



10 CFR 50.90

LR-N09-0002
LAR H08-06
January 5, 2009

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Hope Creek Generating Station
Facility Operating License No. NPF-57
NRC Docket No. 50-354

Subject: **REQUEST FOR CHANGE TO TECHNICAL SPECIFICATIONS REGARDING
MODE CHANGE LIMITATIONS USING THE CONSOLIDATED LINE ITEM
IMPROVEMENT PROCESS (CLIP), TSTF-359**

In accordance with the provisions of 10 CFR 50.90, PSEG Nuclear, LLC (PSEG) requests an amendment to the facility operating license listed above. The proposed amendment would modify Technical Specification (TS) requirements for mode change limitations in TS 3.0.4 and 4.0.4, using the Consolidated Line Item Improvement Process (CLIP) described in NRC approved industry Technical Specification Task Force (TSTF) change TSTF-359, Revision 9. Pursuant to the requirements of 10 CFR 50.91(b)(1), a copy of this request for amendment has been sent to the State of New Jersey.

Attachment 1 provides a description of the proposed change, the requested confirmation of applicability and plant-specific verifications. Attachment 2 provides the existing TS pages marked up to show the proposed changes. Attachment 3 summarizes the regulatory commitments made in this submittal. Attachment 4 provides the existing TS Bases pages (for information only) marked up to show the proposed changes.

PSEG requests approval of the proposed license amendment by January 31, 2010. PSEG requests implementation within 60 days of receipt of the approved amendment.

If you have any questions or require additional information, please contact Mr. Jeff Keenan at (856) 339-5429.

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I declare under penalty of perjury that the foregoing is true and correct.

Executed on January 05, 2009
(date)

Sincerely,



George P. Barnes
Site Vice President
Hope Creek Generating Station

Attachments (4)

S. Collins, Regional Administrator - NRC Region I
R. Ennis, Project Manager - USNRC
NRC Senior Resident Inspector - Hope Creek
P. Mulligan, Manager IV, NJBNE
Commitment Coordinator – Hope Creek
PSEG Commitment Coordinator - Corporate

**HOPE CREEK GENERATING STATION
DOCKET NO. 50-354
CHANGE TO TECHNICAL SPECIFICATIONS
MODE CHANGE LIMITATIONS USING THE CONSOLIDATED LINE ITEM
IMPROVEMENT PROCESS**

DESCRIPTION AND ASSESSMENT

1.0 DESCRIPTION

The proposed amendment would modify Technical Specification (TS) requirements for mode change limitations in TS 3.0.4 and TS 4.0.4. The changes are consistent with Nuclear Regulatory Commission (NRC) approved Industry Technical Specification Task Force (TSTF) change TSTF-359, Revision 9. On April 4, 2003, the NRC published the Notice of Availability for TSTF-359, Revision 8 in Federal Register Notice 68 FR 16579. That Federal Register Notice announced the availability of this TS improvement through the consolidated line item improvement process (CLIIP). The NRC subsequently made two modifications in response to comments, as well as one editorial change, which have been incorporated into TSTF-359, Rev. 9 which was approved on May 9, 2003.

The proposed changes to TS 3.0.4 would allow entry into a MODE or other specified condition that has a specific required action and completion time after performance of an assessment that focuses on managing plant risk. In addition, the TS 3.0.4 allowances can be applied to values and parameters in specifications when explicitly stated in the TS. These changes are in addition to the current mode change allowance when a required action has an indefinite completion time. The TS 3.0.4 mode change allowances are not permitted for higher risk systems and components, and appropriate restrictions are included in the proposed change. The proposed change also removes pre-existing Limiting Conditions for Operation (LCO) 3.0.4 exceptions in the current TS.

Adoption of TSTF-359 is predicated on adoption of a TS Bases Control Program, and General Electric BWR/4 Standard Technical Specifications (STS) SR 3.0.1 and associated bases, if not already incorporated in the TS. Hope Creek Generating Station previously incorporated these requirements into the TS by License Amendment 145, dated March 3, 2003. The Bases Control Program is included in Section 6.15 of the Hope Creek Technical Specifications, consistent with the program described in the STS for General Electric BWR/4 Plants, NUREG-1433, Revision 2. Amendment 145 also incorporated the STS language to replace Specification 4.0.1 (STS SR 3.0.1) and supporting Bases.

2.0 ASSESSMENT

2.1 Applicability of published Safety Evaluation

PSEG has reviewed the safety evaluation published in Federal Register Notice 68 FR 16585, dated April 4, 2003, which supports the CLIP. This review included a review of the NRC staff's evaluation, as well as supporting information provided for TSTF-359, Revision 9. PSEG has concluded that the justifications presented in the TSTF proposal and the safety evaluation prepared by NRC staff are applicable to Hope Creek Generating Station and justify this amendment for incorporation of the changes into the plant's technical specifications.

2.2 Optional Changes and Variations

Since Hope Creek Generating Station has not adopted STS (NUREG-1433, Revision 2), there are some administrative differences from TSTF-359, Revision 9:

1. STS SR 3.0.1 is SR 4.0.1 in the Hope Creek TS
2. STS SR 3.0.4 is SR 4.0.4 in the Hope Creek TS
3. STS LCO 3.4.7 is LCO 3.4.5 in the Hope Creek TS
4. STS LCO 3.5.3 is LCO 3.7.4 in the Hope Creek TS
5. STS LCO 3.8.1 is 3.8.1.1 in the Hope Creek TS
6. Administrative requirements are located under TS 6.0, not 5.0.
7. The location of pre-existing LCO 3.0.4 exceptions in the current Hope Creek TS differs from those in STS (see Attachment 2 for a complete listing).
8. Hope Creek TS use "Operational Condition" instead of "MODE" for describing reactor condition states; consequently "OPERATIONAL CONDITION" is used instead of MODE in the markup of the Technical Specifications.

One minor readability change to the TS has been included with insertion of the word "or" between LCO 3.0.4.a and 3.0.4.b to highlight the mutual exclusivity of these elements. This "or" connector was contained in both the Notice of Opportunity to Comment (67 FR 50475, 8/2/02) and the NRC Notice of Availability (68 FR 16585, 4/4/03), and appears to have been inadvertently dropped.

PSEG is not proposing any variations or deviations from the NRC staff's model safety evaluation.

See Attachments 2 and 4 for a complete listing of the technical specifications and bases, respectively, affected by this proposed change.

3.0 REGULATORY ANALYSIS

3.1 No Significant Hazards Consideration Determination

PSEG has reviewed the proposed No Significant Hazards Consideration (NSHC) determination included in TSTF-359, Revision 9 and the proposed NSHC included in Federal Register as part of the CLIP. PSEG concludes that the proposed determination

is applicable to Hope Creek Generating Station and it is hereby incorporated by reference to satisfy the requirements of 10 CFR 50.91(a).

3.2 Verification and Commitments

As discussed in the Notice of Availability published in Federal Register Notice 68 FR 16579, dated April 4, 2003 for this TS improvement, the following plant-specific verifications were performed.

PSEG has established TS Bases for LCO 3.0.4 and SR 4.0.4 that state that use of the TS mode change limitation flexibility established by LCO 3.0.4 and SR 4.0.4 is not to be interpreted as endorsing the failure to exercise the good practice of restoring systems or components to operable status before entering an associated mode or other specified condition in the TS Applicability. Also included are changes to the TS Bases for LCO 3.0.4 and SR 4.0.4 that provide details on how to implement the new requirements.

The proposed amendment includes bases changes that provide guidance for changing Modes or other specified conditions in the Applicability when an LCO is not met. The bases changes describe in detail how:

(1) LCO 3.0.4.a allows entry into a MODE or other specified condition in the Applicability with the LCO not met when the associated ACTIONS to be entered permit continued operation in the MODE or other specified condition in the Applicability for an unlimited period of time.

(2) LCO 3.0.4.b allows entry into a MODE or other specified condition in the Applicability with the LCO not met after performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering the MODE or other specified condition in the Applicability, and establishment of risk management actions, if appropriate. For a small subset of systems and components that have been determined to be more important to risk, an ACTION was added to the LCO governing these systems and components prohibiting use of the LCO 3.0.4.b allowance.

(3) LCO 3.0.4.c allows entry into a MODE or other specified condition in the Applicability with the LCO not met based on a provision in the Specification, which is typically applied to Specifications which describe values and parameters (e.g., Containment Air Temperature, Containment Pressure, Moderator Temperature Coefficient), although it may be applied to other Specifications based on NRC plant-specific approval.

The bases also state that any risk impact should be managed through the program in place to implement 10 CFR 50.65(a)(4) and its implementation guidance, NRC Regulatory Guide 1.182, "Assessing and Managing Risks Before Maintenance Activities at Nuclear Power Plants," and that the results of the risk assessment shall be considered in determining the acceptability of entering the MODE or other specified condition in the Applicability, and any corresponding risk management actions. Prior to implementation of the revised TS, the PSEG plant procedures that implement 10 CFR 50.65(a)(4) will be modified to address the situation where entering a MODE or other specified condition in the Applicability is contemplated with plant equipment not OPERABLE. The procedure will state that LCO 3.0.4.b should not be used unless there is a reasonable probability of

completing restoration such that the requirements of the LCO would be met prior to expiration of the ACTION completion times that would require exiting the Applicability.

In addition, the bases state that upon entry into a MODE or other specified condition in the Applicability with the LCO not met, LCO 3.0.1 and LCO 3.0.2 require entry into the applicable Conditions and Required Actions until the Condition is resolved, until the LCO is met, or until the unit is not within the Applicability of the Technical Specification. The bases also state that SR 4.0.4 does not restrict changing MODES or other specified conditions of the Applicability when a Surveillance has not been performed within the specified Frequency, provided the requirement to declare the LCO not met has been delayed in accordance with SR 4.0.3.

