

## 3/4 LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

### 3/4.0 APPLICABILITY

#### LIMITING CONDITION FOR OPERATION

3.0.1 Compliance with the Limiting Conditions for Operation contained in the succeeding specifications is required during the OPERATIONAL MODES or other conditions specified therein; except that upon failure to meet the Limiting Conditions for Operation, the associated ACTION requirements shall be met, except as provided in Limiting Condition for Operation 3.0.6.

3.0.2 Noncompliance with a specification shall exist when the requirements of the Limiting Condition for Operation and associated ACTION requirements are not met within the specified time intervals. If the Limiting Condition for Operation is restored prior to expiration of the specified time intervals, completion of the ACTION requirements is not required.

3.0.3 When a Limiting Condition for Operation is not met except as provided in the associated ACTION requirements, within one hour action shall be initiated to place the unit in a MODE in which the specification does not apply by placing it, as applicable, in:

1. At least HOT STANDBY within the next 6 hours,
2. At least HOT SHUTDOWN within the following 6 hours, and
3. At least COLD SHUTDOWN within the subsequent 24 hours.

Where corrective measures are completed that permit operation under the ACTION requirements, the ACTION may be taken in accordance with the specified time limits as measured from the time of failure to meet the Limiting Condition for Operation. Exceptions to these requirements are stated in the individual specifications.

3.0.4 When a Limiting Condition for Operation is not met, entry into an OPERATIONAL MODE or other specified condition in the Applicability shall only be made:

- a. When the associated ACTIONS to be entered permit continued operation in the OPERATIONAL MODE or other specified condition in the Applicability for an unlimited period of time, or
- b. After performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering the OPERATIONAL MODE or other specified condition in the Applicability, and establishment of risk management actions, if appropriate; exceptions to this Specification are stated in the individual Specifications, or
- c. When an allowance is stated in the individual value, parameter, or other Specification.

### 3/4.0 APPLICABILITY

#### LIMITING CONDITION FOR OPERATION (continued)

This Specification shall not prevent changes in OPERATIONAL MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

3.0.5 When a system, subsystem, train, component or device is determined to be inoperable solely because its emergency power source is inoperable, or solely because its normal power source is inoperable, it may be considered OPERABLE for the purpose of satisfying the requirements of its applicable Limiting Condition for Operation, provided: (1) its corresponding normal or emergency power source is OPERABLE; and (2) all of its redundant system(s), subsystem(s), train(s), component(s) and device(s) are OPERABLE, or likewise satisfy the requirements of this specification. Unless both conditions (1) and (2) are satisfied within 2 hours, action shall be initiated to place the unit in a MODE in which the applicable Limiting Condition for Operation does not apply, by placing it, as applicable, in:

1. At least HOT STANDBY within the next 6 hours,
2. At least HOT SHUTDOWN within the following 6 hours, and
3. At least COLD SHUTDOWN within the subsequent 24 hours.

This specification is not applicable in MODES 5 or 6.

3.0.6 Equipment removed from service or declared inoperable to comply with ACTIONS may be returned to service under administrative control solely to perform testing required to demonstrate its OPERABILITY or the OPERABILITY of other equipment. This is an exception to Limiting Condition for Operation 3.0.1 for the system returned to service under administrative control to perform the testing required to demonstrate OPERABILITY.

#### SURVEILLANCE REQUIREMENTS

4.0.1 Surveillance Requirements shall be met during the OPERATIONAL MODES or other conditions specified for individual Limiting Conditions for Operation unless otherwise stated in an individual Surveillance Requirement. Failure to meet a Surveillance, whether such failure is experienced during the performance of the Surveillance or between performances of the Surveillance, shall be failure to meet the Limiting Condition for Operation. Failure to perform a Surveillance within the allowed surveillance interval, defined by Specification 4.0.2, shall be failure to meet the Limiting Condition for Operation except as provided in Specification 4.0.3. Surveillances do not have to be performed on inoperable equipment or variables outside specified limits.

4.0.2 Each Surveillance Requirement shall be performed within the specified time interval with a maximum allowable extension not to exceed 25% of the surveillance interval.

## 3/4.0 APPLICABILITY

### SURVEILLANCE REQUIREMENTS

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4.0.3 If it is discovered that a Surveillance was not performed within its allowed surveillance interval, defined by Specification 4.0.2, then compliance with the requirement to declare the Limiting Condition for Operation not met may be delayed, from the time of discovery, up to 24 hours or up to the limit of the specified surveillance interval, whichever is greater. This delay period is permitted to allow performance of the Surveillance. A risk evaluation shall be performed for any Surveillance delayed greater than 24 hours and the risk impact shall be managed.

If the Surveillance is not performed within the delay period, the Limiting Condition for Operation must immediately be declared not met, and the applicable ACTION(s) must be entered.

When the Surveillance is performed within the delay period and the Surveillance is not met, the Limiting Condition for Operation must immediately be declared not met, and the applicable ACTION(s) must be entered.

4.0.4 Entry into an OPERATIONAL MODE or other specified condition in the Applicability of a Limiting Condition for Operation shall only be made when the Limiting Condition for Operation's Surveillances have been met within their allowed surveillance interval, except as provided by Specification 4.0.3. When a Limiting Condition for Operation is not met due to Surveillances not having been met, entry into an OPERATIONAL MODE or other specified condition in the Applicability shall only be made in accordance with Specification 3.0.4. This provision shall not prevent entry into OPERATIONAL MODES or other specified conditions in the Applicability, that are required to comply with ACTION requirements or that are part of a shutdown of the unit.

4.0.5 Surveillance Requirements for inservice inspection and testing of ASME Code Class 1, 2 and 3 components shall be applicable as follows:

- a.1 Inservice inspection of ASME Code Class 1, 2 and 3 components shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50, Section 50.55a(g).
- a.2 Inservice testing of ASME Code Class 1, 2 and 3 pumps and valves shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50, Section 50.55a(f).

