## BORATED WATER SOURCE - SHUTDOWN

### LIMITING CONDITION FOR OPERATION

3.1.2.7 As a minimum, one of the following borated water sources shall be OPERABLE:

a. One boric acid makeup tank and at least one associated heat tracing circuit with the tank contents in accordance with Figure 3.1-1.

b. The refueling water storage tanks with:

1. A minimum borated water volume of 5465 gallons above the ECCS suction connection,

2. A minimum boron concentration of 1720 ppm, and

3. A solution temperature between 40°F and 120°F.

APPLICABILITY: MODES 5 and 6.

ACTION:

With no borated water sources OPERABLE, suspend all operations involving CORE ALTERATIONS or positive reactivity changes.

### SURVEILLANCE REQUIREMENTS

4.1.2.7 The above required borated water source shall be demonstrated OPERABLE:

a. At least once per 7 days by:

1. Verifying the boron concentration of the water,

2. Verifying the contained borated water volume of the tank, and

3. Verifying the boric acid makeup tank solution temperature when it is the source of borated water.

b. At least once per 24 hours by verifying the RWST temperature when it is the source of borated water when the outside air temperature is less than 40°F.

## BORATED WATER SOURCES - OPERATING

### LIMITING CONDITION FOR OPERATION

3.1.2.8 Each of the following borated water sources shall be OPERABLE:

a. At least one boric acid makeup tank and at least one associated heat tracing circuit with the contents of the tanks in accordance with Figure 3.1-1, and

b. The refueling water storage tank with:

1. A minimum contained borated water volume of 362,800 gallons above the ECCS suction connection,

2. Between 1720 and 2300 ppm of boron, and

3. A solution temperature between 40°F and 120°F.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

a. With the above required boric acid makeup tank inoperable, restore the tank to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and borated to a SHUTDOWN MARGIN equivalent to at least 2% delta k/k at 200°F; restore the above required boric acid makeup tank to OPERABLE status within the next 7 days or be in COLD SHUTDOWN within the next 30 hours.

b. With the refueling water tank inoperable, restore the tank to OPERABLE status within one hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

### SURVEILLANCE REQUIREMENTS

4.1.2.8 Each borated water sources shall be demonstrated OPERABLE:

a. At least once per 7 days by:

1. Verifying the boron concentration in the water,

2. Verifying the contained borated water volume of the water source, and

3. Verifying the boric acid makeup tank solution temperature.

b. At least once per 24 hours by verifying the RWST temperature when the outside air temperature is less than 40°F.

## PART LENGTH CEA INSERTION LIMITS

### LIMITING CONDITION FOR OPERATION

3.1.3.7 The position of the part length CEA group shall be restricted to prevent the neutron absorber section of the part length CEA group from covering the same axial segment of the fuel assemblies for a period in excess of 7 EFPD out of any 30 EFPD period.

APPLICABILITY: MODES 1 and 2.

ACTION:

With the neutron absorber section of the part length CEA group covering any same axial segment of the fuel assemblies for a period exceeding 7 EFPD out of any 30 EFPD period, either:

a. Reposition the part length CEA group to ensure no neutron absorber section of the part length CEA group is covering the same axial segment of the fuel assemblies within 2 hours, or

b. Be in at least HOT STANDBY within the next 6 hours.

### SURVEILLANCE REQUIREMENTS

4.1.3.7 The position of the part length CEA group shall be determined at least once per 12 hours.

TABLE 3.3-1 (Continued)

TABLE NOTATION

@To be OPERABLE prior to first exceeding 5% RATED THERMAL POWER.

*With the protective system trip breakers in the closed position, the CEA drive system capable of CEA withdrawal, and fuel in the reactor vessel.

#The provisions of Specification 3.0.4 are not applicable.

(a) Trip may be manually bypassed above $10^{-4}$% of RATED THERMAL POWER; bypass shall be automatically removed when THERMAL POWER is less than or equal to $10^{-4}$% of RATED THERMAL POWER.

(b) Trip may be manually bypassed below 400 psia; bypass shall be automatically removed whenever pressurizer pressure is greater than or equal to 400 psia.