4. ENVIRONMENTAL EVALUATION

PSEG has reviewed the environmental evaluation included in the model safety evaluation from 68 FR 16579, dated April 4, 2003 and has concluded that the staff's findings presented in the evaluation are applicable to Hope Creek Generating Station. The evaluation is hereby incorporated by reference into this application. Accordingly, the proposed amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) [and (c)(10)]. Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

TECHNICAL SPECIFICATION PAGES WITH PROPOSED CHANGES

The following Technical Specifications for Hope Creek Generating Station, Facility Operating License No. NPF-57, are affected by this amendment request:

TS No.	Title	Page
3.0.4	APPLICABILITY - LIMITING CONDITION FOR OPERATION	3/4 0-1
4.0.4	APPLICABILITY - SURVEILLANCE	3/4 0-2
3.4.5	RCS SPECIFIC ACTIVITY	3/4 4-18
3.5.1	ECCS - OPERATING	3/4 5-2
3.7.4	RCIC	3/4 7-11
3.8.1.1	A.C. SOURCES - OPERATING	3/4 8-1

The following Technical Specifications have pre-existing LCO 3.0.4 exceptions; these exceptions are being removed by this proposed amendment:

TS No.	Title	Page
3.1.3.1	CONTROL ROD OPERABILITY	3/4 1-4
3.1.3.2	CONTROL ROD MAXIMUM SCRAM INSERTION TIMES	3/4 1-6
3.1.3.4	FOUR CONTROL ROD GROUP SCRAM INSERTION TIMES	3/4 1-8
3.1.3.5	CONTROL ROD SCRAM ACCUMULATORS	3/4 1-10
3.1.3.6	CONTROL ROD DRIVE COUPLING	3/4 1-11
3.1.3.7	CONTROL ROD POSITION INDICATION	3/4 1-13
3.2.3	MINIMUM CRITICAL POWER RATIO	3/4 2-3
3.3.1	REACTOR PROTECTION SYSTEM INSTRUMENTATION	3/4 3-1
3.3.2	ISOLATION ACTUATION INSTRUMENTATION	3/4 3-9
3.3.7.1	RADIATION MONITORING INSTRUMENTATION	3/4 3-62
3.3.7.4	REMOTE SHUTDOWN SYSTEM INSTRUMENTATION AND CONTROLS	3/4 3-74
3.3.10	MECHANICAL VACUUM PUMP TRIP INSTRUMENTATION	3/4 3-109
3.4.1.1	RECIRCULATION SYSTEM	3/4 4-2
3.4.7	MAIN STEAM LINE ISOLATION VALVES	3/4 4-26
3.4.9.1	RESIDUAL HEAT REMOVAL	3/4 4-28
3.6.1.3	PRIMARY CONTAINMENT AIR LOCKS	3/4 6-5
3.6.3	PRIMARY CONTAINMENT ISOLATION VALVES	3/4 6-17
3.8.4.1	PRIMARY CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES	3/4 8-24
3.8.4.5	CLASS 1E ISOLATION BREAKER OVERCURRENT PROTECTIVE DEVICES	3/4 8-41

**HOPE CREEK GENERATING STATION UNIT 1 AND UNIT 2 MARKED-UP
TECHNICAL SPECIFICATION PAGES**

Insert 1 (*Completely replaces existing LCO 3.0.4*)

When an LCO is not met, entry into an OPERATIONAL CONDITION 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 CONDITION 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 CONDITION 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.

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

INSERT 3 (*LCO 3.4.5 - RCS SPECIFIC ACTIVITY*)

Note: LCO 3.0.4.c is applicable.

INSERT 4 (*LCO 3.5.1, ECCS - OPERATING*)

Note: LCO 3.0.4.b is not applicable to HPCI.

INSERT 5 (*LCO 3.7.4, RCIC SYSTEM*)

Note: LCO 3.0.4.b is not applicable to RCIC.

INSERT 6 (*LCO 3.8.1.1, AC SOURCES-OPERATING*)

Note: LCO 3.0.4.b is not applicable to DGs.

Insert 2 (*Completely replaces existing SR 4.0.4*)

Entry into an OPERATIONAL CONDITION or other specified condition in the Applicability of an LCO shall only be made when the LCO's Surveillances have been met within their specified Frequency, except as provided by SR 4.0.3. When an LCO is not met due to Surveillances not having been met, entry into an OPERATIONAL CONDITION or other specified condition in the Applicability shall only be made in accordance with LCO 3.0.4.

This provision shall not prevent entry into OPERATIONAL CONDITIONS or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

3/4.0 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 CONDITIONS or other conditions specified therein; except that upon failure to meet the Limiting Conditions for Operation, the associated ACTION requirements shall be met.

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 an OPERATIONAL CONDITION in which the Specification does not apply by placing it, as applicable, in:

1. At least STARTUP 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.

This Specification is not applicable in OPERATIONAL CONDITIONS 4 or 5.

~~3.0.4 Entry into an OPERATIONAL CONDITION or other specified condition shall not be made when the conditions for the Limiting Condition for Operation are not met and the associated ACTION requires a shutdown if they are not met within a specified time interval. Entry into an OPERATIONAL CONDITION or other specified condition may be made in accordance with the ACTION requirements when conformance to them permits continued operation of the facility for an unlimited period of time. This provision shall not prevent passage through or to OPERATIONAL CONDITIONS as required to comply with ACTION requirements. Exceptions to these requirements are stated in the individual Specifications.~~

Insert 1

3.0.5 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 LCO 3.0.2 for the system returned to service under administrative control to perform the testing required to demonstrate OPERABILITY.

APPLICABILITY

SURVEILLANCE REQUIREMENTS

4.0.1 Surveillance Requirements shall be met during the OPERATIONAL CONDITIONS or other specified conditions in the Applicability for individual Limiting Conditions for Operation, unless otherwise stated in the 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 specified frequency shall be a 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 its specified surveillance interval with a maximum allowable extension not to exceed 25 percent of the specified surveillance interval.

4.0.3 If it is discovered that a Surveillance was not performed within its specified frequency, 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 frequency, 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 Actions 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 Actions must be entered.

~~4.0.4 Entry into an OPERATIONAL CONDITION or other specified applicable condition shall not be made unless the Surveillance Requirement(s) associated with the Limiting Condition for Operation have been performed within the applicable surveillance interval or as otherwise specified. This provision shall not prevent passage through or to OPERATIONAL CONDITIONS as required to comply with ACTION requirements.~~

Insert 2

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

- a. Inservice inspection of ASME Code Class 1, 2, and 3 components and 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 Sections 50.55a(f) and 50.55a(g), except where specific written relief has been granted by the Commission pursuant to 10 CFR 50, Section 50.55a(f)(6)(i) or Section 50.55a(g)(6)(i).
- 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

REACTOR COOLANT SYSTEM

3/4.4.5 SPECIFIC ACTIVITY

LIMITING CONDITION FOR OPERATION

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

- a. Less than or equal to 0.2 microcuries per gram DOSE EQUIVALENT I-131, and
- b. Less than or equal to $100/\bar{E}$ microcuries per gram.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3 and 4.

ACTION:

Insert 3

- a. In OPERATIONAL CONDITIONS 1, 2 or 3 with the specific activity of the primary coolant;
 1. Greater than 0.2 microcuries per gram DOSE EQUIVALENT I-131 but less than or equal to 4.0 microcuries per gram DOSE EQUIVALENT I-131 for more than 48 hours during one continuous time interval or greater than 4.0 microcuries per gram DOSE EQUIVALENT I-131, be in at least HOT SHUTDOWN with the main steam line isolation valves closed within 12 hours.
 2. Greater than $100/\bar{E}$ microcuries per gram, be in at least HOT SHUTDOWN with the main steam line isolation valves closed within 12 hours.
- b. In OPERATIONAL CONDITIONS 1, 2, 3 or 4, with the specific activity of the primary coolant greater than 0.2 microcuries per gram DOSE EQUIVALENT I-131 or greater than $100/\bar{E}$ microcuries per gram, perform the sampling and analysis requirements of Item 4a of Table 4.4.5-1 until the specific activity of the primary coolant is restored to within its limit.
- c. In OPERATIONAL CONDITION 1 or 2, with:
 1. THERMAL POWER changed by more than 15% of RATED THERMAL POWER in one hour, or
 2. The off-gas level, at the SJAE, increased by more than 10,000 microcuries per second in one hour during steady state operation at release rates less than 75,000 microcuries per second, or
 3. The off-gas level, at the SJAE, increased by more than 15% in one hour during steady state operation at release rates greater than 75,000 microcuries per second,perform the sampling and analysis requirements of Item 4b of Table 4.4.5-1 until the specific activity of the primary coolant is restored to within its limit.

EMERGENCY CORE COOLING SYSTEMS

LIMITING CONDITION FOR OPERATION (Continued)

ACTION:

Insert 4

- a. For the Core Spray system:
 - 1. With one core spray subsystem inoperable, provided that at least two LPCI subsystem are OPERABLE, restore the inoperable core spray subsystem to OPERABLE status within 7 days or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
 - 2. With both core spray subsystems inoperable, be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.
- b. For the LPCI system:
 - 1. With one LPCI subsystem inoperable, provided that at least one core spray subsystem is OPERABLE, restore the inoperable LPCI subsystem to OPERABLE status within 30 days or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
 - 2. With two LPCI subsystems inoperable, provided that at least one core spray subsystem is operable, restore at least one LPCI subsystem to OPERABLE status within 7 days or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
 - 3. With three LPCI subsystems inoperable, provided that both core spray subsystems are OPERABLE, restore at least two LPCI subsystems to OPERABLE status within 72 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
 - 4. With all four LPCI subsystems inoperable, be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.*
- c. For the HPCI system, provided the Core Spray System, the LPCI system, the ADS and the RCIC system are OPERABLE:

*Whenever two or more RHR subsystems are inoperable, if unable to attain COLD SHUTDOWN as required by this ACTION, maintain reactor coolant temperature as low as practical by use of alternate heat removal methods.