3/4.0 APPLICABILITY

SURVEILLANCE REQUIREMENTS

- b. Surveillance intervals specified in Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda for the inservice inspection and testing activities required by the ASME Boiler and Pressure Vessel Code and applicable Addenda shall be applicable as follows in these Technical Specifications:

<u>ASME Boiler and Pressure Vessel Code and applicable Addenda terminology for inservice inspection and testing activities</u>	<u>Required frequencies for performing inservice inspection and testing activities</u>
Weekly	At least once per 7 days
Monthly	At least once per 31 days
Quarterly or every 3 months	At least once per 92 days
Semiannually or every 6 months	At least once per 184 days
Every 9 months	At least once per 276 days
Yearly or annually	At least once per 366 days

- c. The provisions of Specification 4.0.2 are applicable to the above required frequencies for performing inservice inspection and testing activities.
- d. Performance of the above inservice inspection and testing activities shall be in addition to other specified Surveillance Requirements.
- e. Nothing in the ASME Boiler and Pressure Vessel Code shall be construed to supersede the requirements of any Technical Specification.

## INSTRUMENTATION

### ACCIDENT MONITORING INSTRUMENTATION

#### LIMITING CONDITION FOR OPERATION

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3.3.3.8 The accident monitoring instrumentation channels shown in Table 3.3-11 shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3.

#### ACTION:

- a. With the number of OPERABLE accident monitoring instrumentation channels less than the Total Number of Channels shown in Table 3.3-11, either restore the inoperable channel(s) to OPERABLE status within 7 days or be in at least HOT SHUTDOWN within the next 12 hours (follow Specification 3.4.11 when determining ACTIONS for Items 5 and 6).
- b. With the number of OPERABLE accident monitoring instrumentation channels less than the Minimum Channels OPERABLE requirements of Table 3.3-11, either restore the inoperable channel(s) to OPERABLE status within 48 hours or be in at least HOT SHUTDOWN within the next 12 hours.

#### SURVEILLANCE REQUIREMENTS

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4.3.3.8 Each accident monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK and CHANNEL CALIBRATION operations at the frequencies shown in Table 4.3-7.

## REACTOR COOLANT SYSTEM

### 3/4.4.6 REACTOR COOLANT SYSTEM LEAKAGE

#### LEAKAGE DETECTION INSTRUMENTATION

#### LIMITING CONDITION FOR OPERATION

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3.4.6.1 The following Reactor Coolant System leakage detection instrumentation shall be OPERABLE:

- a. One containment sump (narrow range level or discharge flow) monitor; and
- b. One containment atmosphere radioactivity monitor (gaseous or particulate).

APPLICABILITY: MODES 1, 2, 3 and 4.

#### ACTION:

- a. With the required containment sump monitor inoperable, operations may continue for up to 30 days provided that a Reactor Coolant System water inventory balance measurement (Specification 4.4.6.2.b) is performed at least once per 24 hours. Otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With the required containment atmosphere radioactivity monitor inoperable, operations may continue for up to 30 days provided:
  1. Grab samples of the containment atmosphere are obtained and analyzed at least once per 24 hours, or
  2. A Reactor Coolant System water inventory balance measurement (Specification 4.4.6.2.b) is performed at least once per 24 hours.

Otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

## REACTOR COOLANT SYSTEM

### SPECIFIC ACTIVITY

#### LIMITING CONDITION FOR OPERATION

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3.4.8 The specific activity of the primary coolant shall be limited to:

- a.  $\leq 0.10 \mu\text{Ci/gram DOSE EQUIVALENT I-131}$ , and
- b.  $\leq 100/\bar{E} \mu\text{Ci/gram}$ .

APPLICABILITY: MODES 1, 2, 3, 4 and 5.

#### ACTION:

MODES 1, 2, and 3\*

- a. With the specific activity of the primary coolant  $> 0.10 \mu\text{Ci/gram DOSE EQUIVALENT I-131}^{(1)}$  for more than 48 hours during one continuous time interval or exceeding the limit line shown on Figure 3.4-1, be in HOT STANDBY with  $T_{\text{avg}} < 500^\circ\text{F}$  within 6 hours.
- b. With the specific activity of the primary coolant  $> 100/\bar{E} \mu\text{Ci/gram}$ , be in HOT STANDBY with  $T_{\text{avg}} < 500^\circ\text{F}$  within 6 hours.

MODES 1, 2, 3, 4 and 5

- a. With the specific activity of the primary coolant  $> 0.10 \mu\text{Ci/gram DOSE EQUIVALENT I-131}$  or  $> 100/\bar{E} \mu\text{Ci/gram}$ , perform the sampling and analysis requirement of item 4a of Table 4.4-12 until the specific activity of the primary coolant is restored to within its limits.

#### SURVEILLANCE REQUIREMENTS

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4.4.8 The specific activity of the primary coolant shall be determined to be within the limits by performance of the sampling and analysis program of Table 4.4-12.

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\* With  $T_{\text{avg}} \geq 500^\circ\text{F}$

(1) Specification 3.0.4.c is applicable.

REACTOR COOLANT SYSTEM

OVERPRESSURE PROTECTION SYSTEMS

LIMITING CONDITION FOR OPERATION

3.4.9.3 An overpressure protection system shall be OPERABLE with a maximum of one charging pump<sup>(1)</sup> capable of injecting into the RCS and the accumulators isolated<sup>(2)</sup> and either a or b below:

- a. Two power operated relief valves (PORVs) with a nominal maximum lift setting within limits specified in the PTLR, or
- b. The RCS depressurized and an RCS vent of greater than or equal to 2.07 square inches.

APPLICABILITY: Mode 4 when any RCS cold leg temperature is less than or equal to an enable temperature specified in the PTLR,  
Mode 5,  
Mode 6 when the reactor vessel head is on.