(c) Trip may be manually bypassed below $10^{-4}$% of RATED THERMAL POWER; bypass shall be automatically removed when THERMAL POWER is greater than or equal to $10^{-4}$% of RATED THERMAL POWER. During testing pursuant to Special Test Exception 3.10.3, trip may be manually bypassed below 5% of RATED THERMAL POWER; bypass shall be automatically removed when THERMAL POWER is greater than or equal to 1% of RATED THERMAL POWER.

(d) Trip may be bypassed during testing pursuant to Special Test Exception 3.10.3.

(e) See Special Test Exception 3.10.2.

(f) Each channel shall be comprised of two trip breakers; actual trip logic shall be one-out-of-two taken twice.

(g) Trip may be bypassed below 55% RATED THERMAL POWER.

ACTION STATEMENTS

ACTION 1 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and/or open the protective system trip breakers.

ACTION 2 - With the number of channels OPERABLE one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may continue provided the inoperable channel is placed in the bypassed or tripped condition within 1 hour. If the inoperable channel is bypassed, the desirability of maintaining this channel in the bypassed condition shall be reviewed in accordance with Specification 6.5.1.6k. The channel shall be returned to OPERABLE status no later than during the next COLD SHUTDOWN.

TABLE 3.3-3

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

| FUNCTIONAL UNIT | TOTAL NO. OF CHANNELS | CHANNELS TO TRIP | MINIMUM CHANNELS OPERABLE | APPLICABLE MODES | ACTION |
|---|---|---|---|---|---|
| 1. SAFETY INJECTION (SIAS) | | | | | |
| a. Manual (Trip Buttons) | 2 sets of 2 | 1 set of 2 | 2 sest of 2 | 1, 2, 3, 4 | 8 |
| b. Containment Pressure - High | 4 | 2 | 3 | 1, 2, 3 | 9*, 10* |
| c. Pressurizer Pressure - Low | 4 | 2 | 3 | 1, 2, 3(a) | 9*, 10* |
| d. Automatic Actuation - Logic | 4 | 2 | 3 | 1, 2, 3, 4 | 9*, 10* |
| 2. CONTAINMENT SPRAY (CSAS) | | | | | |
| a. Manual (Trip Buttons) | 2 sets of 2 | 1 set of 2 | 2 sets of 2 | 1, 2, 3, 4 | 8 |
| b. Containment Pressure -- High - High | 4 | 2(b) | 3 | 1, 2, 3 | 9*, 10* |
| c. Automatic Actuation Logic | 4 | 2 | 3 | 1, 2, 3, 4 | 9*, 10* |
| 3. CONTAINMENT ISOLATION (CIAS) | | | | | |
| a. Manual CIAS (Trip Buttons) | 2 sets of 2 | 1 set of 2 | 2 sets of 2 | 1, 2, 3, 4 | 8 |
| b. Manual SIAS (Trip Buttons) (c) | 2 sets of 2 | 1 set of 2 | 2 sets of 2 | 1, 2, 3, 4 | 8 |
| c. Containment Pressure - High | 4 | 2 | 3 | 1, 2, 3 | 9*, 10* |
| d. Automatic Actuation Logic | 4 | 2 | 3 | 1, 2, 3, 4 | 9*, 10* |

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

| FUNCTIONAL UNIT | TOTAL NO. OF CHANNELS | CHANNELS TO TRIP | MINIMUM CHANNELS OPERABLE | APPLICABLE MODES | ACTION |
|---|---|---|---|---|---|
| 4. MAIN STEAM LINE ISOLATION | | | | | |
| a. Manual (Trip Buttons) | 2/steam generator | 1/steam generator | 2/operating steam generator | 1, 2, 3 | 11 |
| b. Steam Generator Pressure - Low | 4/steam generator | 2/steam generator | 3/steam generator | 1, 2, 3 | 9*, 10* |
| c. Automatic Actuation Logic | 4/steam generator | 2/steam generator | 3/steam generator | 1, 2, 3 | 9*, 10* |
| 5. RECIRCULATION (RAS) | | | | | |
| a. Refueling Water Storage Tank - Low | 4 | 2 | 3 | 1, 2, 3 | 9*, 10* |
| b. Automatic Actuation Logic | 4 | 2 | 3 | 1, 2, 3 | 9*, 10* |
| 6. CONTAINMENT COOLING (CCAS) | | | | | |
| a. Manual CCAS (Trip Buttons) | 2 sets of 2 | 1 set of 2 | 2 sets of 2 | 1, 2, 3, 4 | 8 |
| b. Manual SIAS (Trip Buttons) | 2 sets of 2 | 1 set of 2 | 2 sets of 2 | 1, 2, 3 | 8 |
| c. Automatic Actuation Logic | 4 | 2 | 3 | 1, 2, 3, 4 | 9*, 10* |