PLANT SYSTEMS

3/4.7.4 REACTOR CORE ISOLATION COOLING SYSTEM

LIMITING CONDITION FOR OPERATION

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3.7.4 The reactor core isolation cooling (RCIC) system shall be OPERABLE with an OPERABLE flow path capable of automatically taking suction from the suppression pool and transferring the water to the reactor pressure vessel.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3 with reactor steam dome pressure greater than 150 psig.

ACTION:

Insert 5 With the RCIC system inoperable, operation may continue provided the HPCI system is OPERABLE; restore the RCIC system to OPERABLE status within 14 days or be in at least HOT SHUTDOWN within the next 12 hours and reduce reactor steam dome pressure to less than or equal to 150 psig within the following 24 hours.

SURVEILLANCE REQUIREMENTS

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4.7.4 The RCIC system shall be demonstrated OPERABLE:

- a. At least once per 31 days by:
 1. Verifying by venting at the high point vents that the system piping from the pump discharge valve to the system isolation valve is filled with water.
 2. 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.
 3. Verifying that the pump flow controller is in the correct position.
- b. When tested pursuant to Specification 4.0.5 by verifying that the RCIC pump develops a flow of greater than or equal to 600 gpm in the test flow path with a system head corresponding to reactor vessel operating pressure when steam is being supplied to the turbine at 1000 + 20, - 80 psig.*

*The provisions of Specification 4.0.4 are not applicable provided the surveillance is performed within 12 hours after reactor steam pressure is adequate to perform the test.

3/4.8 ELECTRICAL POWER SYSTEMS

3/4.8.1 A.C. SOURCES

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. Four separate and independent diesel generators, each with:
 1. A separate fuel oil day tank containing a minimum of 360 gallons of fuel,
 2. A separate fuel storage system consisting of two storage tanks containing a minimum of 44,800 gallons of fuel, and
 3. A separate fuel transfer pump for each storage tank.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

Insert 6

- a. With one offsite circuit of the above required A.C. electrical power sources 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 inoperable offsite circuit to OPERABLE status within 72 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- b. With one diesel generator of the above required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the above required 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. If the diesel generator became inoperable due to any cause other than an inoperable support system, an independently testable component, or preplanned preventive maintenance or testing, demonstrate the OPERABILITY of the remaining diesel generators by performing Surveillance Requirement 4.8.1.1.2.a.4 separately for each diesel generator within 24 hours* unless the absence of any potential common mode failure for the remaining diesel generators is demonstrated. If continued operation is permitted by LCO 3.7.1.3, restore the inoperable diesel generator to OPERABLE status within 72 hours for diesel generators A or B, or within 14 days for diesel generators C or D, or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

* This test is required to be completed regardless of when the inoperable diesel generator is restored to OPERABILITY.

REACTIVITY CONTROL SYSTEMS

LIMITING CONDITION FOR OPERATION (Continued)

ACTION (Continued)

2. If the inoperable control rod(s) is inserted, within one hour disarm the associated directional control valves** either:
 - a) Electrically, or
 - b) Hydraulically by closing the drive water and exhaust water isolation valves.

Otherwise, be in at least HOT SHUTDOWN within the next 12 hours.

~~3. The provisions of Specification 3.0.4 are not applicable.~~

- c. With more than 8 control rods inoperable, be in at least HOT SHUTDOWN within 12 hours.
- d. With one scram discharge volume (SDV) vent or drain lines*** with one valve inoperable, isolate the associated line within 7 days or be in at least HOT SHUTDOWN within the next 12 hours.****
- e. With one or more SDV vent or drain lines*** with both valves inoperable, isolate the associated line within 8 hours or be in at least HOT SHUTDOWN within the next 12 hours.***

SURVEILLANCE REQUIREMENTS

4.1.3.1.1 The scram discharge volume drain and vent valves shall be demonstrated OPERABLE by:

- a. At least once per 24 hours verifying each valve to be open,* and
- b. At least once per 31 days cycling each valve through at least one complete cycle of full travel.

4.1.3.1.2 When above the low power setpoint of the RWM, all withdrawn control rods not required to have their directional control valves disarmed

*These valves may be closed intermittently for testing under administrative controls.

**May be rearmed intermittently, under administrative control, to permit testing associated with restoring the control rod to OPERABLE status.

*** Separate Action entry is allowed for each SDV vent and drain line.

**** An isolated line may be unisolated under administrative control to allow draining and venting of the SDV.

REACTIVITY CONTROL SYSTEMS

CONTROL ROD MAXIMUM SCRAM INSERTION TIMES

LIMITING CONDITION FOR OPERATION

3.1.3.2 The maximum scram insertion time of each control rod from the fully withdrawn position to notch position 5, based on de-energization of the scram pilot valve solenoids as time zero, shall not exceed 7.0 seconds.

APPLICABILITY: OPERATIONAL CONDITIONS 1 and 2.

ACTION:

- a. With the maximum scram insertion time of one or more control rods exceeding 7.0 seconds:
 1. Declare the control rod(s) with the slow insertion time inoperable, and
 2. Perform the Surveillance Requirements of Specification 4.1.3.2.c at least once per 60 days when operation is continued with three or more control rods with maximum scram insertion times in excess of 7.0 seconds.

Otherwise, be in at least HOT SHUTDOWN within 12 hours.

~~b. The provisions of Specification 3.0.4 are not applicable.~~

SURVEILLANCE REQUIREMENTS

4.1.3.2 The maximum scram insertion time of the control rods shall be demonstrated through measurement with reactor coolant pressure greater than or equal to 950 psig and, during single control rod scram time tests, the control rod drive pumps isolated from the accumulators:

- a. For all control rods prior to THERMAL POWER exceeding 40% of RATED THERMAL POWER following CORE ALTERATIONS or after a reactor shutdown that is greater than 120 days.
- b. For specifically affected individual control rods following maintenance on or modification to the control rod or control rod drive system which could affect the scram insertion time of those specific control rods, and
- c. For at least 10% of the control rods, on a rotating basis, at least once per 120 days of POWER OPERATION.

REACTIVITY CONTROL SYSTEMS

FOUR CONTROL ROD GROUP SCRAM INSERTION TIMES

LIMITING CONDITION FOR OPERATION

3.1.3.4 The average scram insertion time, from the fully withdrawn position, for the three fastest control rods in each group of four control rods arranged in a two-by-two array, based on de-energization of the scram pilot valve solenoids as time zero, shall not exceed any of the following:

<u>Position Inserted From Fully Withdrawn</u>	<u>Average Scram Insertion Time (Seconds)</u>
45	0.45
39	0.92
25	2.05
05	3.70

APPLICABILITY: OPERATIONAL CONDITIONS 1 and 2.

ACTION:

- a. With the average scram insertion times of control rods exceeding the above limits:
 1. Declare the control rods with the slower than average scram insertion times inoperable until an analysis is performed to determine that required scram reactivity remains for the slow four control rod group, and
 2. Perform the Surveillance Requirements of Specification 4.1.3.2.c at least once per 60 days when operation is continued with an average scram insertion time(s) in excess of the average scram insertion time limit.

Otherwise, be in at least HOT SHUTDOWN within the next 12 hours.

~~b. The provisions of Specification 3.0.4 are not applicable.~~

SURVEILLANCE REQUIREMENTS

4.1.3.4 All control rods shall be demonstrated OPERABLE by scram time testing from the fully withdrawn position as required by Surveillance Requirement 4.1.3.2.

REACTIVITY CONTROL SYSTEMS

LIMITING CONDITION FOR OPERATION (Continued)

ACTION (Continued)

3. With one or more control rod scram accumulators inoperable and reactor pressure < 900 psig,
 - a) Immediately upon discovery of charging water header pressure < 940 psig, verify all control rods associated with inoperable accumulators are fully inserted otherwise place the mode switch in the shutdown position**, and
 - b) Within one hour insert the associated control rod(s), declare the associated control rod(s) inoperable and disarm the associated control valves either electrically or hydraulically by closing the drive water and exhaust water isolation valves.

Otherwise, be in at least HOT SHUTDOWN within the next 12 hours.

b. In OPERATIONAL CONDITION 5*:

1. With one or more withdrawn control rods inoperable, upon discovery immediately initiate action to fully insert inoperable withdrawn control rods.

~~e. The provisions of Specification 3.0.4 are not applicable.~~

SURVEILLANCE REQUIREMENTS

4.1.3.5 Each control rod scram accumulator shall be determined OPERABLE:

- a. At least once per 7 days by verifying that the indicated pressure is greater than or equal to 940 psig unless the control rod is inserted and disarmed or scrambled.

* At least the accumulator associated with each withdrawn control rod. Not applicable to control rods removed per Specification 3.9.10.1 or 3.9.10.2.g

** Not applicable if all inoperable control rod scram accumulators are associated with fully inserted control rods.

REACTIVITY CONTROL SYSTEMS
CONTROL ROD DRIVE COUPLING

LIMITING CONDITION FOR OPERATION

3.1.3.6 All control rods shall be coupled to their drive mechanisms.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2 and 5*.

