its isolation position.
- 4.6.3.1.3.1 The isolation time of each power operated or automatic containment isolation valve shall be determined to be within its limit when tested pursuant to Specification 4.0.5.

SURVEILLANCE REQUIREMENTS

- 4.7.1.2 Each auxiliary feedwater pump shall be demonstrated OPERABLE when tested pursuant to Specification 4.0.5 by:
- a. Verifying that each motor driven auxiliary feed pump's developed head at the test flow point is greater than or equal to the required developed head.
  - b. Verifying that the turbine driven auxiliary feedwater pump's developed head at the test flow point is greater than or equal to the required developed head. The provisions of Specification 4.0.4 are not applicable for entry into MODE 3.
  - c. Verifying that each non-automatic valve in the flow path that is not locked, sealed, or otherwise secured in position is in its correct position.
  - d. Verifying that each automatic valve in the flow path is in the correct position whenever the auxiliary feedwater system is placed in automatic control or when above 10% RATED THERMAL POWER. This requirement is not applicable for those portions of the auxiliary feedwater system being used intermittently to maintain steam generator level.
  - e. Verifying at least once per 18 months that each automatic valve in the flow path actuates to its correct position upon receipt of the appropriate engineered safety features actuation test signal required by Specification 3/4 3.2.
  - f. Verifying at least once per 18 months that each auxiliary feedwater pump starts as designed automatically upon receipt of the appropriate engineered safety features actuation test signal required by Specification 3/4.3.2.
  - g. Verifying at least once per 18 months that the unit cross-tie valves can cycle full travel. Following cycling, the valves will be verified to be in their closed positions.

3/4.7.3 COMPONENT COOLING WATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.3.1

- a. At least two independent component cooling water loops shall be OPERABLE.
- b. At least one component cooling water flow path in support of Unit 1 shutdown functions shall be available.

APPLICABILITY: Specification 3.7.3.1.a - MODES 1, 2, 3, 4.  
Specification 3.7.3.1.b - At all times when Unit 1 is in MODES 1, 2, 3, or 4.

ACTION:

When Specification 3.7.3.1.a is applicable:

With only one component cooling water loop OPERABLE, restore at least two loops to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

When Specification 3.7.3.1.b is applicable:

With no flowpath to Unit 1 available, return at least one flowpath to available status within 7 days, or provide equivalent shutdown capability in Unit 1 and return at least one flow path to available status within the next 60 days, or have Unit 1 in HOT STANDBY within the next 12 hours and HOT SHUTDOWN within the following 24 hours. The requirements of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

- 4.7.3.1 At least two component cooling water loops shall be demonstrated OPERABLE:
- a. At least once per 31 days by verifying that each valve (manual, power operated or automatic) servicing safety related equipment that is not locked, sealed, or otherwise secured in position, is in its correct position.
  - b. At least once per 18 months by verifying that each automatic valve servicing safety related equipment actuates to its correct position on a Safety Injection test signal.
  - c. By verifying pump performance pursuant to Specification 4.0.5.
  - d. At least once per 18 months, verify that the unit cross-tie valves can cycle full travel. Following cycling, the valves will be verified to be in their closed positions.

3/4.7.4 ESSENTIAL SERVICE WATER SYSTEM

LIMITING CONDITION FOR OPERATION

- 3.7.4.1 a At least two independent essential service water loops shall be OPERABLE.
- b. At least one essential service water flowpath associated with support of Unit 1 shutdown functions shall be available.

APPLICABILITY: Specification 3.7.4.1 a - Either Unit in MODES 1, 2, 3, and 4.  
Specification 3.7.4.1.b - At all times when Unit 1 is in MODES 1, 2, 3, or 4.

ACTION:

- a When Unit 2 is in MODES 1, 2, 3, and 4:

With only one essential service water loop OPERABLE, restore at least two loops to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

- b. When Unit 1 is in MODES 1, 2, 3 and 4:

1. With any Unit 2 essential service water pump not OPERABLE, within one hour close at least one crosstie valve on the associated header or have Unit 1 enter ACTION a for Unit 1 Specification 3.7.4.1 for the Unit 1 essential service water pump sharing the same header with the inoperable Unit 2 essential service water pump.
2. With no essential service water flow path available in support of Unit 1 shutdown functions, return at least one flow path to available status within 7 days, or have Unit 1 in HOT STANDBY within the next 12 hours and HOT SHUTDOWN within the following 24 hours. The requirements of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.4.1 At least two essential service water loops shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying that each valve (manual, power operated or automatic) servicing safety related equipment that is not locked, sealed, or otherwise secured in position, is in its correct position.
- b. At least once per 18 months by verifying that each automatic valve servicing safety related equipment actuates to its correct position on a Safety Injection test signal.
- c. By verifying pump performance pursuant to Specification 4.0.5.
- d. At least once per 92 days by verifying that each closed crosstie valve, in the available essential service water flowpath associated with support of Unit 1 shutdown functions, can be cycled from the control room.