TABLE 3.3-3 (Continued)

TABLE NOTATION

(a) Trip function may be bypassed in this MODE when pressurizer pressure is less than 400 psia; bypass shall be automatically removed when pressurizer pressure is greater than or equal to 500 psia.

(b) An SIAS signal is first necessary to enable CSAS logic.

(c) Actuated equipment only; does not result in CIAS.

# The provisions of Specification 3.0.3 are not applicable.

* The provisions of Specification 3.0.4 are not applicable.

** With irradiated fuel in the storage pool.

ACTION STATEMENTS

ACTION 8 - With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

ACTION 9 - With the number of channels OPERABLE one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may continue provided the inoperable channel is placed in the bypassed or tripped condition within 1 hour. If the inoperable channel is bypassed, the desirability of maintaining this channel in the bypassed condition shall be reviewed in accordance with Specification 6.5.1.6k. The channel shall be returned to OPERABLE status no later than during the next COLD SHUTDOWN.

With a channel process measurement circuit that affects multiple functional units inoperable or in test, bypass or trip all associated functional units as listed below.

| | Process Measurement Circuit | Functional Unit Bypassed |
|---|---|---|
| 1. | Containment Pressure - High | Containment Pressure - High (ESF)<br>Containment Pressure - High (RPS) |
| 2. | Steam Generator Pressure - Low | Steam Generator Pressure - Low<br>Steam Generator ΔP 1 and 2 (EFAS) |
| 3. | Steam Generator Level | Steam Generator Level - Low<br>Steam Generator Level - High<br>Steam Generator ΔP (EFAS) |

TABLE 3.3-4

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION TRIP VALUES

| FUNCTIONAL UNIT | TRIP VALUE | ALLOWABLE VALUES |
|---|---|---|
| 1. SAFETY INJECTION (SIAS) | | |
| a. Manual (Trip Buttons) | Not Applicable | Not Applicable |
| b. Containment Pressure - High | $\leq$ 2.95 psig | $\leq$ 3.14 psig |
| c. Pressurizer Pressure - Low | $\geq$ 1806 psia (1) | $\geq$ 1763 psia (1) |
| d. Automatic Actuation Logic | Not Applicable | Not Applicable |
| 2. CONTAINMENT SPRAY (CSAS) | | |
| a. Manual (Trip Buttons) | Not Applicable | Not Applicable |
| b. Containment Pressure -- High-High | $\leq$ 16.14 psig | $\leq$ 16.83 psig |
| c. Automatic Actuation Logic | Not Applicable | Not Applicable |
| 3. CONTAINMENT ISOLATION (CIAS) | | |
| a. Manual CIAS (Trip Buttons) | Not Applicable | Not Applicable |
| b. Manual SIAS (Trip Buttons)(5) | Not Applicable | Not Applicable |
| c. Containment Pressure - High | $\leq$ 2.95 psig | $\leq$ 3.14 psig |
| d. Automatic Actuation Logic | Not Applicable | Not Applicable |
| 4. MAIN STEAM ISOLATION (MSIS) | | |
| a. Manual (Trip Buttons) | Not Applicable | Not Applicable |
| b. Steam Generator Pressure - Low | $\geq$ 729 psia (2) | $\geq$ 711 psia (2) |
| c. Automatic Actuation Logic | Not Applicable | Not Applicable |
| 5. RECIRCULATION (RAS) | | |
| a. Manual RAS (Trip Buttons) | Not Applicable | Not Applicable |
| b. Refueling Water Storage Tank | 18.5% of tap span | 19.27% $\geq$ tap span $\geq$ 17.73% |
| c. Automatic Actuation Logic | Not Applicable | Not Applicable |