ACTION:

- a. In OPERATIONAL CONDITION 1 and 2 with one control rod not coupled to its associated drive mechanism, within 2 hours:
1. If permitted by the RWM, insert the control rod to accomplish recoupling and verify recoupling by withdrawing the control rod, and:
 - a) Observing any indicated response of the nuclear instrumentation, and
 - b) Demonstrating that the control rod will not go to the overtravel position.
 2. If recoupling is not accomplished on the first attempt or, if not permitted by the RWM, then until permitted by the RWM, declare the control rod inoperable, insert the control rod and disarm the associated directional control valves** either:
 - a) Electrically, or
 - b) Hydraulically by closing the drive water and exhaust water isolation valves.
- Otherwise, be in at least HOT SHUTDOWN within the next 12 hours.
- b. In OPERATIONAL CONDITION 5* with a withdrawn control rod not coupled to its associated drive mechanism, within 2 hours either:
1. Insert the control rod to accomplish recoupling and verify recoupling by withdrawing the control rod and demonstrating that the control rod will not go to the overtravel position, or
 2. If recoupling is not accomplished, insert the control rod and disarm the associated directional control valves** either:
 - a) Electrically, or
 - b) Hydraulically by closing the drive water and exhaust water isolation valves.

~~e. The provisions of Specification 3.0.4 are not applicable.~~

*At least each withdrawn control rod. Not applicable to control rods removed per Specification 3.9.10.1 or 3.9.10.2.

**May be rearmed intermittently, under administrative control, to permit testing associated with restoring the control rod to OPERABLE status.

REACTIVITY CONTROL SYSTEMS

CONTROL ROD POSITION INDICATION

LIMITING CONDITION FOR OPERATION

3.1.3.7 The control rod position indication system shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2 and 5*.

ACTION:

- a. In OPERATIONAL CONDITION 1 or 2 with one or more control rod position indicators inoperable, within 1 hour:
 1. Determine the position of the control rod by using an alternative method, or:
 - a) Moving the control rod, by single notch movement, to a position with an OPERABLE position indicator,
 - b) Returning the control rod, by single notch movement, to its original position, and
 - c) Verifying no control rod drift alarm at least once per 12 hours, or
 2. Move the control rod to a position with an OPERABLE position indicator, or
 3. When THERMAL POWER is:
 - a) Within the preset power level of the RWM, declare the control rod inoperable.
 - b) Greater than the preset power level of the RWM, declare the control rod inoperable, insert the control rod and disarm the associated directional control valves** either:
 - 1) Electrically, or
 - 2) Hydraulically by closing the drive water and exhaust water isolation valves.

Otherwise, be in at least HOT SHUTDOWN within the next 12 hours.

- b. In OPERATIONAL CONDITION 5* with a withdrawn control rod position indicator inoperable, move the control rod to a position with an OPERABLE position indicator or insert the control rod.

~~e. The provisions of Specification 3.0.4 are not applicable.~~

*At least each withdrawn control rod. Not applicable to control rods removed per Specification 3.9.10.1 or 3.9.10.2.

**May be rearmed intermittently, under administrative control, to permit testing associated with restoring the control rod to OPERABLE status.

POWER DISTRIBUTION LIMITS

3/4.2.3 MINIMUM CRITICAL POWER RATIO

LIMITING CONDITION FOR OPERATION

3.2.3 The MINIMUM CRITICAL POWER RATIO (MCPR) shall be equal to or greater than the MCPR limit specified in the CORE OPERATING LIMITS REPORT.

APPLICABILITY: OPERATIONAL CONDITION 1, when THERMAL POWER is greater than or equal to 24% of RATED THERMAL POWER.

ACTION:

- a. With the end-of-cycle recirculation pump trip system inoperable per Specification 3.3.4.2, operation may continue ~~and the provisions of Specification 3.0.4 are not applicable provided that~~, within 1 hour, MCPR is determined to be greater than or equal to the EOC-RPT inoperable limit specified in the CORE OPERATING LIMITS REPORT.
- b. With MCPR less than the applicable MCPR limit specified in the CORE OPERATING LIMITS REPORT, initiate corrective action within 15 minutes and restore MCPR to within the required limit within 2 hours or reduce THERMAL POWER to less than 24% of RATED THERMAL POWER within the next 4 hours.

SURVEILLANCE REQUIREMENTS

4.2.3 MCPR, shall be determined to be equal to or greater than the applicable MCPR limit specified in the CORE OPERATING LIMITS REPORT:

- a. Once within 12 hours after THERMAL POWER is greater than or equal to 24% of RATED THERMAL POWER and at least once per 24 hours thereafter.
- b. Initially and at least once per 12 hours when the reactor is operating with a LIMITING CONTROL ROD PATTERN for MCPR.

3/4.3 INSTRUMENTATION

3/4.3.1 REACTOR PROTECTION SYSTEM INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.1 As a minimum, the reactor protection system instrumentation channels shown in Table 3.3.1-1 shall be OPERABLE.

APPLICABILITY: As shown in Table 3.3.1-1.

ACTION:

- a. With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip System requirement for one trip system, place the inoperable channel(s) and/or that trip system in the tripped condition* within twelve hours. ~~The provisions of Specification 3.0.4 are not applicable.~~
- b. With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip System requirement for both trip systems, place at least one trip system** in the tripped condition within one hour and take the ACTION required by Table 3.3.1-1.

SURVEILLANCE REQUIREMENTS

4.3.1.1 Each reactor protection system instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL FUNCTIONAL TEST and CHANNEL CALIBRATION operations for the OPERATIONAL CONDITIONS and at the frequencies shown in Table 4.3.1.1-1.

4.3.1.2 LOGIC SYSTEM FUNCTIONAL TESTS and simulated automatic operation of all channels shall be performed at least once per 18 months.

4.3.1.3 The REACTOR PROTECTION SYSTEM RESPONSE TIME of each reactor trip functional unit shall be demonstrated to be within its limit at least once per 18 months. Neutron detectors are exempt from response time testing. For the Reactor Vessel Steam Dome Pressure - High Functional Unit and the Reactor Vessel Water Level - Low, Level 3 Functional Unit, the sensor is eliminated from response time testing for RPS circuits. Each test shall include at least one channel per trip system such that all channels are tested at least once every N times 18 months where N is the total number of redundant channels in a specific reactor trip system.

4.3.1.4 The provisions of Specification 4.0.4 are not applicable for entry into OPERATIONAL CONDITION 2 or 3 from OPERATIONAL CONDITION 1 for the Intermediate Range Monitors.

*An inoperable channel need not be placed in the tripped condition where this would cause the Trip Function to occur. In these cases, the inoperable channel shall be restored to OPERABLE status within 6 hours or the ACTION required by Table 3.3.1-1 for that Trip Function shall be taken.

**If more channels are inoperable in one trip system than in the other, place the trip system with more inoperable channels in the tripped condition, except when this would cause the Trip Function to occur.

INSTRUMENTATION

3/4.3.2 ISOLATION ACTUATION INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.2 The isolation actuation instrumentation channels shown in Table 3.3.2-1 shall be OPERABLE with their trip setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.3.2-2.

APPLICABILITY: As shown in Table 3.3.2-1.

ACTION:

- a. With an isolation actuation instrumentation channel trip setpoint less conservative than the value shown in the Allowable Values column of Table 3.3.2-2, declare the channel inoperable until the channel is restored to OPERABLE status with its trip setpoint adjusted consistent with the Trip Setpoint value.
- b. With the number of OPERABLE channels less than required by the minimum OPERABLE channels per trip system requirement for one trip system, either
 - 1) place the inoperable channel(s) in the tripped condition within
 - a) 1 hour for trip functions without an OPERABLE channel,
 - b) 12 hours for trip functions common to RPS instrumentation, and
 - c) 24 hours for trip functions not common to RPS instrumentation,
 - or
 - 2) take the ACTION required by Table 3.3.2-1.

~~The provisions of Specification 3.0.4 are not applicable.~~

- c. With the number of OPERABLE channels less than required by the minimum OPERABLE channels per trip system requirement for both trip systems,
 - 1) place the inoperable channel(s) in one trip system in the tripped condition within one hour, and
 - 2) a) place the inoperable channel(s) in the remaining trip system in the tripped condition within
 - 1) 1 hour for trip functions without an OPERABLE channel,
 - 2) 12 hours for trip functions common to RPS instrumentation, and
 - 3) 24 hours for trip functions not common to RPS instrumentation,
 - or
 - b) take the ACTION required by Table 3.3.2-1.

~~The provisions of Specification 3.0.4 are not applicable.~~

INSTRUMENTATION

3/4.3.7 MONITORING INSTRUMENTATION

RADIATION MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.7.1 The radiation monitoring instrumentation channels shown in Table 3.3.7.1-1 shall be OPERABLE with their alarm/trip setpoints within the specified limits.

APPLICABILITY: As shown in Table 3.3.7.1-1.

ACTION:

- a. With a radiation monitoring instrumentation channel alarm/trip setpoint exceeding the value shown in Table 3.3.7.1-1, adjust the setpoint to within the limit within 4 hours or declare the channel inoperable.
- b. With one or more radiation monitoring channels inoperable, take the ACTION required by Table 3.3.7.1-1.
- c. The provisions of Specifications 3.0.3 and ~~3.0.4~~ are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.7.1 Each of the above required radiation monitoring instrumentation channels shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL FUNCTIONAL TEST and CHANNEL CALIBRATION operations for the conditions and at the frequencies shown in Table 4.3.7.1-1.

INSTRUMENTATION

REMOTE SHUTDOWN SYSTEM INSTRUMENTATION AND CONTROLS

LIMITING CONDITION FOR OPERATION

3.3.7.4 The remote shutdown system instrumentation and controls shown in Table 3.3.7.4-1 and Table 3.3.7.4-2 shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1 and 2.