ACTION:

----- GENERAL NOTE -----

Specification 3.0.4.b is not applicable when entering MODE 4 or MODE 5.

- a. With two or more charging pumps capable of injecting into the RCS, immediately initiate action to verify a maximum of one charging pump is capable of injecting into the RCS or depressurize and vent the RCS through a 2.07 square inch or larger vent within 12 hours.
- b. With an accumulator not isolated when the accumulator pressure is greater than or equal to the maximum RCS pressure for the existing RCS cold leg temperature allowed by the heatup and cooldown curves in the PTLR, isolate the affected accumulator within 1 hour or increase the RCS cold leg temperature above the enable temperature specified in the PTLR within the next 12 hours or depressurize the affected accumulator to less than the maximum RCS pressure for the existing cold leg temperature allowed by the heatup and cooldown curves in the PTLR within the next 12 hours.

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(1) Two charging pumps may be capable of injecting into the RCS for pump swap operation for less than or equal to 1 hour.

(2) Accumulator isolation with power removed from the discharge isolation valves is only required when the accumulator pressure is greater than or equal to the maximum RCS pressure for the existing RCS cold leg temperature allowed by the heatup and cooldown curves provided in the PTLR.

EMERGENCY CORE COOLING SYSTEMS

3/4.5.3 ECCS SUBSYSTEMS - T<sub>avg</sub> < 350°F

LIMITING CONDITION FOR OPERATION

3.5.3 As a minimum, one ECCS subsystem comprised of the following shall be OPERABLE:

- a. One OPERABLE centrifugal charging pump,#
- b. One OPERABLE Low Head Safety Injection Pump, and
- c. An OPERABLE flow path capable of taking suction from the refueling water storage tank upon being manually realigned and transferring suction to the containment sump during the recirculation phase of operation.

APPLICABILITY: MODE 4.

ACTION:

----- GENERAL NOTE -----

Specification 3.0.4.b is not applicable to ECCS centrifugal charging pumps.

- a. With no ECCS subsystem OPERABLE because of the inoperability of either the centrifugal charging pump or the flow path from the refueling water storage tank, restore at least one ECCS subsystem to OPERABLE status within 1 hour or be in COLD SHUTDOWN within the next 20 hours.
- b. In the event the ECCS is actuated and injects water into the Reactor Coolant System, a Special Report shall be prepared and submitted in accordance with 10 CFR 50.4 within 30 days describing the circumstances of the actuation and the total accumulated actuation cycles to date.

SURVEILLANCE REQUIREMENTS

4.5.3.1 The ECCS subsystem shall be demonstrated OPERABLE per the applicable Surveillance Requirements of 4.5.2.

4.5.3.2 All charging pumps except the above required OPERABLE pumps, shall be demonstrated inoperable at least once per 12 hours whenever the temperature of one or more of the non-isolated RCS cold legs is ≤ the enable temperature specified in the PTLR by verifying that the control switches are placed in the PULL-TO-LOCK position and tagged.

# A maximum of one centrifugal charging pump shall be OPERABLE whenever the temperature of one or more of the non-isolated RCS cold legs is ≤ the enable temperature specified in the PTLR.

3/4.7 PLANT SYSTEMS

3/4.7.1 TURBINE CYCLE

MAIN STEAM SAFETY VALVES (MSSVs)

LIMITING CONDITION FOR OPERATION

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3.7.1.1 Five MSSVs per steam generator shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

- - - - - GENERAL NOTE - - - - -

Separate ACTION entry is allowed for each MSSV.

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- a. With one or more steam generators with one MSSV inoperable and the Moderator Temperature Coefficient (MTC) zero or negative at all power levels, within 4 hours reduce THERMAL POWER to less than or equal to 61% RTP; otherwise, be in HOT STANDBY within the next 6 hours, and in HOT SHUTDOWN within the next 6 hours.
- b. With one or more steam generators with two or more MSSVs inoperable, or with one or more steam generators with one MSSV inoperable and the MTC positive at any power level, within 4 hours reduce THERMAL POWER to less than or equal to the Maximum Allowable % RTP specified in Table 3.7-1 for the number of OPERABLE MSSVs, and reduce the Power Range Neutron Flux-High reactor trip setpoint to less than or equal to the Maximum Allowable % RTP specified in Table 3.7-1 for the number of OPERABLE MSSVs within the next 32 hours<sup>(1)</sup>; otherwise, be in HOT STANDBY within the next 6 hours, and in HOT SHUTDOWN within the next 6 hours.
- c. With one or more steam generators with four or more MSSVs inoperable, within 6 hours be in HOT STANDBY and in HOT SHUTDOWN within the next 6 hours.

SURVEILLANCE REQUIREMENTS

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4.7.1.1 Verify<sup>(2)</sup> each required MSSV lift setpoint per Table 3.7-2 in accordance with the Inservice Testing Program. Following testing, lift settings shall be within  $\pm 1$  percent.

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(1) Required to be performed only in MODE 1.  
(2) Required to be performed only in MODES 1 and 2.

PLANT SYSTEMS

AUXILIARY FEEDWATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.1.2 Three Auxiliary Feedwater (AFW) trains shall be OPERABLE and consist of the following:<sup>(1)</sup>

- a. One motor driven AFW pump with a flow path from WT-TK-10 to each feedwater injection header via the train "A" supply header.
- b. One motor driven AFW pump with a flow path from WT-TK-10 to each feedwater injection header via the train "B" supply header.
- c. One turbine driven AFW pump capable of being powered from two steam supplies<sup>(8)</sup> with a flow path from WT-TK-10 to each feedwater injection header via the designated train supply header.
- d. One feedwater injection header to each steam generator.

APPLICABILITY:       MODES 1, 2, and 3,  
                          MODE 4 when steam generator(s) is relied upon for heat removal.