Table 3.3-5 (Continued)

| INITIATING SIGNAL AND FUNCTION | RESPONSE TIME (SEC) |
|---|---|
| 5. Steam Generator Pressure - Low | |
| a. MSIS | |
| (1) Main Steam Isolation (MSIV) | 20.9 |
| (2) Main Feedwater Isolation | 10.9 |
| 6. Refueling Water Storage Tank - Low | |
| a. RAS | |
| (1) Containment Sump Valves Open | 50.7* |
| (2) ECCS Miniflow Valves Shut | 40.7* |
| 7. 4.16 kv Emergency Bus Undervoltage | |
| a. LOV (loss of voltage and degraded voltage) | Figure 3.3-1 |
| 8. Steam Generator Level - Low (and No Pressure-Low Trip) | |
| a. EFAS | |
| (1) Auxiliary Feedwater (AC trains) | 40.9* |
| (2) Auxiliary Feedwater (steam/DC train) | 30.9 |
| 9. Steam Generator Level - Low (and $\Delta P$ - High) | |
| a. EFAS | |
| (1) Auxiliary Feedwater (AC trains) | 40.9* |
| (2) Auxiliary Feedwater (Steam/DC train) | 30.9 |
| 10. Control Room Ventilation Airborne Radiation | |
| a. CRIS | |
| (1) Control Room Ventilation - Emergency Mode | Not Applicable |
| 11. Control Room Toxic Gas (Chlorine) | |
| a. TGIS | |
| (1) Control Room Ventilation - Isolation Mode | 16 (NOTE 5) |
| 12. Control Room Toxic Gas (Ammonia) | |
| a. TGIS | |
| (1) Control Room Ventilation - Isolation Mode | 36 (NOTE 5) |

Table 3.3-5 (Continued)

| INITIATING SIGNAL AND FUNCTION | RESPONSE TIME (SEC) |
|---|---|
| 13. Control Room Toxic Gas (Butane/Propane) | |
| a. TGIS | |
| (1) Control Room Ventilation - Isolation Mode | 36 (NOTE 5) |
| 14. Control Room Toxic Gas (Carbon Dioxide) | |
| a. TGIS | |
| (1) Control Room Ventilation - Isolation Mode | 36 (NOTE 5) |
| 15. Fuel Handling Building Airborne Radiation | |
| a. FHIS | |
| (1) Fuel Handling Building Post-Accident Cleanup Filter System | Not Applicable |
| 16. Containment Airborne Radiation | |
| a. CPIS | |
| (1) Containment Purge Isolation | 2 (NOTE 2) |
| 17. Containment Area Radiation | |
| a. CPIS | |
| (1) Containment Purge Isolation | 2 (NOTE 2) |

NOTES:

1. Response times include movement of valves and attainment of pump or blower discharge pressure as applicable.

* Emergency diesel generator starting delay (10 sec.) and sequence loading delays for SIAS are included.

2. Response time includes emergency diesel generator starting delay (applicable to AC motor operated valves other than containment purge valves), instrumentation and logic response only. Refer to table 3.6-1 for containment isolation valve closure times.

3. All CIAS-Actuated valves except MSIVs and MFIVs.

4. CCW non-critical loop isolation valves 2HV-6212, 2HV-6213, 2HV-6218 and 2HV-6219.

5. Response time includes instrumentation, logic, and isolation damper closure times only.

TABLE 3.3-10

ACCIDENT MONITORING INSTRUMENTATION (CONTINUED)

| INSTRUMENT | | REQUIRED NUMBER OF CHANNELS | MINIMUM CHANNELS OPERABLE |
|---|---|---|---|
| 19. | Containment Area Radiation - High Range | 2 | 1 |
| 20. | Main Steam Line Area Radiation | 1/steam line | N.A. |
| 21. | Condenser Evacuation System Radiation Monitor - Wide Range | 1 | N.A. |
| 22. | Purge/Vent Stack Radiation Monitor - Wide Range* | 2 | 1 |
| 23. | Cold Leg HPSI Flow | 2/cold leg | 1/cold leg |
| 24. | Hot Leg HPSI Flow | 1/hot leg | N.A. |

NOTES:

*The two required channels are the Unit 2 monitor and the Unit 3 monitor.