ACTION:

- a. With the number of OPERABLE remote shutdown monitoring instrumentation channels less than required by Table 3.3.7.4-1, restore the inoperable channel(s) to OPERABLE status within 7 days or be in at least HOT SHUTDOWN within the next 12 hours.
- b. With the number of OPERABLE remote shutdown system controls less than required in Table 3.3.7.4-2, restore the inoperable control(s) to OPERABLE status within 7 days or be in at least HOT SHUTDOWN within the next 12 hours.
- ~~c. The provisions of Specification 3.0.4 are not applicable.~~

SURVEILLANCE REQUIREMENTS

4.3.7.4.1 Each of the above required remote shutdown monitoring instrumentation channels shall be demonstrated OPERABLE by performance of the CHANNEL CHECK and CHANNEL CALIBRATION operations at the frequencies shown in Table 4.3.7.4-1.

4.3.7.4.2 At least one of each of the above remote shutdown control switch(es) and control circuits shall be demonstrated OPERABLE by verifying its capability to perform its intended function(s) at least once per 18 months.

INSTRUMENTATION

3/4.3.10 MECHANICAL VACUUM PUMP TRIP INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.10 Two channels of the Main Steam Line Radiation - High, High function for the mechanical vacuum pump trip shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1 and 2 with mechanical vacuum pump in service and any main steam line not isolated.

ACTION:

- a. With one channel of the Main Steam Line Radiation - High, High function for the mechanical vacuum pump trip inoperable, restore the channel to OPERABLE status within 12 hours. Otherwise, trip the mechanical vacuum pumps, or isolate the main steam lines or be in HOT SHUTDOWN within the next 12 hours.

~~The provisions of Specification 3.0.4 are not applicable.~~

- b. With mechanical vacuum pump trip capability not maintained:
 1. Trip the mechanical vacuum pumps within 12 hours; or
 2. Isolate the main steam lines within 12 hours; or
 3. Be in HOT SHUTDOWN within 12 hours.

~~The provisions of Specification 3.0.4 are not applicable.~~

- c. When a channel is placed in an inoperable status solely for the performance of required Surveillances, entry into the associated ACTIONS may be delayed for up to 6 hours provided the mechanical vacuum pump trip capability is maintained.

SURVEILLANCE REQUIREMENTS

4.3.10 Each channel of the Main Steam Line Radiation - High, High function for the mechanical vacuum pump trip shall be demonstrated OPERABLE by:

- a. Performance of a CHANNEL CHECK at least once per 12 hours;
- b. Performance of a CHANNEL FUNCTIONAL TEST at least once per 92 days;
- c. Performance of a CHANNEL CALIBRATION at least once per 18 months. The Allowable Value shall be $\leq 3.6 \times$ normal background; and
- d. Performance of a LOGIC SYSTEM FUNCTIONAL TEST, including mechanical vacuum pump trip breaker actuation, at least once per 18 months.

REACTOR COOLANT SYSTEM

ACTION (Continued)

- reduced to those applicable for single recirculation loop operation, place at least one affected channel in the tripped condition and within the following 6 hours, reduce the Trip Setpoints and Allowable Values of the affected channels to those applicable for single recirculation loop operation per Specification 3.3.6.
4. Within 4 hours, reduce the Rod Block Monitor Trip Setpoints and Allowable Values to those applicable for single recirculation loop operation per Specification 3.3.6; otherwise, with the Trip Setpoints and Allowable Values associated with one trip function not reduced to those applicable for single recirculation loop operation, place at least one affected channel in the tripped condition and within the following 6 hours, reduce the Trip setpoints and Allowable Values of the remaining channels to those applicable for single recirculation loop operation per Specification 3.3.6.
 - ~~5. The provisions of Specification 3.0.4 are not applicable.~~
 6. Otherwise be in at least HOT SHUTDOWN within the next 12 hours.
- b. With no reactor coolant system recirculation loops in operation, initiate measures to place the unit in at least STARTUP within 6 hours and in HOT SHUTDOWN within the next 6 hours.

REACTOR COOLANT SYSTEM

3/4.4.7 MAIN STEAM LINE ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

3.4.7 Two main steam line isolation valves (MSIVs) per main steam line shall be OPERABLE with closing times greater than or equal to 3 and less than or equal to 5 seconds.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2 and 3.

ACTION:

- a. With one or more MSIVs inoperable:
 1. Maintain at least one MSIV OPERABLE in each affected main steam line that is open and within 8 hours, either:
 - a) Restore the inoperable valve(s) to OPERABLE status, or
 - b) Isolate the affected main steam line by use of a deactivated MSIV in the closed position.
 2. Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- ~~b. The provisions of Specification 3.0.4 are not applicable.~~

SURVEILLANCE REQUIREMENTS

4.4.7 Each of the above required MSIVs shall be demonstrated OPERABLE by verifying full closure between 3 and 5 seconds when tested pursuant to Specification 4.0.5.

REACTOR COOLANT SYSTEM

3/4.4.9 RESIDUAL HEAT REMOVAL

HOT SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.4.9.1 Two[#] shutdown cooling mode loops of the residual heat removal (RHR) system shall be OPERABLE and, unless at least one recirculation pump is in operation, at least one shutdown cooling mode loop shall be in operation*^{##}, with each loop consisting of:

- a. One OPERABLE RHR pump, and
- b. One OPERABLE RHR heat exchanger.

APPLICABILITY: OPERATIONAL CONDITION 3, with reactor vessel pressure less than the RHR cut-in permissive setpoint.

ACTION:

- a. With less than the above required RHR shutdown cooling mode loops OPERABLE, immediately initiate corrective action to return the required loops to OPERABLE status as soon as possible. Within one hour and at least once per 24 hours thereafter, demonstrate the operability of at least one alternate method capable of decay heat removal for each inoperable RHR shutdown cooling mode loop. Be in at least COLD SHUTDOWN within 24 hours.**
- b. With no RHR shutdown cooling mode loop or recirculation pump in operation, immediately initiate corrective action to return at least one loop to operation as soon as possible. Within one hour establish reactor coolant circulation by an alternate method and monitor reactor coolant temperature and pressure at least once per hour.
- e. ~~The provisions of Specification 3.0.4 are not applicable.~~

SURVEILLANCE REQUIREMENTS

4.4.9.1 At least one shutdown cooling mode loop of the residual heat removal system, one recirculation pump, or alternate method shall be determined to be in operation and circulating reactor coolant at least once per 12 hours.

[#] One RHR shutdown cooling mode loop may be inoperable for up to 2 hours for surveillance testing provided the other loop is OPERABLE and in operation or at least one recirculation pump is in operation.

* The shutdown cooling pump may be removed from operation for up to 2 hours per 8 hour period provided the other loop is OPERABLE.

^{##} The RHR shutdown cooling mode loop may be removed from operation during hydrostatic testing.

** Whenever two or more RHR subsystems are inoperable, if unable to attain COLD SHUTDOWN as required by this ACTION, maintain reactor coolant temperature as low as practical by use of alternate heat removal methods.

CONTAINMENT SYSTEMS

PRIMARY CONTAINMENT AIR LOCKS

LIMITING CONDITION FOR OPERATION

3.6.1.3 Each primary containment air lock shall be OPERABLE with:

- a. Both doors closed except when the air lock is being used for normal transit entry and exit through the containment, then at least one air lock door shall be closed, and
- b. An overall air lock leakage rate in accordance with the Primary Containment Leakage Rate Testing Program.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2* and 3.

ACTION:

- a. With one primary containment air lock door inoperable:
 1. Maintain at least the OPERABLE air lock door closed and either restore the inoperable air lock door to OPERABLE status within 24 hours or lock the OPERABLE air lock door closed.
 2. Operation may then continue until performance of the next required overall air lock leakage test provided that the OPERABLE air lock door is verified to be locked closed at least once per 31 days.
 3. Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
 - ~~4. The provisions of Specification 3.0.4 are not applicable.~~
- b. With the primary containment air lock inoperable, except as a result of an inoperable air lock door, maintain at least one air lock door closed; restore the inoperable air lock to OPERABLE status within 24 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

*See Special Test Exception 3.10.1.

CONTAINMENT SYSTEMS

3/4.6.3 PRIMARY CONTAINMENT ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

3.6.3 Each primary containment isolation valve and each reactor instrumentation line excess flow check valve shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2 and 3.

ACTION:

a. With one or more of the primary containment isolation valves inoperable, maintain at least one isolation valve OPERABLE in each affected penetration that is open and within 4 hours either:

1. Restore the inoperable valve(s) to OPERABLE status, or
2. Isolate each affected penetration by use of at least one deactivated automatic valve secured in the isolated position,* or
3. Isolate each affected penetration by use of at least one closed manual valve or blind flange.*

~~4. The provisions of Specification 3.0.4 are not applicable provided that within 4 hours the affected penetration is isolated in accordance with ACTION a.2. or a.3. above, and provided that the associated system, if applicable, is declared inoperable and the appropriate ACTION statements for that system are performed.~~

Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

b. With one or more of the reactor instrumentation line excess flow check valves inoperable, operation may continue and the provisions of Specifications 3.0.3 and 3.0.4 are not applicable provided that within 4 hours either:

1. The inoperable valve is returned to OPERABLE status, or
2. The instrument line is isolated and the associated instrument is declared inoperable.

Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

* Isolation valves closed to satisfy these requirements may be reopened on an intermittent basis under administrative control.

ELECTRICAL POWER SYSTEMS

PRIMARY CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

LIMITING CONDITION FOR OPERATION

3.8.4.1 All primary containment penetration conductor overcurrent protective devices shown in Table 3.8.4.1-1 shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2 and 3.

ACTION:

a. With one or more of the primary containment penetration conductor overcurrent protective devices shown in Table 3.8.4.1-1 inoperable, declare the affected system or component inoperable and apply the appropriate ACTION statement for the affected system, and

1. For 4.16 kV circuit breakers, de-energize the 4.16 kV circuit(s) by tripping the associated redundant circuit breaker(s) within 72 hours and verify the redundant circuit breaker to be tripped at least once per 7 days thereafter.
2. For 480 volt circuit breakers, remove the inoperable circuit breaker(s) from service by disconnecting* the breaker within 72 hours and verify the inoperable breaker(s) to be disconnected at least once per 7 days thereafter.

Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

b. ~~The provisions of Specification 3.0.4 are not applicable to overcurrent devices in 4.16 kV circuits which have their redundant circuit breakers tripped or to 480 volt circuits which have the inoperable circuit breaker disconnected.*~~

SURVEILLANCE REQUIREMENTS

4.8.4.1 Each of the primary containment penetration conductor overcurrent protective devices shown in Table 3.8.4.1-1 shall be demonstrated OPERABLE:

- a. At least once per 18 months:
 1. By verifying that each of the medium voltage 4.16 kV circuit breakers are OPERABLE by performing:
 - a) A CHANNEL CALIBRATION of the associated protective relays, and
 - b) An integrated system functional test which includes simulated automatic actuation of the system and verifying that each relay and associated circuit breakers and overcurrent control circuits function as designed.

*After being disconnected, these breakers shall be maintained disconnected under administrative control.

ELECTRICAL POWER SYSTEMS

CLASS 1E ISOLATION BREAKER OVERCURRENT PROTECTIVE DEVICES

LIMITING CONDITION FOR OPERATION

3.8.4.5 All Class 1E isolation breaker (tripped by a LOCA signal) overcurrent protective devices shown in Table 3.8.4.5-1 shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2 and 3.

ACTION:

a. With one or more of the overcurrent protective devices shown in Table 3.8.4.5-1 inoperable, declare the affected isolation breaker inoperable and remove the inoperable circuit breaker(s) from service within 72 hours and verify the inoperable breaker(s) to be disconnected at least once per 7 days thereafter.

~~b. The provisions of Specification 3.0.4 are not applicable to overcurrent devices in 480 volt circuits which have the inoperable circuit breaker disconnected.~~

SURVEILLANCE REQUIREMENTS

4.8.4.5 Each of the Class 1E isolation breaker overcurrent protective devices shown in Table 3.8.4.5-1 shall be demonstrated OPERABLE:

a. At least once per 18 months:

By selecting and functionally testing a representative sample of at least 10% of each type of lower voltage circuit breakers. Circuit breakers selected for functional testing shall be selected on a rotating basis. Testing of these circuit breakers shall consist of injecting a current with a value between 150% and 300% of the pickup of the long time delay trip element and a value between 150% and 250% of the pickup of the short time delay, and verifying that the circuit breaker operates within the time delay band width for that current specified by the manufacturer. The instantaneous element shall be tested by injecting a current in excess of 120% of the pickup value of the element and verifying that the circuit breaker trips instantaneously with no intentional time delay. Molded case circuit breaker testing shall also follow this procedure except that generally no more than two trip elements, time delay and instantaneous, will be involved. For circuit breakers equipped with solid state trip devices, the functional testing may be performed with use of portable instruments designed to verify the time-current characteristics and pickup calibration of the trip elements. Circuit breakers found inoperable during functional testing shall be restored to OPERABLE status prior to resuming operation. For each circuit breaker found inoperable during these functional tests, an additional representative sample of at least 10% of all the circuit breakers of the inoperable type shall also be functionally tested until no more failures are found or all circuit breakers of that type have been functionally tested.

b. At least once per 60 months by subjecting each circuit breaker to an inspection and preventive maintenance in accordance with procedures prepared in conjunction with its manufacturer's recommendations.

LIST OF REGULATORY COMMITMENTS

The following table identifies those actions committed to by PSEG in this document. Any other statements in this submittal are provided for information only purposes and are not considered to be regulatory commitments.

Regulatory Commitment	Committed Date	Commitment Type	
		One-Time Action (Yes/No)	Programmatic (Yes/No)
PSEG will establish the Technical Specification Bases for LCO 3.0.4 and SR 4.0.4 as adopted with this license amendment request.	Concurrent with implementation of the amendment	Yes	No

PROPOSED CHANGES TO TS BASES PAGES

The following Technical Specifications Bases for Hope Creek, Facility Operating License No. NPF-57, are affected by this change request:

Bases No.	Title	Page
3.0.4	APPLICABILITY - LIMITING CONDITION FOR OPERATION	B 3/4 0-3
4.0.4	APPLICABILITY - SURVEILLANCE	B 3/4 0-5, 0-6
3/4.4.5	RCS SPECIFIC ACTIVITY	B 3/4 4-4
3/4.5.1	ECCS - OPERATING	B 3/4 5-1a
3/4.7.4	RCIC	B 3/4 7-1b
3/4.8.1.	A.C. SOURCES	B 3/4 8-1

Note that the pre-existing LCO 3.0.4 exceptions that are being removed by this proposed amendment (See Attachment 2) are not discussed in the current Hope Creek TS Bases; therefore no changes to the Bases are required.

Insert 1B (LCO 3.0.4 BASES)

LCO 3.0.4 establishes limitations on changes in OPERATIONAL CONDITIONS or other specified conditions in the Applicability when an LCO is not met. It allows placing the unit in an OPERATIONAL CONDITION or other specified condition stated in that Applicability (e.g., the Applicability desired to be entered) when unit conditions are such that the requirements of the LCO would not be met, in accordance with LCO 3.0.4.a, LCO 3.0.4.b, or LCO 3.0.4.c.

LCO 3.0.4.a allows entry into an OPERATIONAL CONDITION or other specified condition in the Applicability with the LCO not met when the associated ACTIONS to be entered permit continued operation in the OPERATIONAL CONDITION or other specified condition in the Applicability for an unlimited period of time. Compliance with Required Actions that permit continued operation of the unit for an unlimited period of time in an OPERATIONAL CONDITION or other specified condition provides an acceptable level of safety for continued operation. This is without regard to the status of the unit before or after the OPERATIONAL CONDITION change. Therefore, in such cases, entry into an OPERATIONAL CONDITION or other specified condition in the Applicability may be made in accordance with the provisions of the Required Actions.

LCO 3.0.4.b allows entry into an OPERATIONAL CONDITION or other specified condition in the Applicability with the LCO not met after performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering the OPERATIONAL CONDITION or other specified condition in the Applicability, and establishment of risk management actions, if appropriate.

The risk assessment may use quantitative, qualitative, or blended approaches, and the risk assessment will be conducted using the plant program, procedures, and criteria in place to implement 10 CFR 50.65(a)(4), which requires that risk impacts of maintenance activities to be assessed and managed. The risk assessment, for the purposes of LCO 3.0.4.b, must take into account all inoperable Technical Specification equipment regardless of whether the equipment is included in the normal 10 CFR 50.65(a)(4) risk assessment scope. The risk assessments will be conducted using the procedures and guidance endorsed by Regulatory Guide 1.182, "Assessing and Managing Risk Before Maintenance Activities at Nuclear Power Plants." Regulatory Guide 1.182 endorses the guidance in Section 11 of NUMARC 93-01, "Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants." These documents address general guidance for conduct of the risk assessment, quantitative and qualitative guidelines for establishing risk management actions, and example risk management actions. These include actions to plan and conduct other activities in a manner that controls overall risk, increased risk awareness by shift and management personnel, actions to reduce the duration of the condition, actions to minimize the magnitude of risk increases (establishment of backup success paths or compensatory measures), and determination that the proposed OPERATIONAL CONDITION change is acceptable. Consideration should also be given to the probability of completing restoration such that the requirements of the LCO would be met prior to the expiration of ACTIONS Completion Times that would require exiting the Applicability.

LCO 3.0.4.b may be used with single, or multiple systems and components unavailable. NUMARC 93-01 provides guidance relative to consideration of simultaneous unavailability of multiple systems and components.

The results of the risk assessment shall be considered in determining the acceptability of entering the OPERATIONAL CONDITION or other specified condition in the Applicability, and any corresponding risk management actions. The LCO 3.0.4.b risk assessments do not have to be documented.

The Technical Specifications allow continued operation with equipment unavailable in OPERATIONAL CONDITION 1 for the duration of the Completion Time. Since this is allowable, and since in general the risk impact in that particular OPERATIONAL CONDITION bounds the risk of transitioning into and through the applicable OPERATIONAL CONDITIONS or other specified conditions in the Applicability of the LCO, the use of the LCO 3.0.4.b allowance should be generally acceptable, as long as the risk is assessed and managed as stated above. However, there is a small subset of systems and components that have been determined to be more important to risk and use of the LCO 3.0.4.b allowance is prohibited. The LCOs governing these system and components contain Notes prohibiting the use of LCO 3.0.4.b by stating that LCO 3.0.4.b is not applicable.

LCO 3.0.4.c allows entry into an OPERATIONAL CONDITION or other specified condition in the Applicability with the LCO not met based on an ACTION in the Specification which states LCO 3.0.4.c is applicable. These specific allowances permit entry into OPERATIONAL CONDITIONS or other specified conditions in the Applicability when the associated ACTIONS to be entered do not provide for continued operation for an unlimited period of time and a risk assessment has not been performed. This allowance may apply to all the ACTIONS or to a specific Required Action of a Specification. The risk assessments performed to justify the use of LCO 3.0.4.b usually only consider systems and components. For this reason, LCO 3.0.4.c is typically applied to Specifications that describe values and parameters (e.g., Containment Air Temperature, Containment Pressure, Moderator Temperature Coefficient), and may be applied to other Specifications based on NRC plant-specific approval.

The provisions of this Specification should not be interpreted as endorsing the failure to exercise the good practice of restoring systems or components to OPERABLE status before entering an associated OPERATIONAL CONDITION or other specified condition in the Applicability.