ACTION:

----- GENERAL NOTE -----  
Specification 3.0.4.b is not applicable when entering MODE 1.  
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- a. With one of the two steam supplies to the turbine driven AFW pump inoperable, restore two steam supplies to OPERABLE status within 7 days and within 10 days from discovery of failure to meet the LCO or be in HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.
- b. With one feedwater injection header inoperable in MODE 1, 2, or 3, be in HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours.

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(1) Only one AFW train (capable of providing flow to the steam generator(s) relied upon for heat removal), which includes a motor driven pump, is required to be OPERABLE in MODE 4.

(8) With one steam supply inoperable, follow ACTION statement a.

3/4.8 ELECTRICAL POWER SYSTEMS

3/4.8.1 A.C. SOURCES

OPERATING

LIMITING CONDITION FOR OPERATION

3.8.1.1 As a minimum, the following A.C. electrical power sources shall be OPERABLE:

- a. Two physically independent circuits between the offsite transmission network and the onsite Class 1E distribution system, and
- b. Two separate and independent diesel generators each with:
  - 1. Separate day and engine-mounted fuel tanks containing a minimum of 900 usable gallons of fuel,
  - 2. A separate fuel storage system containing a minimum of 17,500 usable gallons of fuel, and
  - 3. A separate fuel transfer pump.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

----- GENERAL NOTE -----  
 Specification 3.0.4.b is not applicable to diesel generators.  
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- a. With one offsite circuit inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter. Restore the offsite circuit to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours.
- b. With one diesel generator<sup>(1)</sup> inoperable, demonstrate the OPERABILITY of the A.C. offsite sources by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter; and if the diesel generator became inoperable due to any cause other than an independently testable component, testing or preplanned preventative maintenance, demonstrate the OPERABILITY of the remaining OPERABLE diesel generator by performing

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(1) Fuel oil contained in the storage tanks not meeting the properties in accordance with 4.8.1.1.2.d.2 or 4.8.1.1.2.e shall be brought within the specified limits within 7 days.

## REFUELING OPERATIONS

### 3/4.9.14 SPENT FUEL STORAGE POOL

#### LIMITING CONDITION FOR OPERATION

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- 3.9.14 Fuel is to be stored in the spent fuel storage pool with:
- a. The boron concentration in the spent fuel pool maintained greater than or equal to 1050 ppm when moving fuel in the spent fuel pool; and
  - b. Fuel assembly storage in Region 1 restricted to fuel with an enrichment less than or equal to 5.0 w/o U-235; and
  - c. Fuel assembly storage in Region 2 restricted to fuel which has been qualified in accordance with Table 3.9-1; and
  - d. Fuel assembly storage in Region 3 restricted to fuel which has been qualified in accordance with Table 3.9-2.

APPLICABILITY: During storage of fuel in the spent fuel pool.

#### ACTION:

- a. Suspend all actions involving movement of fuel in the spent fuel pool if it is determined a fuel assembly has been placed in the incorrect Region until such time as the correct storage location is determined. Move the assembly to its correct location before resumption of any other fuel movement.
- b. Suspend all actions involving the movement of fuel in the spent fuel pool if it is determined the pool boron concentration is less than 1050 ppm, until such time as the boron concentration is increased to 1050 ppm or greater.
- c. The provisions of Specification 3.0.3 are not applicable.

#### SURVEILLANCE REQUIREMENTS

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4.9.14.1 Prior to placing fuel or moving fuel in the spent fuel pool, verify through fuel receipt records for new fuel, or by burnup analysis and comparison with Table 3.9-1 or Table 3.9-2 for spent fuel, that fuel assemblies to be placed into or moved in the spent fuel pool are within the above enrichment/burnup limits.

4.9.14.2 Verify the spent fuel pool boron concentration is  $\geq 1050$  ppm:

- a. Within 8 hours prior to and at least once per 24 hours during movement of fuel in the spent fuel pool, and
- b. At least once per 31 days.

## 3/4 LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

### 3/4.0 APPLICABILITY

#### LIMITING CONDITION FOR OPERATION

3.0.1 Compliance with the Limiting Conditions for Operation contained in the succeeding specifications is required during the OPERATIONAL MODES or other conditions specified therein; except that upon failure to meet the Limiting Conditions for Operation, the associated ACTION requirements shall be met, except as provided in Limiting Condition for Operation 3.0.6.

3.0.2 Noncompliance with a specification shall exist when the requirements of the Limiting Condition for Operation and associated ACTION requirements are not met within the specified time intervals. If the Limiting Condition for Operation is restored prior to expiration of the specified time intervals, completion of the ACTION requirements is not required.

3.0.3 When a Limiting Condition for Operation is not met except as provided in the associated ACTION requirements, within one hour action shall be initiated to place the unit in a MODE in which the specification does not apply by placing it, as applicable, in:

1. At least HOT STANDBY within the next 6 hours,
2. At least HOT SHUTDOWN within the following 6 hours, and
3. At least COLD SHUTDOWN within the subsequent 24 hours.

Where corrective measures are completed that permit operation under the ACTION requirements, the ACTION may be taken in accordance with the specified time limits as measured from the time of failure to meet the Limiting Condition for Operation. Exceptions to these requirements are stated in the individual specifications.

3.0.4 When a Limiting Condition for Operation is not met, entry into an OPERATIONAL MODE or other specified condition in the Applicability shall only be made:

- a. When the associated ACTIONS to be entered permit continued operation in the OPERATIONAL MODE or other specified condition in the Applicability for an unlimited period of time, or
- b. After performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering the OPERATIONAL MODE or other specified condition in the Applicability, and establishment of risk management actions, if appropriate; exceptions to this Specification are stated in the individual Specifications, or
- c. When an allowance is stated in the individual value, parameter, or other Specification.

## APPLICABILITY

### LIMITING CONDITION FOR OPERATION (Continued)

This Specification shall not prevent changes in OPERATIONAL MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

3.0.5 When a system, subsystem, train, component or device is determined to be inoperable solely because its emergency power source is inoperable, or solely because its normal power source is inoperable, it may be considered OPERABLE for the purpose of satisfying the requirements of its applicable limiting Condition for Operation, provided: (1) its corresponding normal or emergency power source is OPERABLE; and (2) all of its redundant system(s), subsystem(s), train(s), component(s) and device(s) are OPERABLE, or likewise satisfy the requirements of this specification. Unless both conditions (1) and (2) are satisfied within 2 hours, action shall be initiated to place the unit in a MODE in which the applicable Limiting Condition for Operation does not apply, by placing it, as applicable, in:

1. At least HOT STANDBY within the next 6 hours,
2. At least HOT SHUTDOWN within the following 6 hours, and
3. At least COLD SHUTDOWN within the subsequent 24 hours.

This specification is not applicable in MODES 5 or 6.

3.0.6 Equipment removed from service or declared inoperable to comply with ACTIONS may be returned to service under administrative control solely to perform testing required to demonstrate its OPERABILITY or the OPERABILITY of other equipment. This is an exception to Limiting Condition for Operation 3.0.1 for the system returned to service under administrative control to perform the testing required to demonstrate OPERABILITY.

### SURVEILLANCE REQUIREMENTS

4.0.1 Surveillance Requirements shall be met during the OPERATIONAL MODES or other conditions specified for individual Limiting Conditions for Operation unless otherwise stated in an individual Surveillance Requirement. Failure to meet a surveillance, whether such failure is experienced during the performance of the Surveillance or between performances of the Surveillance, shall be failure to meet the Limiting Condition for Operation. Failure to perform a surveillance within the allowed surveillance interval, defined by Specification 4.0.2, shall be failure to meet the Limiting Condition for Operation except as provided in Specification 4.0.3. Surveillances do not have to be performed on inoperable equipment or variables outside specified limits.

4.0.2 Each Surveillance Requirement shall be performed within the specified time interval with a maximum allowable extension not to exceed 25% of the surveillance interval.

## APPLICABILITY

### SURVEILLANCE REQUIREMENTS

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4.0.3 If it is discovered that a Surveillance was not performed within its allowed surveillance interval, defined by Specification 4.0.2, then compliance with the requirement to declare the Limiting Condition for Operation not met may be delayed, from the time of discovery, up to 24 hours or up to the limit of the specified surveillance interval, whichever is greater. This delay period is permitted to allow performance of the Surveillance. A risk evaluation shall be performed for any Surveillance delayed greater than 24 hours and the risk impact shall be managed.

If the Surveillance is not performed within the delay period, the Limiting Condition for Operation must immediately be declared not met, and the applicable ACTION(s) must be entered.

When the Surveillance is performed within the delay period and the Surveillance is not met, the Limiting Condition for Operation must immediately be declared not met, and the applicable ACTION(s) must be entered.

4.0.4 Entry into an OPERATIONAL MODE or other specified condition in the Applicability of a Limiting Condition for Operation shall only be made when the Limiting Condition for Operation Surveillances have been met within their allowed surveillance interval, except as provided by Specification 4.0.3. When a Limiting Condition for Operation is not met due to Surveillances not having been met, entry into an OPERATIONAL MODE or other specified condition in the Applicability shall only be made in accordance with Specification 3.0.4. This provision shall not prevent entry into OPERATIONAL MODES, or other specified conditions in the Applicability, that are required to comply with ACTION requirements or that are part of a shutdown of the unit.

4.0.5 Surveillance Requirements for inservice inspection and testing of ASME Code Class 1, 2 and 3 components shall be applicable as follows:

- a.1 Inservice inspection of ASME Code Class 1, 2 and 3 components shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50, Section 50.55a(g).
- a.2 Inservice testing of ASME Code Class 1, 2 and 3 pumps and valves shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50, Section 50.55a(f).

APPLICABILITY

SURVEILLANCE REQUIREMENTS

b. Surveillance intervals specified in Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda for the inservice inspection and testing activities required by the ASME Boiler and Pressure Vessel Code and applicable Addenda shall be applicable as follows in these Technical Specifications:

<u>ASME Boiler and Pressure Vessel Code and applicable Addenda terminology for inservice inspection and testing activities</u>	<u>Required frequencies for performing inservice inspection and testing activities</u>
Weekly	At least once per 7 days
Monthly	At least once per 31 days
Quarterly or every 3 months	At least once per 92 days
Semiannually or every 6 months	At least once per 184 days
Every 9 months	At least once per 276 days
Yearly or annually	At least once per 366 days

- c. The provisions of Specification 4.0.2 are applicable to the above required frequencies for performing inservice inspection and testing activities.
- d. Performance of the above inservice inspection and testing activities shall be in addition to other specified Surveillance Requirements.
- e. Nothing in the ASME Boiler and Pressure Vessel Code shall be construed to supersede the requirements of any Technical Specification.

## INSTRUMENTATION

### ACCIDENT MONITORING INSTRUMENTATION

#### LIMITING CONDITION FOR OPERATION

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3.3.3.8 The accident monitoring instrumentation channels shown in Table 3.3-11 shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

- a. With the number of OPERABLE accident monitoring instrumentation channels less than the Total Number of Channels shown in Table 3.3-11, either restore the inoperable channel(s) to OPERABLE status within 7 days or be in at least HOT SHUTDOWN within the next 12 hours (follow Specification 3.4.11 when determining ACTIONS for Items 4 and 5).
- b. With the number of OPERABLE accident monitoring instrumentation channels less than the Minimum Channels OPERABLE requirements of Table 3.3-11, either restore the inoperable channel(s) to OPERABLE status within 48 hours or be in at least HOT SHUTDOWN within the next 12 hours.
- c. With the number of OPERABLE Reactor Coolant System Subcooling Margin Monitor instrumentation channels less than the Minimum Channels OPERABLE requirements of Table 3.3-11, either restore the inoperable channel(s) to OPERABLE status within 7 days or be in at least HOT SHUTDOWN within the next 12 hours.

#### SURVEILLANCE REQUIREMENTS

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4.3.3.8 Each accident monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK and CHANNEL CALIBRATION operations at the frequencies shown in Table 4.3-7.

## REACTOR COOLANT SYSTEM

### 3/4.4.6 REACTOR COOLANT SYSTEM LEAKAGE

#### LEAKAGE DETECTION INSTRUMENTATION

#### LIMITING CONDITION FOR OPERATION

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3.4.6.1 The following Reactor Coolant System leakage detection instrumentation shall be OPERABLE:

- a. One containment sump (narrow range level or discharge flow) monitor; and
- b. One containment atmosphere radioactivity monitor (gaseous or particulate).

APPLICABILITY: MODES 1, 2, 3 and 4.

#### ACTION:

- a. With the required containment sump monitor inoperable, operations may continue for up to 30 days provided that a Reactor Coolant System water inventory balance measurement (Specification 4.4.6.2.b) is performed at least once per 24 hours. Otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With the required containment atmosphere radioactivity monitor inoperable, operations may continue for up to 30 days provided:
  1. Grab samples of the containment atmosphere are obtained and analyzed at least once per 24 hours, or
  2. A Reactor Coolant System water inventory balance measurement (Specification 4.4.6.2.b) is performed at least once per 24 hours.

Otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

## REACTOR COOLANT SYSTEM

### 3/4.4.8 SPECIFIC ACTIVITY

#### LIMITING CONDITION FOR OPERATION

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3.4.8 The specific activity of the reactor coolant shall be limited to:

- a.  $\leq 0.35 \mu\text{Ci/gram DOSE EQUIVALENT I-131}$ , and
- b.  $\leq 100/\bar{E} \mu\text{Ci/gram}$

APPLICABILITY: MODES 1, 2, 3, 4, and 5

#### ACTION:

MODES 1, 2 and 3\*:

- a. With the specific activity of the primary coolant  $> 0.35 \mu\text{Ci/gram DOSE EQUIVALENT I-131}^{(1)}$  for more than 48 hours during one continuous time interval or exceeding the limit line shown on Figure 3.4-1, be in HOT STANDBY with  $T_{\text{avg}} < 500^\circ\text{F}$  within 6 hours.
- b. With the specific activity of the primary coolant  $> 100/\bar{E} \mu\text{Ci/gram}$ , be in HOT STANDBY with  $T_{\text{avg}} < 500^\circ\text{F}$  within 6 hours.

MODES 1, 2, 3, 4, and 5

- a. With the specific activity of the primary coolant  $> 0.35 \mu\text{Ci/gram DOSE EQUIVALENT I-131}$  or  $> 100/\bar{E} \mu\text{Ci/gram}$ , perform the sampling analysis requirement of item 4a of Table 4.4-12 until the specific activity of the primary coolant is restored to within its limits.

#### SURVEILLANCE REQUIREMENTS

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4.4.8 The specific activity of the primary coolant shall be determined to be within the performance limits of the sampling and analysis program of Table 4.4-12.

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\* With  $T_{\text{avg}} \geq 500^\circ\text{F}$ .

(1) Specification 3.0.4.c is applicable.

REACTOR COOLANT SYSTEM

OVERPRESSURE PROTECTION SYSTEMS

LIMITING CONDITION FOR OPERATION

3.4.9.3 An overpressure protection system shall be OPERABLE with a maximum of one charging pump<sup>(1)</sup> capable of injecting into the RCS and the accumulators isolated<sup>(2)</sup> and either a or b below:

- a. Two power-operated relief valves (PORVs) with nominal maximum lift settings which vary with the RCS temperature and which do not exceed the limits specified in the PTLR, or
- b. The RCS depressurized and an RCS vent of greater than or equal to 3.14 square inches.

APPLICABILITY: MODE 4 when any RCS cold leg temperature is less than or equal to an enable temperature specified in the PTLR, MODE 5, MODE 6 when the reactor vessel head is on.

ACTION:

----- GENERAL NOTE -----  
Specification 3.0.4.b is not applicable when entering MODE 4 or MODE 5.  
-----

- a. With two or more charging pumps capable of injecting into the RCS, immediately initiate action to verify a maximum of one charging pump is capable of injecting into the RCS or depressurize and vent the RCS through a 3.14 square inch or larger vent within 12 hours.
- b. With an accumulator not isolated when the accumulator pressure is greater than or equal to the maximum RCS pressure for the existing RCS cold leg temperature allowed by the heatup and cooldown curves in the PTLR, isolate the affected accumulator within 1 hour or increase the RCS cold

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(1) Two charging pumps may be capable of injecting into the RCS for pump swap operation for less than or equal to 15 minutes. All charging pumps may be capable of injecting into the RCS for less than or equal to 4 hours immediately following a change from MODE 3 to MODE 4 or prior to the temperature of one or more of the RCS cold legs decreasing below the enable temperature specified in the PTLR minus 25°F, whichever comes first.

(2) Accumulator isolation with power removed from the discharge isolation valves is only required when the accumulator pressure is greater than or equal to the maximum RCS pressure for the existing RCS cold leg temperature allowed by the heatup and cooldown curves provided in the PTLR.

## REACTOR COOLANT SYSTEM

### LIMITING CONDITION FOR OPERATION (Continued)

#### ACTION: (Continued)

- leg temperature above the enable temperature specified in the PTLR within the next 12 hours or depressurize the affected accumulator to less than the maximum RCS pressure for the existing cold leg temperature allowed by the heatup and cooldown curves in the PTLR within the next 12 hours.
- c. With one PORV inoperable in MODE 4 (when any RCS cold leg temperature is less than or equal to the enable temperature specified in the PTLR), restore the inoperable PORV to OPERABLE status within 7 days or depressurize and vent the RCS through a 3.14 square inch or larger vent within the next 12 hours.
  - d. With one PORV inoperable in MODES 5 or 6, restore the inoperable PORV to OPERABLE status within 24 hours or depressurize and vent the RCS through a 3.14 square inch or larger vent within the next 12 hours.
  - e. With two PORVs inoperable, depressurize and vent the RCS through a 3.14 square inch or larger vent within 12 hours.

### SURVEILLANCE REQUIREMENTS

#### 4.4.9.3.1 Verify at least once per 12 hours that:

- a. A maximum of one charging pump is capable of injecting into the RCS, and
- b. Each accumulator is isolated; however, with the accumulator pressure less than the low temperature overpressure protection setpoint, the accumulator discharge isolation valves may be opened to perform accumulator discharge check valve testing.

#### 4.4.9.3.2 When PORVs are being used for overpressure protection, demonstrate each PORV is OPERABLE by:

- a. Verifying each PORV block valve is open for each required PORV at least once per 72 hours, and

## EMERGENCY CORE COOLING SYSTEMS

### 3/4.5.2 ECCS SUBSYSTEMS - $T_{avg} \geq 350^{\circ}F$

#### LIMITING CONDITION FOR OPERATION

3.5.2 Two separate and independent ECCS subsystems shall be OPERABLE<sup>(1)</sup> with each subsystem comprised of:

- a. One OPERABLE centrifugal charging pump,
- b. One OPERABLE low head safety injection pump,
- c. One OPERABLE recirculation spray pump<sup>(2)</sup> capable of supplying the safety injection flow path during recirculation phase, and
- d. An OPERABLE flow path capable of taking suction from the refueling water storage tank on a safety injection signal and transferring suction to the containment sump during the recirculation phase of operation.

APPLICABILITY: MODES 1, 2 and 3.

#### ACTION:

- a. With one ECCS subsystem inoperable, restore the inoperable subsystem to OPERABLE status within 72 hours or be in HOT SHUTDOWN within the next 12 hours.
- b. In the event the ECCS is actuated and injects water into the Reactor Coolant System, a Special Report shall be prepared and submitted in accordance with 10 CFR 50.4 within 30 days describing the circumstances of the actuation and the total accumulated actuation cycles to date.

#### SURVEILLANCE REQUIREMENTS

4.5.2 Each ECCS subsystem shall be demonstrated OPERABLE:

- a.1. At least once per 12 hours by verifying that the following valves are in the indicated positions with power to the valve operator control circuits disconnected by removal of the plug in the lock out circuit from each circuit:

---

(1) In MODE 3, the centrifugal charging pumps may be inoperable pursuant to Specification 4.5.3.2 provided the centrifugal charging pumps are restored to OPERABLE status within 4 hours or until the temperature of all RCS cold legs exceeds the OPSS enable temperature specified in the PTLR plus 25°F, whichever comes first.

(2) Recirculation spray pump 2RSS-P21C or 2RSS-P21D.

EMERGENCY CORE COOLING SYSTEMS

ECCS SUBSYSTEMS - T<sub>avg</sub> < 350°F

LIMITING CONDITION FOR OPERATION

3.5.3 As a minimum, one ECCS subsystem comprised of the following shall be OPERABLE:

- a. One OPERABLE centrifugal charging pump,
- b. One OPERABLE Low Head Safety Injection Pump, and
- c. One OPERABLE recirculation spray pump\* capable of supplying the safety injection flow path during recirculation phase, and
- d. An OPERABLE flow path capable of taking suction from the refueling water storage tank upon being manually realigned and transferring suction to the containment sump during the recirculation phase of operation.

APPLICABILITY: MODE 4.

ACTION:

----- GENERAL NOTE -----  
Specification 3.0.4.b is not applicable to ECCS centrifugal charging pumps.  
-----

- a. With no ECCS subsystem OPERABLE because of the inoperability of either the centrifugal charging pump or the flow path from the refueling water storage tank, restore at least one ECCS subsystem to OPERABLE status within 1 hour or be in COLD SHUTDOWN within the next 20 hours.
- b. In the event the ECCS is actuated and injects water into the Reactor Coolant System, a Special Report shall be prepared and submitted in accordance with 10 CFR 50.4 within 30 days describing the circumstances of the actuation and the total accumulated actuation cycle to date.

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\* Recirculation spray pump 2RSS-P21C or 2RSS-P21D.

## EMERGENCY CORE COOLING SYSTEMS

### SURVEILLANCE REQUIREMENTS

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4.5.3.1 The ECCS subsystem shall be demonstrated OPERABLE per the applicable Surveillance Requirements of 4.5.2.

4.5.3.2 All charging pumps, except the above required OPERABLE charging pump, shall be demonstrated inoperable\*\* by verifying that the control switches are placed in the PULL-TO-LOCK position and tagged within 4 hours after entering MODE 4 from MODE 3 prior to the temperature of one or more of the RCS cold legs decreasing below the enable temperature specified in the PTLR minus 25°F, whichever comes first, and at least once per 12 hours thereafter.

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\*\* An inoperable pump may be energized for testing provided the discharge of the pump has been isolated from the RCS by a closed isolation valve with power removed from the valve operator, or by a manual isolation valve secured in the closed position.

3/4.7 PLANT SYSTEMS

3/4.7.1 TURBINE CYCLE

MAIN STEAM SAFETY VALVES (MSSVs)

LIMITING CONDITION FOR OPERATION

3.7.1.1 Five MSSVs per steam generator shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

----- GENERAL NOTE -----  
Separate ACTION entry is allowed for each MSSV.  
-----

- a. With one or more steam generators with one MSSV inoperable and the Moderator Temperature Coefficient (MTC) zero or negative at all power levels, within 4 hours reduce THERMAL POWER to less than or equal to 61% RTP; otherwise, be in HOT STANDBY within the next 6 hours, and in HOT SHUTDOWN within the next 6 hours.
- b. With one or more steam generators with two or more MSSVs inoperable, or with one or more steam generators with one MSSV inoperable and the MTC positive at any power level, within 4 hours reduce THERMAL POWER to less than or equal to the Maximum Allowable % RTP specified in Table 3.7-1 for the number of OPERABLE MSSVs, and reduce the Power Range Neutron Flux-High reactor trip setpoint to less than or equal to the Maximum Allowable % RTP specified in Table 3.7-1 for the number of OPERABLE MSSVs within the next 32 hours<sup>(1)</sup>; otherwise, be in HOT STANDBY within the next 6 hours, and in HOT SHUTDOWN within the next 6 hours.
- c. With one or more steam generators with four or more MSSVs inoperable, within 6 hours be in HOT STANDBY and in HOT SHUTDOWN within the next 6 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.1 Verify<sup>(2)</sup> each required MSSV lift setpoint per Table 3.7-2 in accordance with the Inservice Testing Program. Following testing, lift settings shall be within  $\pm 1$  percent.

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(1) Required to be performed only in MODE 1.  
(2) Required to be performed only in MODES 1 and 2.

PLANT SYSTEMS

AUXILIARY FEEDWATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.1.2 Three Auxiliary Feedwater (AFW) trains shall be OPERABLE and consist of the following:<sup>(1)</sup>

- a. One motor driven AFW pump with a flow path from TK-210 to each feedwater injection header via the train "A" supply header.
- b. One motor driven AFW pump with a flow path from TK-210 to each feedwater injection header via the train "B" supply header.
- c. One turbine driven AFW pump capable of being powered from two steam supplies<sup>(8)</sup> with a flow path from TK-210 to each feedwater injection header via the designated train supply header.
- d. One feedwater injection header to each steam generator.

APPLICABILITY: MODES 1, 2, and 3,  
MODE 4 when steam generator(s) is relied upon for heat removal.

ACTION:

----- GENERAL NOTE -----

Specification 3.0.4.b is not applicable when entering MODE 1.

- a. With one of the two steam supplies to the turbine driven AFW pump inoperable, restore two steam supplies to OPERABLE status within 7 days and within 10 days from discovery of failure to meet the LCO or be in HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.
- b. With one feedwater injection header inoperable in MODE 1, 2, or 3, be in HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours.

---

(1) Only one AFW train (capable of providing flow to the steam generator(s) relied upon for heat removal), which includes a motor driven pump, is required to be OPERABLE in MODE 4.

(8) With one steam supply inoperable, follow ACTION statement a.

3/4.8 ELECTRICAL POWER SYSTEMS

3/4.8.1 A.C. SOURCES

OPERATING

LIMITING CONDITION FOR OPERATION

3.8.1.1 As a minimum, the following A.C. electrical power sources shall be OPERABLE:

- a. Two physically independent circuits between the offsite transmission network and the onsite Class 1E distribution system, and
- b. Two separate and independent diesel generators each with:
  - 1. Separate day tank containing a minimum of 350 usable gallons of fuel,
  - 2. A separate fuel storage system containing a minimum of 53,225 usable gallons of fuel,
  - 3. A separate fuel transfer pump,
  - 4. Lubricating oil storage containing a minimum total volume of 504 gallons of lubricating oil, and
  - 5. Capability to transfer lubricating oil from storage to the diesel generator unit.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

----- GENERAL NOTE -----  
 Specification 3.0.4.b is not applicable to diesel generators.  
 -----

- a. With one offsite circuit inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter. Restore the offsite circuit to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours.
- b. With one diesel generator<sup>(1)</sup> inoperable, demonstrate the OPERABILITY of the A.C. offsite sources by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter; and if the diesel

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(1) Fuel oil contained in the storage tanks not meeting the properties in accordance with 4.8.1.1.2.d.2 or 4.8.1.1.2.e shall be brought within the specified limits within 7 days.

### 3/4.9.14 SPENT FUEL POOL STORAGE

#### LIMITING CONDITION FOR OPERATION

---

3.9.14 The combination of initial enrichment and burnup of each fuel assembly stored in the spent fuel storage pool shall comply with the limits specified in Table 3.9-1.

APPLICABILITY: Whenever any fuel assembly is stored in the spent fuel storage pool.

ACTION: With the above requirements not satisfied:

- a. Immediately initiate action to move the non-complying fuel assembly to a location that complies with Table 3.9-1.
- b. The provisions of Specification 3.0.3 are not applicable.

#### SURVEILLANCE REQUIREMENTS

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4.9.14 Verify, by administrative means, the initial enrichment and burnup complies with Table 3.9-1 prior to storing a fuel assembly in the spent fuel storage pool.

### 3/4.9.15 FUEL STORAGE POOL BORON CONCENTRATION

#### LIMITING CONDITION FOR OPERATION

---

3.9.15 The fuel storage pool boron concentration shall be greater than or equal to 2000 ppm.

APPLICABILITY: When fuel assemblies are stored in the fuel storage pool.

ACTION: With fuel storage pool boron concentration not within limits,

- a. Immediately suspend all operations involving the movement of fuel assemblies in the fuel storage pool and initiate action to restore the fuel storage pool boron concentration to within the limit.
- b. The provisions of Specification 3.0.3 are not applicable.

#### SURVEILLANCE REQUIREMENTS

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4.9.15 Verify the fuel storage pool boron concentration is within the limit at least once per 7 days.