REACTOR COOLANT SYSTEM

HOT SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.4.1.3 a. At least two of the loop(s)/train(s) listed below shall be OPERABLE:

1. Reactor Coolant Loop 1 and its associated steam generator and at least one associated Reactor Coolant pump,**

2. Reactor Coolant Loop 2 and its associated steam generator and at least one associated Reactor Coolant pump,**

3. Shutdown Cooling Train A,

4. Shutdown Cooling Train B.

b. At least one of the above Reactor Coolant loops and/or shutdown cooling trains shall be in operation.*

APPLICABILITY: MODE 4#

ACTION:

a. With less than the above required Reactor Coolant loops and/or shutdown cooling trains OPERABLE, immediately initiate corrective action to return the required loops/trains to OPERABLE status as soon as possible; if the remaining OPERABLE loop is a shutdown cooling train, be in COLD SHUTDOWN within 24 hours.

b. With no Reactor Coolant loop or shutdown cooling train in operation, suspend all operations involving a reduction in boron concentration of the Reactor Coolant System and immediately initiate corrective action to return the required coolant loop/ train to operation.

---

# With the Reactor Coolant System cold leg temperature less than or equal to 235°F, the SDCS isolation valves HV-9337, HV-9339, HV-9377, and HV-9378 shall be open with the SDCS relief valve PSV-9349 OPERABLE.

* All Reactor Coolant pumps and shutdown cooling pumps may be de-energized for up to 1 hour provided (1) no operations are permitted that would cause dilution of the Reactor Coolant System boron concentration, and (2) core outlet temperature is maintained at least 10°F below saturation temperature.

** A Reactor Coolant pump shall not be started with one or more of the Reactor Coolant System cold leg temperatures less than or equal to 235°F unless 1) the pressurizer water volume is less than 900 cubic feet or 2) the secondary water temperature of each steam generator is less than 100°F above each of the Reactor Coolant System cold leg temperatures.

REACTOR COOLANT SYSTEM

COLD SHUTDOWN - LOOPS FILLED

LIMITING CONDITION FOR OPERATION

3.4.1.4.1 At least one shutdown cooling train shall be OPERABLE with all suction line valves open and in operation,* and either:

a. One additional shutdown cooling train shall be OPERABLE,# or

b. The secondary side water level of each steam generator shall be greater than 10% (wide range).

APPLICABILITY: MODE 5#, with Reactor Coolant loops filled.

ACTION:

a. With less than the above required shutdown trains/loops OPERABLE or with less than the required steam generator level, immediately initiate corrective action to return the required trains/loops to OPERABLE status or restore the required level as soon as possible.

b. With no shutdown cooling train in operation, suspend all operations involving a reduction in boron concentration of the Reactor Coolant System and immediately initiate corrective action to return the required shutdown cooling train to operation.

SURVEILLANCE REQUIREMENTS

4.4.1.4.1.1 The secondary side water level of at least two steam generators, when required, shall be determined to be within limits at least once per 12 hours.

4.4.1.4.1.2 The shutdown cooling train shall be determined to be in operation and circulating reactor coolant at least once per 12 hours.

---

#One shutdown cooling train may be inoperable for up to 2 hours for surveillance testing provided the other shutdown cooling train is OPERABLE and in operation.

*The shutdown cooling pump may be de-energized for up to 1 hour provided 1) no operations are permitted that would cause dilution of the Reactor Coolant System boron concentration, and 2) core outlet temperature is maintained at least 10°F below saturation temperature.

## 3/4.4.3 PRESSURIZER

### LIMITING CONDITION FOR OPERATION

3.4.3 The pressurizer shall be OPERABLE with a water volume of less than or equal to 900 cubic feet and at least two groups of pressurizer heaters each having a capacity of at least 150 kw.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

a. With one group of pressurizer heaters inoperable, restore at least two groups to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

b. With the pressurizer otherwise inoperable, be in at least HOT STANDBY with the reactor trip breakers open within 6 hours and in HOT SHUTDOWN within the following 6 hours.