The provisions of LCO 3.0.4 shall not prevent changes in OPERATIONAL CONDITIONS or other specified conditions in the Applicability that are required to comply with ACTIONS. In addition, the provisions of LCO 3.0.4 shall not prevent changes in OPERATIONAL CONDITIONS or other specified conditions in the Applicability that result from any unit shutdown. In this context, a unit shutdown is defined as a change in OPERATIONAL CONDITION or other specified condition in the Applicability associated with transitioning from OPERATIONAL CONDITION 1 to OPERATIONAL CONDITION 2, OPERATIONAL CONDITION 2 to OPERATIONAL CONDITION 3, OPERATIONAL CONDITION 3 to OPERATIONAL CONDITION 4, and OPERATIONAL CONDITION 4 to OPERATIONAL CONDITION 5.

Upon entry into an OPERATIONAL CONDITION or other specified condition in the Applicability with the LCO not met, LCO 3.0.1 and LCO 3.0.2 require entry into the applicable Conditions and Required Actions until the Condition is resolved, until the LCO is met, or until the unit is not within the Applicability of the Technical Specification.

Surveillances do not have to be performed on the associated inoperable equipment (or on variables outside the specified limits), as permitted by SR 4.0.1. Therefore, utilizing LCO 3.0.4 is not a violation of SR 4.0.1 or SR 4.0.4 for any Surveillances that have not been performed on inoperable equipment. However, SRs must be met to ensure OPERABILITY prior to declaring the associated equipment OPERABLE (or variable within limits) and restoring compliance with the affected LCO.

INSERT 2B (SR 4.0.4 BASES)

SR 4.0.4 establishes the requirement that all applicable SRs must be met before entry into an OPERATIONAL CONDITION or other specified condition in the Applicability.

This Specification ensures that system and component OPERABILITY requirements and variable limits are met before entry into OPERATIONAL CONDITIONS or other specified conditions in the Applicability for which these systems and components ensure safe operation of the unit. The provisions of this Specification should not be interpreted as endorsing the failure to exercise the good practice of restoring systems or components to OPERABLE status before entering an associated OPERATIONAL CONDITION or other specified condition in the Applicability.

A provision is included to allow entry into an OPERATIONAL CONDITION or other specified condition in the Applicability when an LCO is not met due to Surveillance not being met in accordance with LCO 3.0.4.

However, in two certain circumstances, failing to meet an SR will not result in SR 4.0.4 restricting an OPERATIONAL CONDITION change or other specified condition change:

- (1) When a system, subsystem, division, component, device or variable is inoperable or outside its specified limits, the associated SR(s) are not required to be performed, per SR 4.0.1, which states that surveillances do not have to be performed on inoperable equipment. When equipment is inoperable, SR 4.0.4 does not apply to the associated SR(s) since the requirement for the SR(s) to be performed is removed. Therefore, failing to perform the Surveillance(s) within the specified Frequency does not result in an SR 4.0.4 restriction to changing OPERATIONAL CONDITIONS or other specified conditions of the Applicability. However, since the LCO is not met in this instance, LCO 3.0.4 will govern any restrictions that may (or may not) apply to OPERATIONAL CONDITION or other specified condition changes.
- (2) SR 4.0.4 does not restrict changing OPERATIONAL CONDITIONS or other specified conditions of the Applicability when a Surveillance has not been performed within the specified Frequency, provided the requirement to declare the LCO not met has been delayed in accordance with SR 4.0.3.

The provisions of SR 4.0.4 shall not prevent entry into OPERATIONAL CONDITIONS or other specified conditions in the Applicability that are required to comply with ACTIONS. In addition, the provisions of SR 4.0.4 shall not prevent changes in OPERATIONAL CONDITIONS or other specified conditions in the Applicability that result from any unit shutdown. In this context, a unit shutdown is defined as a change in OPERATIONAL CONDITION or other specified condition in the Applicability associated with transitioning from OPERATIONAL CONDITION 1 to OPERATIONAL CONDITION 2, OPERATIONAL CONDITION 2 to OPERATIONAL CONDITION 3, OPERATIONAL CONDITION 3 to OPERATIONAL CONDITION 4, and OPERATIONAL CONDITION 4 to OPERATIONAL CONDITION 5.

The precise requirements for performance of SRs are specified such that exceptions to SR 4.0.4 are not necessary. The specific time frames and conditions necessary for meeting the SRs are specified in the Frequency, in the Surveillance, or both. This allows performance of Surveillances when the prerequisite condition(s) specified in a Surveillance procedure require entry into the OPERATIONAL CONDITION or other specified condition in the Applicability of the associated LCO prior to the performance or completion of a Surveillance. A Surveillance that could not be performed until after entering the LCO's Applicability would have its Frequency specified such that it is not "due" until the specific conditions needed are met. Alternately, the Surveillance may be stated in the form of a Note, as not required (to be met or performed) until a particular event, condition, or time has been reached. Further discussion of the specific formats of SRs' annotation is found in Section 1.4, Frequency.

INSERT 3B (*LCO 3.4.5 - RCS SPECIFIC ACTIVITY BASES*)

A Note permits the use of the provisions of LCO 3.0.4.c. This allowance permits entry into the applicable OPERATIONAL CONDITION(S) while relying on the ACTIONS.

INSERT 4B (*LCO 3.5.1, ECCS - OPERATING*)

A Note prohibits the application of LCO 3.0.4.b to an inoperable HPCI subsystem . There is an increased risk associated with entering an OPERATIONAL CONDITION or other specified condition in the Applicability with an inoperable HPCI subsystem and the provisions of LCO 3.0.4.b, which allow entry into an OPERATIONAL CONDITION or other specified condition in the Applicability with the LCO not met after performance of a risk assessment addressing inoperable systems and components, should not be applied in this circumstance.

INSERT 5B (*LCO 3.7.4, RCIC SYSTEM*)

A Note prohibits the application of LCO 3.0.4.b to an inoperable RCIC system. There is an increased risk associated with entering an OPERATIONAL CONDITION or other specified condition in the Applicability with an inoperable RCIC system and the provisions of LCO 3.0.4.b, which allow entry into an OPERATIONAL CONDITION or other specified condition in the Applicability with the LCO not met after performance of a risk assessment addressing inoperable systems and components, should not be applied in this circumstance.

INSERT 6B (*LCO 3.8.1.1, AC SOURCES-OPERATING*)

A Note prohibits the application of LCO 3.0.4.b to an inoperable DG. There is an increased risk associated with entering an OPERATIONAL CONDITION or other specified condition in the Applicability with an inoperable DG and the provisions of LCO 3.0.4.b, which allow entry into an OPERATIONAL CONDITION or other specified condition in the Applicability with the LCO not met after performance of a risk assessment addressing inoperable systems and components, should not be applied in this circumstance.

3/4.0 APPLICABILITY

BASES (Con't)

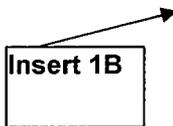
a lower CONDITION of operation is reached in less time than allowed, the total allowable time to reach COLD SHUTDOWN, or other OPERATIONAL CONDITION, is not reduced. For example, if STARTUP is reached in 2 hours, the time allowed to reach HOT SHUTDOWN is the next 11 hours because the total time to reach HOT SHUTDOWN is not reduced from the allowable limit of 13 hours. Therefore, if remedial measures are completed that would permit a return to POWER operation, a penalty is not incurred by having to reach a lower CONDITION of operation in less than the total time allowed.

The same principle applies with regard to the allowable outage time limits of the ACTION requirements, if compliance with the ACTION requirements for one specification results in entry into an OPERATIONAL CONDITION or condition of operation for another specification in which the requirements of the Limiting Condition for Operation are not met. If the new specification becomes applicable in less time than specified, the difference may be added to the allowable outage time limits of the second specification. However, the allowable outage time limits of ACTION requirements for a higher CONDITION of operation may not be used to extend the allowable outage time that is applicable when a Limiting Condition for Operation is not met in a lower CONDITION of operation.

The shutdown requirements of Specification 3.0.3 do not apply in CONDITIONS 4 and 5, because the ACTION requirements of individual specifications define the remedial measures to be taken.

~~Specification 3.0.4 establishes limitations on a change in OPERATIONAL CONDITIONS when a Limiting Condition for Operation is not met. It precludes placing the facility in a higher CONDITION of operation when the requirements for a Limiting Condition for Operation are not met and continued noncompliance to these conditions would result in a shutdown to comply with the ACTION requirements if a change in CONDITIONS were permitted. The purpose of this specification is to ensure that facility operation is not initiated or that higher CONDITIONS of operation are not entered when corrective action is being taken to obtain compliance with a specification by restoring equipment to OPERABLE status or parameters to specified limits. Compliance with ACTION requirements that permit continued operation of the facility for an unlimited period of time provides an acceptable level of safety for continued operation without regard to the status of the plant before or after a change in OPERATIONAL CONDITIONS. Therefore, in this case, entry into an OPERATIONAL CONDITION or other specified condition may be made in accordance with the provisions of the ACTION requirements. The provisions of this specification should not, however, be interpreted as endorsing the failure to exercise good practice in restoring systems or components to OPERABLE status before plant startup.~~

~~When a shutdown is required to comply with ACTION requirements, the provisions of Specification 3.0.4 do not apply because they would delay placing the facility in a lower CONDITION of operation.~~



Insert 1B

3/4.0 APPLICABILITY

BASES (Con't)

When a Surveillance with a frequency based not on time intervals, but upon specified unit conditions, operating situations, or requirements of regulations (e.g., prior to entering Mode 1 after each fuel loading, or in accordance with 10CFR50 Appendix J, as modified by approved exemptions, etc.) is discovered not to have been performed when specified, SR 4.0.3 allows the full delay period of up to the specified Frequency to perform the Surveillance. However, since there is not a time interval specified, the missed Surveillance should be performed at the first reasonable opportunity. SR 4.0.3 also provides a time limit for, and allowances for the performance of, Surveillances that become applicable as a consequence of MODE changes imposed by Required Actions.