### SURVEILLANCE REQUIREMENTS

4.4.3.1 The pressurizer water volume shall be determined to be within its limit at least once per 12 hours.

4.4.3.2 The pressurizer heaters shall be demonstrated OPERABLE at least once per 18 months by manually energizing the heaters.

4.4.3.3 The capacity of each of the above required groups of pressurizer heaters shall be verified by energizing the heaters and measuring circuit current at least once per 92 days.

REACTOR COOLANT SYSTEM

OVERPRESSURE PROTECTION SYSTEMS

RCS TEMPERATURE $\leq$ 235°F

LIMITING CONDITION FOR OPERATION

3.4.8.3 1 At least one of the following overpressure protection systems shall be OPERABLE:

a. The Shutdown Cooling System (SDCS) Relief Valve (PSV9349) with a lift setting of less than or equal to 402 psig, or,

b. The Reactor Coolant System depressurized with an RCS vent of greater than or equal to 5.6 square inches.

APPLICABILITY: MODE 4 when the temperature of one any RCS cold leg is less than or equal to 235°F; Mode 5; Mode 6 with the reactor vessel head on.

ACTION:

a. With the SDCS Relief Valve inoperable, reduce $T_{avg}$ to less than 200°F, depressurize and vent the RCS through a greater than or equal to 5.6 square inch vent within the next 8 hours.

b. With one or both SDCS Relief Valve isolation valves in a single SDCS Relief Valve isolation valve pair (valve pair 2HV9337 and 2HV9339 or valve pair 2HV9377 and 2HV9378) closed, open the closed valve(s) within 7 days or reduce $T_{avg}$ to less than 200°F, depressurize and vent the RCS through a greater than or equal to 5.6 inch vent within the next 8 hours.

c. In the event either the SDCS Relief Valve or an RCS vent is used to mitigate a RCS pressure transient, a Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.9.2 within 30 days. The report shall describe the circumstances initiating the transient, the effect of the SDCS Relief Valve or RCS vent on the transient and any corrective action necessary to prevent recurrence.

d. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.4.8.3.1.1 The SDCS Relief Valve shall be demonstrated OPERABLE by:

a. Verifying at least once per 72 hours when the SDCS Relief Valve is being used for overpressure protection that at least one pair of SDCS Relief Valve isolation valves (valve pair 2HV9337 and 2HV9339 or valve pair 2HV9377 and 2HV9378) is open.

PLANT SYSTEMS

MAIN STEAM LINE ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.5 Each main steam line isolation valve shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

MODE 1 - With one main steam line isolation valve inoperable but open, POWER OPERATION may continue provided the inoperable valve is restored to OPERABLE status within 4 hours; otherwise, reduce power to less than or equal to 5 percent RATED THERMAL POWER within the next 2 hours.

MODES 2 and 3 - With one main steam line isolation valve inoperable, subsequent operation in MODES 2 or 3 may proceed provided:

a. The isolation valve is maintained closed.

b. The provisions of Specification 3.0.4 are not applicable.

Otherwise, be in at least HOT STANDBY with the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.5 Each main steam line isolation valve shall be demonstrated OPERABLE by verifying full closure within 5.0 seconds when tested pursuant to Specification 4.0.5.

TABLE 3.10-1

RADIATION MONITORING/SAMPLING EXCEPTIONS

1. Testing performed pursuant to FSAR Section 11.5.2.1.5.2 in startup program shall satisfy the initial CHANNEL CALIBRATION for the following monitors prior to first exceeding 5% RATED THERMAL POWER:

| | | |
|---|---|---|
| a. | Control Room Airborne Monitors | 2RT-7824<br>2RT-7825 |
| b. | Containment Airborne Monitors | 2RT-7804-1<br>2RT-7807-2 |
| c. | Containment Purge Area Monitors | 2RT-7856-1<br>2RT-7857-2 |
| d. | Containment Area Radiation - High Range Monitors | 2RT-7820-1<br>2RT-7820-2 |
| e. | Plant Vent Stack Airborne Monitor | 2/3RT-7808 |
| f. | Radwaste Discharge Line Monitor | 2/3RT-7813 |
| g. | Blowdown Neutralization Sump Monitor | 2RT-7817 |
| h. | Turbine Building Sump Monitor | 2RT-7821 |

2. The following monitors and samplers shall be OPERABLE prior to first exceeding 5% RATED THERMAL POWER:

| | | |
|---|---|---|
| a. | Main Steam Line Area Monitors | 2RT-7874A1<br>2RT-7847B1<br>2RT-7875A1<br>2RT-7875B1 |
| b. | Condenser Evacuation System - Wide Range Monitor | 2RT-7870-1 |
| c. | Purge/Vent Stack Monitors - Wide Range | 2RT-7865-1<br>3RT-7865-1 |
| d. | Plant Vent Stack | Flow Rate Monitor |
| e. | Containment Purge | Flow Rate Monitor |
| f. | Condenser Evacuation System | Iodine Sampler<br>Particulate Sampler<br>Flow Rate Monitor |

3. The Steam Jet Air Ejector Monitor (2RT-7818) shall be OPERABLE prior to initial criticality.

SPECIAL TEST EXCEPTIONS

MINIMUM TEMPERATURE FOR CRITICALITY

LIMITING CONDITION FOR OPERATION

3.10.6 The minimum temperature for criticality limits to Specification 3.1.1.4 and the MODE 2 definition of Table 1.1 may be suspended during low temperature PHYSICS TESTS to a minimum temperature of 320°F provided:

a. The THERMAL POWER does not exceed 5% of RATED THERMAL POWER.

b. The reactor trip setpoints on the OPERABLE Linear Power Level - High neutron flux monitoring channels are set at $\leq$ 20% of RATED THERMAL POWER, and

c. The Reactor Coolant System temperature and pressure relationship and the minimum temperaure for criticaliaty is maintained within the acceptable region of operation shown on Figure 3.4-2.

APPLICABILITY: MODE 2.*

ACTION:

a. With the THERMAL POWER > 5 percent of RATED THERMAL POWER, immediately trip the reactor.

b. With the Reactor Coolant System temperature and pressure relationship and/or the minimum temperature for criticality within the region of unacceptable operation on Figure 3.4-2, immediately trip the reactor and, if necessary, restore the temperature-pressure relationship to within its limit within 30 minutes; perform the engineering evaluation required by Specification 3.4.8.1 prior to the next reactor criticality.

SURVEILLANCE REQUIREMENTS

4.10.6.1 The Reactor Coolant System temperature and pressure relationship and the minimum temperature for criticality shall be verified to be within the acceptable region for operation of Figure 3.4-2 at least once per hour.

4.10.6.2 The THERMAL POWER shall be determined to be $\leq$ 5% of RATED THERMAL POWER at least once per hour.

4.10.6.3 The Reactor Coolant System temperature shall be verified to be greater than or equal to 320°F at least once per hour.

4.10.6.4 Each Logarithmic Power Level and Linear Power Level channel shall be subjected to a CHANNEL FUNCTIONAL TEST within 12 hours prior to initiating low temperature PHYSICS TESTS.

*First core only, prior to first exceeding 5% RATED THERMAL POWER.

FIRE SUPPRESSION SYSTEMS (Continued)

In the event the fire suppression water system becomes inoperable, immediate corrective measures must be taken since this system provides the major fire suppression capability of the plant. The requirement for a twenty-four hour report to the Commission provides for prompt evaluation of the acceptability of the corrective measures to provide adequate fire suppression capability for the continued protection of the nucle plant.

3/4.7.9 FIRE RATED ASSEMBLIES

The OPERABILITY of the fire barriers and barrier penetrations ensure that fire damage will be limited. These design features minimize the possibility of a single fire involving more than one fire area prior to detection and extinguishment. The fire barriers, fire barrier penetrations for conduits, cable trays and piping, fire windows, fire dampers, and fire doors are periodically inspected to verify their OPERABILITY.

A.C. SOURCES, D.C. SOURCES AND ONSITE POWER DISTRIBUTION SYSTEMS (Continued)

as well as operation of loss of voltage logic, is the same as for the primary connection using the reserve auxiliary transformer, with the exception of no transfer to the companion unit.

The Surveillance Requirements for demonstrating the OPERABILITY of the diesel generators are in accordance with the recommendations of Regulatory Guides 1.9 "Selection of Diesel Generator Set Capacity for Standby Power Supplies," March 10, 1971, and 1.108 "Periodic Testing of Diesel Generator Units Used as Onsite Electric Power Systems at Nuclear Power Plants," Revision 1, August 1977, and 1.137, "Fuel Oil Systems for Standby Diesel Generators," Revision 1, October 1979.

Additionally, Regulatory Guide 1.9 allows loading of the diesel generator to its 2000 hour rating in an accident situation. The full load, continuous operation rating for each diesel generator is 4700 kw, while the calculated accident loading is 4000 kw. No 2000 hour loading has been specified by the diesel generator manufacturer and, as a result the full loading rating of 4700 kw is conservatively established as the 2000 hour rating. Diesel frequency droop restrictions are established due to HPSI flow rate considerations.

The Surveillance Requirement for demonstrating the OPERABILITY of the Station batteries are based on the recommendations of Regulatory Guide 1.129, "Maintenance Testing and Replacement of Large Lead Storage Batteries for Nuclear Power Plants," February 1978, and IEEE Std 450-1980, "IEEE Recommended Practice for Maintenance, Testing, and Replacement of Large Lead Storage Batteries for Generating Stations and Substations."

Verifying average electrolyte temperature above the minimum for which the battery was sized, total battery terminal voltage onfloat charge, connection resistance values and the performance of battery service and discharge tests ensures the effectiveness of the charging system, the ability to handle high discharge rates and compares the battery capacity at that time with the rated capacity.

Table 4.8-2 specifies the normal limits for each designated pilot cell and each connected cell for electrolye level, float voltage and specific gravity. The limits for the designated pilot cells float voltage and specific gravity, greater than 2.13 volts and .015 below the manufacturer's full charge specific gravity or a battery charger current that had stabilized at a low value, is characteristic of a charged cell with adequate capacity. The normal limits for each connected cell for float voltage and specific gravity, greater than 2.13 volts and not more than .020 below the manufacturer's full charge specific gravity with an average specific gravity of all the connected cells not more than .010 below the manufacturer's full charge specific gravity, ensures the OPERABILITY and capability of the battery.

ATTACHMENT B

REACTIVITY CONTROL SYSTEMS

PART LENGTH CEA INSERTION LIMITS

LIMITING CONDITION FOR OPERATION

3.1.3.7 The position of the part length CEA group shall be:

a. withdrawn to $\geq$ 145" or;

b. restricted to prevent the neutron absorber section of the part length CEA group from covering the same axial segment ($\leq$ 145") of the fuel assemblies for a period in excess of 7 EFPD out of any 30 EFPD period.

APPLICABILITY: MODES 1 and 2

ACTION:

With the neutron absorber section of the part length CEA group covering any same axial segment of the fuel assemblies as specified in 3.1.3.7.b above, for a period exceeding 7 EFPD out of any 30 EFPD period, either:

a. Reposition the part length CEA group to ensure no neutron absorber section of the part length CEA group is covering the same axial segment of the fuel assemblies within 2 hours, or

b. Be in at least HOT STANDBY within the next 6 hours.

SURVEILLANCE REQUIREMENTS

4.1.3.7 The position of the part length CEA group shall be determined at least once per 12 hours.

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TABLE 3.3-10

ACCIDENT MONITORING INSTRUMENTATION (CONTINUED)

| INSTRUMENT | REQUIRED NUMBER OF CHANNELS | MINIMUM CHANNELS OPERABLE |
|---|---|---|
| 19. Containment Area Radiation - High Range | 2 | 1 |
| 20. Main Steam Line Area Radiation | 1/steam line | N.A. |
| 21. Condenser Evacuation System Radiation Monitor - Wide Range | 1 | N.A. |
| 22. Purge/Vent Stack Radiation Monitor - Wide Range* | 2 | 1 |
| 23. Cold Leg HPSI Flow | 1 | N.A. |
| 24. Hot Leg HPSI Flow | 1/hot leg | N.A. |

NOTES:

*The two required channels are the Unit 2 monitor and the Unit 3 monitor.