Failure to comply with specified frequencies for Surveillances is expected to be an infrequent occurrence. Use of the delay period established by SR 4.0.3 is a flexibility which is not intended to be used as an operational convenience to extend Surveillance intervals. While up to 24 hours or the limit of the specified Frequency is provided to perform the missed Surveillance, it is expected that the missed Surveillance will be performed at the first reasonable opportunity. The determination of the first reasonable opportunity should include consideration of the impact on plant risk (from delaying the Surveillance as well as any plant configuration changes required or shutting the plant down to perform the Surveillance) and impact on any analysis assumptions, in addition to unit conditions, planning, availability of personnel, and the time required to perform the Surveillance.

This risk impact should be managed through the program in place to implement 10 CFR50.65(a)(4) and its implementation guidance, NRC Regulatory Guide 1.182, 'Assessing and Managing Risk Before Maintenance Activities at Nuclear Power Plants.' This Regulatory Guide addresses consideration of temporary and aggregate risk impacts, determination of risk management action thresholds, and risk management action up to and including plant shutdown. The missed Surveillance should be treated as an emergent condition as discussed in the Regulatory Guide. The risk evaluation may use quantitative, qualitative, or blended methods. The degree of depth and rigor of the evaluation should be commensurate with the importance of the component. Missed Surveillances for important components should be analyzed quantitatively. If the results of the risk evaluation determine the risk increase is significant, this evaluation should be used to determine the safest course of action. All missed Surveillances will be placed in the licensee's Corrective Action Program.

If a Surveillance is not completed within the allowed delay period, then the equipment is considered inoperable, or the variable is considered outside the specified limits, and the Completion Times of the Required Actions for the applicable LCO begin immediately upon expiration of the delay period. If a Surveillance is failed within the delay period, then the equipment is inoperable, or the variable is outside the specified limits, and the Completions Times of the Required Actions for the applicable LCO begins immediately upon the failure of the Surveillance.

Completion of the Surveillance within the delay period allowed by this Specification, or within the Completion Time of the Actions, restores compliance with SR 4.0.1.

~~Specification 4.0.4 establishes the requirement that all applicable surveillances must be met before entry into an OPERATIONAL CONDITION or other~~

3/4.0 APPLICABILITY

BASES (Con't)

~~condition of operation specified in the Applicability statement. The purpose of this specification is to ensure that system and component OPERABILITY requirements or parameter limits are met before entry into an OPERATIONAL CONDITION or other specified condition for which these systems and components ensure safe operation of the facility. This provision applies to changes in OPERATIONAL CONDITIONS or other specified conditions associated with plant shutdown as well as startup.~~

~~Under the provisions of this specification, the applicable Surveillance Requirements must be performed within the specified surveillance interval to assume that the Limiting Conditions for Operation are met during initial plant startup or following a plant outage.~~

~~When a shutdown is required to comply with ACTION requirements, the provisions of Specification 4.0.4 do not apply because this would delay placing the facility in a lower CONDITIONS of operation.~~

Specification 4.0.5 establishes the requirement that inservice inspection of ASME Code Class 1, 2, and 3 components and inservice testing of ASME Code Class 1, 2, and 3 pumps and valves shall be performed in accordance with a periodically updated version of Section XI of the ASME Boiler and Pressure Vessel Code and Addenda as required by 10 CFR 50.55a. These requirements apply except when relief has been provided in writing by the Commission.

This specification includes a clarification of the frequencies for performing the inservice inspection and testing activities required by Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda. This clarification is provided to ensure consistency in surveillance intervals throughout the Technical Specifications and to remove any ambiguities relative to the frequencies for performing the required inservice inspection and testing activities.

Under the terms of this specification, the more restrictive requirements of the Technical Specifications take precedence over the ASME Boiler and Pressure Vessel Code and applicable Addenda. The requirements of Specification 4.0.4 to perform surveillance activities before entry into an OPERATIONAL CONDITION or other specified condition takes precedence over the ASME Boiler and Pressure Vessel Code provision that allows pumps and valves to be tested up to one week after return to normal operation. The Technical Specification definition of OPERABLE does not allow a grace period before a component, which is not capable of performing its specified function, is declared inoperable and takes precedence over the ASME Boiler and Pressure Vessel Code provision that allows a valve to be incapable of performing its specified function for up to 24 hours before being declared inoperable.

This specification includes inservice inspection requirements that conform to the guidance of Generic Letter 88-01, "NRC Position on IGSCC in BWR Austenitic Stainless Steel Piping."

REACTOR COOLANT SYSTEM

BASES

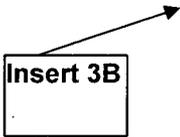
3/4.4.5 SPECIFIC ACTIVITY

The limitations on the specific activity of the primary coolant ensure that the 2 hour thyroid and whole body doses resulting from a main steam line failure outside the containment during steady state operation will not exceed small fractions of the dose guidelines of 10 CFR 100. The values for the limits on specific activity represent interim limits based upon a parametric evaluation by the NRC of typical site locations. These values are conservative in that specific site parameters, such as site boundary location and meteorological conditions, were not considered in this evaluation.

The ACTION statement permitting POWER OPERATION to continue for limited time periods with the primary coolant's specific activity greater than 0.2 microcuries per gram DOSE EQUIVALENT I-131, but less than or equal to 4.0 microcuries per gram DOSE EQUIVALENT I-131, accommodates possible iodine spiking phenomenon which may occur following changes in THERMAL POWER. Monitoring the iodine activity in the primary coolant and taking responsible actions to maintain it at a reasonably low level will aid in ensuring the accumulated time of plant operation with high iodine activity will not exceed 800 hours in a consecutive 12-month period. The results of all primary coolant specific activity analyses which exceed the limits of Specification 3.4.5 will be documented pursuant to Specification 6.9.1.5.

Information obtained on iodine spiking will be used to assess the parameters associated with spiking phenomena. A reduction in frequency of isotopic analysis following power changes may be permissible if justified by the data obtained.

Closing the main steam line isolation valves prevents the release of activity to the environs should a steam line rupture occur outside containment. The surveillance requirements provide adequate assurance that excessive specific activity levels in the reactor coolant will be detected in sufficient time to take corrective action.



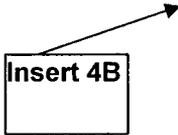
Insert 3B

3/4.5 EMERGENCY CORE COOLING SYSTEM

BASES

3/4.5.1 and 3/4.5.2 ECCS - OPERATING AND SHUTDOWN (Continued)

The capacity of the system is selected to provide the required core cooling. The HPCI pump is designed to deliver greater than or equal to 5600 gpm at reactor pressures between 1120 and 200 psig. Initially, water from the condensate storage tank is used instead of injecting water from the suppression pool into the reactor, but no credit is taken in the safety analyses for the condensate storage tank water.



Insert 4B

3/4.7 PLANT SYSTEMS

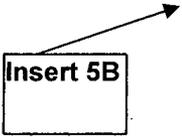
BASES

3/4.7.4 REACTOR CORE ISOLATION COOLING SYSTEM

The reactor core isolation cooling (RCIC) system is provided to assure adequate core cooling in the event of reactor isolation from its primary heat sink and the loss of feedwater flow to the reactor vessel without requiring actuation of any of the Emergency Core Cooling System equipment. The RCIC system is conservatively required to be OPERABLE whenever reactor steam dome pressure exceeds 150 psig. This pressure is substantially below that for which the RCIC system can provide adequate core cooling for events requiring the RCIC system.

The RCIC system specifications are applicable during OPERATIONAL CONDITIONS 1, 2 and 3 when reactor vessel steam dome pressure exceeds 150 psig because RCIC is the primary non-ECCS source of emergency core cooling when the reactor is pressurized.

With the RCIC system inoperable, adequate core cooling is assured by the OPERABILITY of the HPCI system and justifies the specified 14 day out-of-service period.



Insert 5B

3/4.8 ELECTRICAL POWER SYSTEMS

BASES

3/4.8.1, 3/4.8.2 and 3/4.8.3 A.C. SOURCES, D.C. SOURCES and ONSITE POWER

DISTRIBUTION SYSTEMS

The OPERABILITY of the A.C. and D.C. power sources and associated distribution systems during operation ensures that sufficient power will be available to supply the safety related equipment required for (1) the safe shutdown of the facility and (2) the mitigation and control of accident conditions within the facility. The minimum specified independent and redundant A.C. and D.C. power sources and distribution systems satisfy the requirements of General Design Criteria 17 of Appendix "A" to 10 CFR 50.

The ACTION requirements specified for the levels of degradation of the power sources provide restriction upon continued facility operation commensurate with the level of degradation. The OPERABILITY of the power sources are consistent with the initial condition assumptions of the safety analyses and are based upon maintaining at least one of the onsite A.C. and the corresponding D.C. power sources and associated distribution systems OPERABLE during accident conditions coincident with an assumed loss of offsite power and single failure of the other onsite A.C. or D.C. source.

Insert 6B

The A.C. and D.C. source allowable out-of-service times are based on Regulatory Guide 1.93, "Availability of Electrical Power Sources", December 1974 as modified by plant specific analysis and diesel generator manufacturer recommendations. When two diesel generators are inoperable, there is an additional ACTION requirement to verify that all required systems, subsystems, trains, components and devices, that depend on the remaining OPERABLE diesel generators as a source of emergency power, are also OPERABLE. This requirement is intended to provide assurance that a loss of offsite power event will not result in a complete loss of safety function of critical systems during the period two or more of the diesel generators are inoperable.

The term verify as used in this context means to administratively check by examining logs or other information to determine if certain components are out-of-service for maintenance or other reasons. It does not mean to perform the surveillance requirements needed to demonstrate the OPERABILITY of the component. The 14 day AOT for the "C" and "D" EDGs is based upon the following conditions being met: