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SOUTHERN COMPANY

MAY 0 6 2015

Docket Nos.: 50-424
50-425

NL-14-1870

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

Vogtle Electric Generating Plant – Units 1 and 2
License Amendment Request for Adoption of TSTF-432-A, Rev. 1,
"Change in Technical Specifications End States (WCAP-16294),
Using the Consolidated Line Item Improvement Process"

Reference: TSTF-432-A, Revision 1, "Change in Technical Specifications End States (WCAP-16294)," dated November 29, 2010.

Ladies and Gentlemen:

In accordance with the provisions of 10 CFR 50.90, Southern Nuclear Operating Company (SNC) is submitting a request for an amendment to the Technical Specifications (TS) for Vogtle Electric Generating Plant (VEGP) – Units 1 and 2.

The proposed change would modify the VEGP Technical Specifications to incorporate risk-informed requirements for selected Required Action end states. Specifically, the proposed change would permit a Required Action end state of Mode 4 rather than an end state of Mode 5. The proposed changes are consistent with NRC-approved Technical Specification Task Force (TSTF) Technical Change Traveler 432-A, Revision 1 (reference).

Enclosure 1 provides the basis for the proposed changes, the requested confirmation of applicability, and plant-specific verifications. Enclosure 2 provides the existing VEGP TS pages marked up to show the proposed changes. Enclosure 3 provides existing VEGP TS Bases pages marked up to show the proposed changes. Enclosure 4 provides revised (clean-typed) VEGP TS pages.

SNC requests approval of the proposed license amendment by May 2016, with the amendment being implemented within 90 days of issuance of the amendment.

A001
NRR

A copy of the proposed changes has been sent to J. H. Turner, the Georgia State Designee, in accordance with 10 CFR 50.91(b)(1).

Mr. C. R. Pierce states he is Regulatory Affairs Director of Southern Nuclear Operating Company, is authorized to execute this oath on behalf of Southern Nuclear Operating Company and to the best of his knowledge and belief, the facts set forth in this letter are true.

If you have any questions, please contact Ken McElroy at (205) 992-7369.

Respectfully submitted,

C. R. Pierce

C. R. Pierce
Regulatory Affairs Director

CRP/EGA

Sworn to and subscribed before me this 6 *day of* May, *2015.*

Laura L. Crumpton

Notary Public

My commission expires: 10-8-2017

Enclosures:
1. Basis for Proposed Changes
2. Markup for VEGP Proposed TS Changes
3. Markups for VEGP Proposed TS Bases Changes
4. Clean Typed VEGP Proposed TS Changes

cc: Southern Nuclear Operating Company
Mr. S. E. Kuczynski, Chairman, President & CEO
Mr. D. G. Bost, Executive Vice President & Chief Nuclear Officer
Mr. D. R. Madison, Vice President – Fleet Operations
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U. S. Nuclear Regulatory Commission
Mr. V. M. McCree, Regional Administrator
Mr. R. E. Martin, NRR Senior Project Manager – Vogtle 1 & 2
Mr. L. M. Cain, Senior Resident Inspector – Vogtle 1 & 2

State of Georgia
Mr. J. H. Turner, Environmental Director – Protection Division

Vogtle Electric Generating Plant
License Amendment Request for Adoption of TSTF-432-A, Revision 1,
Change in Technical Specifications End States (WCAP-16294)

Enclosure 1

Basis for Proposed Changes

Basis for Proposed Changes

1.0 Description

Southern Nuclear Company, (SNC) requests an amendment to Operating Licenses for the Vogtle Electric Generating Plant (VEGP), Units 1 and 2, NPF-68 and NPF-81, respectively. The proposed change would modify the VEGP Technical Specifications to incorporate risk-informed requirements for selected Required Action end states. The changes are consistent with Technical Specification Task Force (TSTF) Standard Technical Specification (STS) Change Traveler TSTF-432-A Revision 1, "Change in Technical Specifications End States (WCAP-16294)." The availability of this TS improvement was announced in the Federal Register on May 11, 2012 (77 FR 27814) as part of the Consolidated Line Item Improvement Process (CLIIP).

2.0 Assessment

2.1 Applicability of Published Safety Evaluation

SNC has reviewed Westinghouse Topical Report (TR) WCAP-16294 (Reference 1), the Nuclear Regulatory Commission (NRC) safety evaluation for WCAP-16294 (Reference 2), TSTF-432-A, Revision 1 (Reference 3), and the associated NRC model safety evaluation (Reference 4). SNC has concluded that the technical bases described in the Westinghouse topical report and TSTF-432-A, Revision 1, as well as the associated safety evaluation prepared by the NRC staff are applicable to VEGP Units 1 and 2 and support incorporation of this amendment request into the VEGP Unit 1 and 2 Technical Specifications.

The TSTF-432 justification references Regulatory Guide (RG) 1.182. On November 27, 2012, the NRC published a Federal Register Notice stating that RG 1.182 has been withdrawn and the subject matter has been incorporated into RG 1.160, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants." RG 1.160 endorses NUMARC 93 01, Revision 4A, dated April 2011. SNC assesses the risk of maintenance activities consistent with the guidance in RG 1.160. Therefore, the justification for adoption of TSTF-432 continues to be applicable.

2.2 Optional Changes and Variations

SNC is proposing the following variations or deviations from the Westinghouse topical report, the TS changes described in the TSTF-432-A, Revision 1, or the NRC staff's model safety evaluation published in the Federal Register on May 11, 2012 (77 FR 27814) as part of the CLIIP Notice of Availability. In some instances, the Technical Specification number and or title may be different between the generic Improved Standard Technical Specifications (ISTS) (Reference 5) on which TSTF-432-A was based and the VEGP Unit 1 and 2 specific TS; however, the justification for the proposed mode change remains directly applicable. Additionally, in some cases there may be content differences between the ISTS and VEGP TS due to plant specific or historical reasons. Table 1 provides a comparison of the Technical Specifications action

requirements in TSTF-432-A and the corresponding VEGP Technical Specifications action requirements which are proposed for modification. These variations or deviations are discussed below:

1. ISTS TS 3.3.2, Engineered Safety Feature Actuation System Instrumentation, Condition K (VEGP TS 3.3.2, Condition K)
   TS 3.3.2, Condition K applies to the Engineered Safety Feature Actuation System (ESFAS) Instrumentation safety feature for switchover from the refueling water storage tank (RWST) to the containment sump when RWST level is Low Low. The Completion Times for Required Actions K.1, K.2.1, and K.2.2 are bracketed values in the ISTS, and the values in the VEGP TS differ from those provided in TSTF-432-A, Revision 1.

   TSTF-432-A, Revision 1, and ISTS TS 3.3.2, Required Action K.1 allow 6 hours to place an inoperable RWST level Low Low channel in bypass, and Required Action K.2.1 states that the unit must be in Mode 3 within the next 6 hours (i.e., 12 hours) if Required Action K.1 is not completed within the specified time. As modified by TSTF-432-A, Revision 1, Required Action K.2.2 then allows an additional 6 hours (i.e., 18 hours) to be in MODE 4.

   As described in the Bases for VEGP TS 3.3.2, Condition K, the Completion Time for placing an inoperable RWST level Low-Low channel in bypass is 72 hours, as justified in WCAP-14333-P-A, "Probabilistic Risk Analysis of the RPS and ESFAS Test Times and Completion Times," Revision 1. An additional 6 hours (i.e., 78 hours) is provided to be in MODE 3 if Required Action K.1 is not completed. The 72 hour Completion Time for placing an inoperable RWST level Low-Low channel in bypass is retained, as is the requirement to be in MODE 3 within the next the 6 hours (i.e., 78 hours) if Required Action K.1is not completed within the specified time. It is proposed that the Completion Time for Required Action K.2.2 be revised to allow an additional 6 hours (i.e., 84 hours) to be in MODE 4. Allowing 6 hours to be in MODE 3, and additional 6 hours to be in MODE 4 when Required Action K.1 is not completed is consistent WCAP-16294, Revision 1, and TSTF-432-A, Revision 1.

2. ISTS TS 3.3.7, Control Room Emergency Filtration System Actuation Instrumentation, Condition C
   ISTS TS 3.3.7, Condition C provides end state requirements for inoperability of Control Room Emergency Filtration System Actuation Instrumentation. The VEGP TS do not include a corresponding specification for the Control Room Emergency Filtration System Actuation Instrumentation. The changes described in TSTF-432-A, Revision 1, for ISTS TS 3.3.7, Condition C are therefore not adopted.

3. ISTS TS 3.3.8, Fuel Building Air Cleanup System Actuation Instrumentation, Condition D
   ISTS TS 3.3.8, Condition D provides end state requirements for inoperability of Fuel Building Air Cleanup System Actuation Instrumentation. The VEGP TS do not include a corresponding specification for the Fuel Building Air Cleanup System Actuation Instrumentation. The changes

described in TSTF-432-A, Revision 1, for ISTS TS 3.3.8, Condition D are therefore not adopted.

4. ISTS TS 3.4.15, Reactor Coolant System Leakage Detection Instrumentation, Condition E (VEGP TS 3.4.15, Condition G)
VEGP TS 3.4.15 includes Conditions reflecting combinations of reactor coolant system leakage detection instrumentation inoperability that are not included in ISTS TS 3.4.15. The end state Completion Times for these additional Conditions are consistent with those evaluated in WCAP-16294, Revision 1, and provided in TSTF-432-A, Revision 1. The Completion Time for Required Action G.2 is revised to reflect these values.

5. ISTS TS 3.5.3, Emergency Core Cooling System – Shutdown, Conditions A, B, C (VEGP TS 3.5.3, Conditions A, B, C, D)
VEGP TS 3.5.3 includes an additional Condition (Condition B) for inoperability of an Emergency Core Cooling System (ECCS) centrifugal charging subsystem when 100% of the ECCS flow equivalent to a single ECCS train is available that is not included in ISTS TS 3.5.3. VEGP TS 3.5.3, Condition D is also modified from ISTS TS 3.5.3, Condition C to reflect the additional Condition. The additional and modified Conditions in VEGP TS 3.5.3 are plant-specific aspects of the licensing basis, and are not readily adaptable to the changes described in TSTF-432-A. Therefore, the TS and Bases changes identified in TSTF-432-A for ISTS 3.5.3 are not adopted.

6. ISTS TS 3.5.4, Refueling Water Storage Tank, Condition C (VEGP TS 3.5.4, Condition E)
VEGP TS 3.5.4 includes Conditions reflecting combinations of RWST sludge mixing equipment inoperability that are not included in ISTS TS 3.5.4. The end state Completion Times for these additional Conditions are consistent with those evaluated in WCAP-16294, Revision 1, and provided in TSTF-432-A, Revision 1. The Completion Time for Required Action E.2 is revised to reflect these values.

7. ISTS TS 3.6.6A, Containment Spray and Cooling Systems, Conditions B, E, and F
VEGP does not utilize or credit chemical addition to the containment spray system for iodine removal. As such, ISTS TS 3.6.6B is the applicable ISTS TS for application of the changes in TSTF-432-A, Revision 1, and the changes identified for ISTS TS 3.6.6A are not adopted.

8. ISTS TS 3.6.6B, Containment Spray and Cooling Systems, Condition F (VEGP TS 3.6.6, Condition C)
ISTS TS 3.6.6B includes Conditions reflecting combinations of containment spray and cooling system inoperability that are not reflected in VEGP TS 3.6.6. For VEGP, since no end state path is provided for these inoperability combinations, their occurrence requires entry into LCO 3.0.3. The VEGP ECCS design is consistent with the design assumed in the ISTS and WCAP-16294, Revision 1. The end state Completion Times for those Conditions provided in VEGP TS 3.6.6 are consistent with those evaluated

in WCAP-16294, Revision 1, and provided in TSTF-432 A, Revision 1. The Completion Time for Required Action C.2 is revised to reflect these values.

9. ISTS TS 3.6.6C, Containment Spray System, Condition B
The VEGP design does not include an ice condenser. The changes identified in TSTF-432-A, Revision 1, for ISTS TS 3.6.6C are therefore not adopted.

10. ISTS TS 3.6.6D, Quench Spray System, Condition B
The VEGP design does not include a Quench Spray System. The changes identified in TSTF-432-A, Revision 1, for ISTS TS 3.6.6D are therefore not adopted.

11. ISTS TS 3.6.6E, Recirculation Spray System, Condition B
The VEGP design does not include a Recirculation Spray System. The changes identified in TSTF-432-A, Revision 1, for ISTS TS 3.6.6E are therefore not adopted.

12. ISTS TS 3.6.7, Spray Additive System, Condition B (VEGP TS 3.5.6, Recirculation Fluid pH Control System, Condition B)
ISTS TS 3.6.7 provides Conditions for inoperability of the Spray Additive System. The VEGP design does not employ a Spray Additive System, and uses a recirculation fluid pH control system instead. The recirculation fluid pH control system consists of baskets of crystalline trisodium phosphate (TSP) that are located inside containment. The ISTS does not provide a model specification for recirculation fluid pH control systems that utilize TSP baskets, and it is therefore not specifically included in TSTF-432-A, Revision 1. However, end state Completion Times for recirculation fluid pH control systems that utilize TSP baskets are discussed in Section 3.1.15 of WCAP-16294, Revision 1. The Completion Time for Required Action B.2 of VEGP TS 3.5.6 is revised to reflect the value evaluated in WCAP-16294, Revision 1.

13. ISTS TS 3.6.11, Iodine Cleanup System, Condition B
The VEGP design does not include an Iodine Cleanup System. The changes identified in TSTF-432-A, Revision 1, for ISTS TS 3.6.11 are therefore not adopted.

14. ISTS TS 3.6.12, Vacuum Relief Valves, Condition B
The VEGP design does not include containment vacuum relief valves. The changes identified in TSTF-432-A, Revision 1, for ISTS TS 3.6.12 are therefore not adopted.

15. ISTS TS 3.6.13, Shield Building Air Cleanup System, Condition B
The VEGP design does not include a shield building air cleanup system. The changes identified in TSTF-432-A, Revision 1, for ISTS TS 3.6.13 are therefore not adopted

16. ISTS TS 3.6.14, Air Return System, Condition B
The VEGP design does not include an ice condenser air return system. The changes identified in TSTF-432-A, Revision 1, for ISTS TS 3.6.14 are therefore not adopted

17. ISTS TS 3.6.18, Containment Recirculation Drains, Condition C
The VEGP design does not include containment recirculation drains. The changes identified in TSTF-432-A, Revision 1, for ISTS TS 3.6.18 are therefore not adopted

18. ISTS TS 3.7.9, Ultimate Heat Sink, Condition C (VEGP TS 3.7.9, Condition E)
VEGP TS 3.7.9 includes Conditions reflecting ultimate heat sink (UHS) equipment inoperabilities (i.e., fan/spray cell, basin transfer pump) that are not included in ISTS TS 3.7.9. Additionally, VEGP TS 3.7.9 does not include a Condition for UHS temperature that is included in ISTS TS 3.7.9. The end state Completion Times for the additional Conditions reflect plant-specific attributes of the VEGP UHS design, and are consistent with those evaluated in WCAP-16294, Revision 1, and provided in TSTF-432-A, Revision 1. The omitted ISTS Condition for UHS temperature reflects plant specific attributes of the VEGP design and licensing basis does not alter this conclusion. The Completion Time for Required Action E.2 is revised to reflect these values.

19. ISTS TS 3.7.10, Control Room Emergency Filtration System, Condition C (VEGP TS 3.7.10, Control Room Emergency Filtration System – Both Units Operating, Condition F; VEGP TS 3.7.11, Control Room Emergency Filtration System – One Unit Operating, Condition H)
The VEGP TS includes separate specifications for the Control Room Emergency Filtration System (CREFS) depending on whether both units are operating (TS 3.7.10), or one unit is operating (TS 3.7.11). The ISTS (and TSTF-432-A) provides a single specification that covers both operating conditions. VEGP TS 3.7.10 and 3.7.11 also include additional Completion Times reflecting combinations of CREFS equipment inoperability that are not reflected in ISTS TS 3.7.10. The Completion Times for these additional Conditions are consistent with those evaluated in WCAP-16294, Revision 1, and provided in TSTF-432-A, Revision 1. The end state Completion Times for VEGP TS 3.7.10, Required Action F.3, and VEGP TS 3.7.11, Required Action H.2, are revised to reflect these values.

20. ISTS TS 3.7.11, Control Room Emergency Air Temperature Control System, Condition B
ISTS TS 3.7.11, Condition C provides end state requirements for inoperability of Control Room Emergency Air Temperature Control System. The VEGP TS do not include a corresponding specification for the Control Room Emergency Air Temperature Control System. The changes described in TSTF-432-A, Revision 1, for ISTS TS 3.7.11, Condition B are therefore not adopted.

21. ISTS TS 3.7.12, ECCS Pump Room Exhaust Air Cleanup System, Condition C (VEGP TS 3.7.14, ESF Room Cooler and Safety-Related Chiller, Condition B)
ISTS TS 3.7.12 includes ECCS pump room exhaust cleanup and cooling equipment. The VEGP design does not include ECCS pump room exhaust cleanup equipment or depend on maintaining the ECCS pump rooms as a ventilation boundary. As a result, ISTS TS 3.7.12 includes Conditions for ECCS pump room filtration equipment inoperability and pump room boundary inoperability that are not included in VEGP TS 3.7.14.

ISTS 3.7.12 also includes the ECCS pump room coolers and chillers. The corresponding VEGP specification for this equipment is TS 3.7.14. ISTS TS 3.7.12 includes an additional Condition for two inoperable trains that does not appear in VEGP TS 3.7.14. The end state Completion Times for the Conditions in VEGP TS 3.7.14 are consistent with those evaluated in WCAP-16294, Revision 1, and provided in TSTF-432-A, Revision 1. The Completion Time for Required Action B.2 is revised to reflect these values.

22. ISTS TS 3.7.13, Fuel Building Air Cleanup System, Condition C
ISTS TS 3.7.13, Condition C provides end state requirements for inoperability of the Fuel Building Air Cleanup System. The VEGP TS do not include a corresponding specification for the Fuel Building Air Cleanup System. The changes described in TSTF-432-A, Revision 1 for ISTS TS 3.7.13, Condition B are therefore not adopted.

23. ISTS TS 3.7.14, Penetration Room Exhaust Air Cleanup System, Condition C (VEGP TS 3.7.13, Piping Penetration Area Filtration and Exhaust System, Condition C)
ISTS TS 3.7.14, Condition C provides end state requirements for inoperability of the Penetration Room Exhaust Air Cleanup System. The corresponding VEGP requirements are located in TS 3.7.13, Piping Penetration Area Filtration and Exhaust System, Condition C.

24. ISTS TS 3.8.1, Alternating Current Sources – Operating, Condition G (VEGP TS 3.8.1, Condition H)
VEGP TS 3.8.1 includes an additional Condition that is not included in ISTS TS 3.8.1. This Condition is related to operability of the emergency diesel generators when the station auxiliary transformers are available, and reflects plant specific attributes of the VEGP design. The end state Completion Times for this additional Condition is consistent with those evaluated in WCAP-16294, Revision 1, and provided in TSTF-432-A, Revision 1. The Completion Time for Required Action H.2 is revised to reflect these values.

3.0 Regulatory Analysis

3.1 No Significant Hazards Consideration

Southern Nuclear Corporation (SNC) has evaluated the proposed changes to the TS using the criteria in 10 CFR 50.92 and has determined that the proposed changes do not involve a significant hazards consideration.

Description of Amendment Request: The proposed amendment would modify TS to risk-inform requirements regarding selected Required Action End States.

As required by 10 CFR 50.91(a), the SNC analysis of the issue of no significant hazards consideration is presented below:

1. Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No

The proposed change modifies the end state (e.g., mode or other specified condition) which the Required Actions specify must be entered if compliance with the Limiting Conditions for Operation (LCO) is not restored. The requested Technical Specifications (TS) permit an end state of Mode 4 rather than an end state of Mode 5 contained in the current TS. In some cases, other Conditions and Required Actions are revised to implement the proposed change. Required Actions are not an initiator of any accident previously evaluated. Therefore, the proposed change does not affect the probability of any accident previously evaluated. The affected systems continue to be required to be operable by the TS and the Completion Times specified in the TS to restore equipment to operable status or take other remedial Actions remain unchanged. WCAP-16294-NP-A, Rev. 1, "Risk-Informed Evaluation of Changes to Tech Spec Required Action Endstates for Westinghouse NSSS PWRs," demonstrates that the proposed change does not significantly increase the consequences of any accident previously evaluated.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No

The proposed change modifies the end state (e.g., mode or other specified condition) which the Required Actions specify must be entered if compliance with the LCO is not restored. In some cases, other Conditions and Required Actions are revised to implement the proposed change. The change does not involve a physical alteration of the plant (i.e., no new or different type of equipment will be installed) or a change in the methods governing normal plant operation. In addition, the change does not impose any new requirements. The change does not alter assumptions made in the safety analysis.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the proposed change involve a significant reduction in a margin of safety?

Response: No

The proposed change modifies the end state (e.g., mode or other specified condition) which the Required Actions specify must be entered if compliance with the LCO is not restored. In some cases, other Conditions and Required Actions are revised to implement the proposed change. Remaining within the Applicability of the LCO is acceptable because WCAP-16294-NP-A demonstrates that the plant risk in MODE 4 is similar to or lower than MODE 5. As a result, no margin of safety is significantly affected.

Therefore, the proposed changes do not involve a significant reduction in a margin of safety.

3.2 Applicable Regulatory Requirements/Criteria

A description of the proposed TS change and its relationship to applicable regulatory requirements were published in the Model Safety Evaluation (SE) (NRC ADAMS Accession Number ML 120200384). SNC has reviewed the NRC staffs model SE referenced in the CLIIP Notice of Availability and concluded that the regulatory evaluation section is applicable to VEGP Units1 and 2.

4.0 Environmental Considerations

The proposed change would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR Part 20, or would change an inspection or surveillance requirement. However, the proposed change does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluents that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed change meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed change.

5.0 References

1. WCAP-16294-NP-A, Revision 1, "Risk-Informed Evaluation of Changes to Technical Specification Required Action Endstates for Westinghouse

NSSS PWRs," dated June, 2010 (NRC ADAMS Accession Number ML103430249).

2. Final Safety Evaluation for NEI Topical Report WCAP-16294-NP, Revision 0, "Risk-Informed Evaluation of Changes to Technical Specification Required Endstates for Westinghouse NSSS [Nuclear Steam Supply System] PWRS [Pressurized Water Reactors]," August 2005 (NRC ADAMS Accession Number ML100770146)
3 TSTF-432, Revision 1, "Change in Technical Specifications End States WCAP-16294" dated November 29, 2010 (NRC ADAMS Accession Number ML103360003).

4. Federal Register, 77 FR 27814, "Notice of Availability for TSTF-432, Revision 1, "Change in Technical Specifications End States (WCAP-16294)" Using the Consolidated Line Item Improvement Process, May 11, 2012.

5. NUREG-1431, "Standard Technical Specifications Westinghouse Plants," Revision 3, March 2004.

Table 1 – TSTF-432-A Technical Specifications and corresponding VEGP Technical Specifications Required Actions

TSTF-432-A Technical Specification and Condition		Corresponding VEGP Technical Specification and Condition	
3.3.2-B:	ESFAS Instrumentation	3.3.2-B:	ESFAS Instrumentation
3.3.2-C:	ESFAS Instrumentation	3.3.2-C:	ESFAS Instrumentation
3.3.2-K:	ESFAS Instrumentation	3.3.2-K:	ESFAS Instrumentation
3.4.13-B:	RCS Operational Leakage	3.4.13-B:	RCS Operational Leakage
3.4.14-B:	RCS Pressure Isolation Valve Leakage	3.4.14-B:	RCS Pressure Isolation Valve Leakage
3.4.15-E:	RCS Leakage Detection Instrumentation	3.4.15-G:	RCS Leakage Detection Instrumentation
3.5.3-A:	ECCS -- Shutdown	3.5.3-A:	N/A – Changes not adopted
3.5.3-B:	ECCS -- Shutdown	3.5.3-B:	N/A – Changes not adopted
3.5.3-B:	ECCS -- Shutdown	3.5.3-C:	N/A – Changes not adopted
3.5.3-C:	ECCS -- Shutdown	3.5.3-D:	N/A – Changes not adopted
3.5.4-C:	Refueling Water Storage Tank	3.5.4-E:	Refueling Water Storage Tank
3.6.6B-F:	Containment Spray and Cooling Systems (Atmospheric and Dual)	3.6.6-C:	Containment Spray and Cooling Systems
3.6.7-B:	Spray Additive System (Atmospheric, Subatmospheric, Ice Condenser, and Dual)	3.5.6-B:	ECCS Recirculation Fluid pH Control System
3.7.7-B:	Component Cooling Water System	3.7.7-B:	Component Cooling Water System
3.7.8-B:	Service Water System	3.7.8-B:	Nuclear Service Cooling Water System
3.7.9-C:	Ultimate Heat Sink	3.7.9-E:	Ultimate Heat Sink
3.7.10-C:	Control Room Emergency Filtration System	3.7.10-F: 3.7.11-H:	Control Room Emergency Filtration System – Both Units Operating Control Room Emergency Filtration System – One Unit Operating
3.7.12-C:	ECCS Pump Room Exhaust Air Cleanup System	3.7.14-C:	ESF Room Cooler and Safety-Related Chiller
3.7.14-C:	Penetration Room Exhaust Air Cleanup System	3.7.13-C:	Piping Penetration Area Filtration and Exhaust System
3.8.1-G:	AC Sources – Operating	3.8.1-H:	AC Sources – Operating
3.8.4-D:	DC Sources – Operating	3.8.4-D:	DC Sources – Operating
3.8.7-B:	Inverters – Operating	3.8.7-B:	Inverters – Operating
3.8.9-D:	Distribution Systems – Operating	3.8.9-D:	Distribution Systems – Operating

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Enclosure 2

Marked-Up Technical Specifications Pages

Index of Affected Technical Specification Pages

Affected Pages

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3.5.6-1
3.6.6-1
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3.7.8-1
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3.7.14-1
3.8.1-6
3.8.4-2
3.8.7-1
3.8.9-2

3.3 INSTRUMENTATION

3.3.2 Engineered Safety Feature Actuation System (ESFAS) Instrumentation

LCO 3.3.2 The ESFAS instrumentation for each Function in Table 3.3.2-1 shall be OPERABLE.

APPLICABILITY: According to Table 3.3.2 1.

ACTIONS

---NOTE---
Separate Condition entry is allowed for each Function.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more Functions with one or more required channels inoperable.	A.1 Enter the Condition referenced in Table 3.3.2-1 for the channel(s) or train(s).	Immediately
B. One channel inoperable.	B.1 Restore channel to OPERABLE status. OR B.2.1 Be in MODE 3. AND B.2.2 Be in MODE [4] ~~5~~.	48 hours 54 hours [60] ~~84~~ hours

---NOTE---
LCO 3.0.4.a is not applicable when entering MODE 4.

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. One train inoperable.	----------NOTE---------- One train may be bypassed for up to 4 hours for surveillance testing provided the other train is OPERABLE. ----------	
	C.1 Restore train to OPERABLE status.	24 hours
	OR	
	C.2.1 Be in MODE 3.	30 hours
----------NOTE---------- LCO 3.0.4.a is not applicable when entering MODE 4. ----------	AND C.2.2 Be in MODE [5] [4].	[36] [60] hours
D. One channel inoperable.	----------NOTE---------- A channel may be bypassed for up to 12 hours for surveillance testing. ----------	
	D.1 Place channel in trip.	72 hours
	OR	
	D.2.1 Be in MODE 3.	78 hours
	AND	
	D.2.2 Be in MODE 4.	84 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
I. One channel inoperable.	----------NOTE---------- A channel may be bypassed for up to 12 hours for surveillance testing. ----------	
	I.1 Place channel in trip.	72 hours
	OR	
	I.2 Be in MODE 3.	78 hours
J. One Main Feedwater Pumps trip channel inoperable.	J.1 Restore channel to OPERABLE status.	48 hours
	OR	
	J.2 Be in MODE 3.	54 hours
K. One RWST Level - Low Low channel inoperable.	----------NOTE---------- One additional channel may be bypassed for up to 12 hours for surveillance testing. ----------	
	K.1 Place channel in bypass.	72 hours
	OR	
	K.2.1 Be in MODE 3.	78 hours
----------NOTE---------- LCO 3.0.4.a is not applicable when entering MODE 4. ----------	AND K.2.2 Be in MODE [4] [5].	[84] ~~108~~ hours

(continued)

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.13 RCS Operational LEAKAGE

LCO 3.4.13 RCS operational LEAKAGE shall be limited to:

a. No pressure boundary LEAKAGE;

b. 1 gpm unidentified LEAKAGE;

c. 10 gpm identified LEAKAGE; and

d. 150 gallons per day primary to secondary LEAKAGE through any one steam generator (SG).

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. RCS operational LEAKAGE not within limits for reasons other than pressure boundary LEAKAGE or primary to secondary LEAKAGE.	A.1 Reduce LEAKAGE to within limits.	4 hours
B. Required Action and associated Completion Time of Condition A not met. OR Pressure boundary LEAKAGE exists. OR Primary to secondary LEAKAGE not within limit.	B.1 Be in MODE 3. AND B.2 Be in MODE [5] [4] ----------NOTE---------- LCO 3.0.4.a is not applicable when entering MODE 4. ----------	6 hours [36] [12] hours

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (continued) ----------NOTE---------- LCO 3.0.4.a is not applicable when entering MODE 4. ----------	A.1 Isolate the high pressure portion of the affected system from the low pressure portion by use of one closed manual, deactivated automatic, or check valve. AND A.2 Isolate the high pressure portion of the affected system from the low pressure portion by use of a second closed manual, deactivated automatic, or check valve.	4 hours 72 hours
B. Required Action and associated Completion Time for Condition A not met.	B.1 Be in MODE 3. AND B.2 Be in MODE ~~5~~ 4.	6 hours ~~36~~ 12 hours
C. RHR System suction isolation valve interlock function inoperable.	C.1 Isolate the affected penetration by use of one closed manual or deactivated automatic valve.	4 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. Required containment atmosphere radioactivity monitor inoperable. AND Required containment air cooler condensate flow rate monitor inoperable.	E.1 Restore required containment atmosphere radioactivity monitor to OPERABLE status. OR E.2 Restore required containment air cooler condensate flow rate monitor to OPERABLE status.	30 days 30 days
----------NOTE---------- Only applicable when a containment atmosphere gaseous radiation monitor is the only OPERABLE monitor. ---------- F. Required containment sump monitors inoperable. AND Required containment air cooler condensate flow rate monitor inoperable.	F.1 Analyze grab samples of the containment atmosphere. AND F.2.1 Restore required containment sump monitors to OPERABLE status. OR F.2.2 Restore required containment air cooler condensate flow rate monitor to OPERABLE status.	Once per 12 hours 7 days 7 days
G. Required Action and associated Completion Time not met.	G.1 Be in MODE 3. AND G.2 Be in MODE 5.	6 hours ~~36~~ 12 hours

(continued)

----------NOTE----------
LCO 3.0.4.a is not applicable when entering MODE 4.

ACTIONS (continued)

----------NOTE----------
LCO 3.0.4.a is not applicable when entering MODE 4.

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. Required Action and associated Completion Time of Condition A or D not met.	E.1 Be in MODE 3. AND E.2 Be in MODE [5]. [4]	6 hours [12] ~~36~~ hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.5.4.1	----------NOTE---------- Only required to be performed when ambient air temperature is < 40°F. --- Verify RWST borated water temperature is ≥ 44°F and ≤ 116°F.	In accordance with the Surveillance Frequency Control Program
SR 3.5.4.2	Verify RWST borated water volume is ≥ 686,000 gallons.	In accordance with the Surveillance Frequency Control Program
SR 3.5.4.3	Verify RWST boron concentration is ≥ 2400 ppm and ≤ 2600 ppm.	In accordance with the Surveillance Frequency Control Program
SR 3.5.4.4	Verify each sludge mixing pump isolation valve automatically closes on an actual or simulated RWST Low-Level signal.	In accordance with the Surveillance Frequency Control Program

3.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

3.5.6 Recirculation Fluid pH Control System

LCO 3.5.6 The Recirculation Fluid pH Control System shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Recirculation Fluid pH Control System inoperable.	A.1 Restore system to OPERABLE status.	72 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. AND B.2 Be in MODE ~~5~~ 4.	6 hours ~~84~~ 54 hours

----------NOTE----------
LCO 3.0.4.a is not applicable when entering MODE 4.

3.6 CONTAINMENT SYSTEMS

3.6.6 Containment Spray and Cooling Systems

LCO 3.6.6 Two containment spray trains and two containment cooling trains shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One containment spray train inoperable.	A.1 Restore containment spray train to OPERABLE status.	72 hours
B. One containment cooling train inoperable.	B.1 Restore containment cooling train to OPERABLE status.	72 hours
C. Required Action and associated Completion Time not met. of Condition A or B	C.1 Be in MODE 3. AND C.2 Be in MODE [4] 5.	6 hours [12] 84 hours

----------NOTE----------
LCO 3.0.4.a is not applicable when entering MODE 4.

3.7 PLANT SYSTEMS

3.7.7 Component Cooling Water (CCW) System

LCO 3.7.7 Two CCW trains shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One CCW train inoperable.	A.1	----------NOTE---------- Enter applicable Conditions and Required Actions of LCO 3.4.6, "RCS Loops - MODE 4," for residual heat removal loops made inoperable by CCW. ---------- Restore CCW train to OPERABLE status.	72 hours
B. Required Action and associated Completion Time of Condition A not met.	B.1 AND B.2	Be in MODE 3. Be in MODE 4.	6 hours 12 hours

----------NOTE----------
LCO 3.0.4.a is not applicable when entering MODE 4.

3.7 PLANT SYSTEMS

3.7.8 Nuclear Service Cooling Water (NSCW) System

LCO 3.7.8 Two NSCW trains shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One NSCW train inoperable.	----------NOTES---------- 1. Enter applicable Conditions and Required Actions of LCO 3.8.1, "AC Sources - Operating," for emergency diesel generator made inoperable by NSCW system. 2. Enter applicable Conditions and Required Actions of LCO 3.4.6, "RCS Loops - MODE 4," for residual heat removal loops made inoperable by NSCW system. ---------- A.1 Restore NSCW system to OPERABLE status.	72 hours
B. Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 3. AND B.2 Be in MODE [5]. (4)	6 hours [36] (12) hours

----------NOTE----------
LCO 3.0.4.a is not applicable when entering MODE 4.

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. One NSCW basin transfer pump inoperable.	D.1 Restore the transfer pump to OPERABLE status. OR D.2.1 Implement an alternate method of basin transfer. AND D.2.2 Restore the transfer pump to OPERABLE status.	8 days 8 days 31 days
E. Required Action and associated Completion Time not met. OR UHS inoperable for reasons other than Conditions A, B, C, or D.	E.1 Be in MODE 3. AND E.2 Be in MODE ~~5~~ 4.	6 hours ~~36~~ 12 hours

----------NOTE----------
LCO 3.0.4.a is not applicable when entering MODE 4.

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
F. Required Action and associated Completion Time not met.	F.1	----------NOTE---------- Required Action F.1 is not applicable when entering this Condition from Condition B, D, or E. ----------	
		Lock closed the outside air (OSA) intake dampers of the affected unit and lock open the OSA intake dampers of the unaffected unit.	1 hour
	AND		
	F.2	Place the affected units(s) in MODE 3.	7 hours
	AND		
	F.3	Place the affected unit(s) in MODE 4.	12 hours

----------NOTE----------
LCO 3.0.4.a is not applicable when entering MODE 4.

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
F. One or more CREFS trains inoperable due to inoperable CRE boundary.	F.1	Initiate action to implement mitigating actions.	Immediately
	AND		
	F.2	Verify mitigating actions ensure CRE occupant exposures to radiological, chemical, and smoke hazards will not exceed limits.	24 hours
	AND		
	F.3	Restore CRE boundary to OPERABLE status.	90 days
G. Control room air temperature not within limit.	G.1	Restore control room air temperature to within limit.	7 days
H. Required Action and associated Completion Time not met for operating unit.	H.1	Place the unit in MODE 3.	6 hours
	AND		
	H.2	Place the unit in MODE 4 5.	36 12 hours

----------NOTE----------
LCO 3.0.4.a is not applicable when entering MODE 4.

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.11.1	The Surveillance Requirements of Specification 3.7.10 are applicable.	In accordance with applicable SRs.

3.7 PLANT SYSTEMS

3.7.13 Piping Penetration Area Filtration and Exhaust System (PPAFES)

LCO 3.7.13 Two PPAFES trains shall be OPERABLE.

---NOTE---
The PPAFES boundary may be opened intermittently under administrative control.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One PPAFES train inoperable.	A.1 Restore PPAFES train to OPERABLE status.	7 days
B. Two PPAFES trains inoperable due to inoperable PPAFES boundary.	B.1 Restore PPAFES boundary to OPERABLE status.	24 hours
C. Required Action and associated Completion Time not met.	C.1 Be in MODE 3. AND C.2 Be in MODE [5] [4].	6 hours [36] [12] hours

---NOTE---
LCO 3.0.4.a is not applicable when entering MODE 4.

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.7.13.1 Operate each PPAFES train for ≥ 15 minutes.	In accordance with the Surveillance Frequency Control Program

(continued)

3.7 PLANT SYSTEMS

3.7.14 Engineered Safety Features (ESF) Room Cooler and Safety Related Chiller System

LCO 3.7.14 Two ESF Room Cooler and Safety-Related Chiller trains shall be OPERABLE.

---NOTE---
One Safety-Related Chiller train may be removed from service for ≤ 2 hours under administrative controls for surveillance testing of the other Safety-Related Chiller train.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One ESF room cooler and safety-related chiller train inoperable.	A.1 Restore the ESF room cooler and safety-related chiller train to OPERABLE status.	72 hours*
B. Required Action and Associated Completion Time not met.	B.1 Be in MODE 3. AND B.2 Be in MODE ~~5~~ 4.	6 hours ~~36~~ 12 hours

---NOTE---
LCO 3.0.4.a is not applicable when entering MODE 4.
---

*For the VEGP Unit 2 August 16, 2010 entry into Technical Specifications 3.7.14 Condition A, one ESF room cooler and safety-related chiller train may be inoperable for a period not to exceed 14 days.

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. (continued)	E.1 Restore required offsite circuit to OPERABLE status. OR E.2 Restore DG to OPERABLE status.	12 hours 12 hours
F. Two DGs inoperable.	F.1 Restore one DG to OPERABLE status.	2 hours
G. One automatic load sequencer inoperable.	G.1 Restore automatic load sequencer to OPERABLE status.	12 hours
H. Required Action and associated Completion Time of Condition A, C, D, E, F, or G not met. OR Required Action B.1, B.3, B.4.1, B.4.2, or B.6 and associated Completion Time not met.	H.1 Be in MODE 3. AND H.2 Be in MODE 5.	6 hours 36 hours
I. Three or more required AC sources inoperable.	I.1 Enter LCO 3.0.3.	Immediately

4

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----------NOTE----------
LCO 3.0.4.a is not applicable when entering MODE 4.

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. One DC electrical power source inoperable for reasons other than Condition A or B.	C.1 Restore DC electrical power source to OPERABLE status.	2 hours
D. Required Action and Associated Completion Time not met.	D.1 Be in MODE 3. AND D.2 Be in MODE 5.	6 hours 36 hours

4

12

SURVEILLANCE REQUIREMENTS

----------NOTE----------
LCO 3.0.4.a is not applicable when entering MODE 4.

SURVEILLANCE		FREQUENCY
SR 3.8.4.1	Verify battery terminal voltage is greater than or equal to the minimum established float voltage.	In accordance with the Surveillance Frequency Control Program
SR 3.8.4.2	Verify the battery charger supplies: ≥ 400 amps for System A and B ≥ 300 amps for System C, and ≥ 200 amps for System D at greater than or equal to the minimum established float voltage for ≥ 8 hours for Systems A and B and ≥ 3 hours for Systems C and D. OR Verify each battery charger can recharge the battery to the fully charged state within 12 hours while supplying the largest combined demands of the various continuous steady state loads, after a battery discharge to the bounding design basis event discharge state.	In accordance with the Surveillance Frequency Control Program

(continued)

3.8 ELECTRICAL POWER SYSTEMS

3.8.7 Inverters – Operating

LCO 3.8.7 The required Class 1E 120 V inverters shall be OPERABLE.

---NOTE---
Two inverters may be disconnected from their associated DC bus for ≤ 24 hours to perform an equalizing charge on their associated common battery, provided:

a. The associated AC vital bus(es) are energized from their Class 1E regulating transformers; and

b. All other AC vital buses are energized from their associated OPERABLE inverters.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One required inverter inoperable.	---NOTE--- Enter applicable conditions and required actions of LCO 3.8.9 "Distribution Systems - Operating" with any vital bus deenergized. --- A.1 Restore inverter to OPERABLE status.	24 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. AND B.2 Be in MODE [4] 5.	6 hours [12] 36 hours

---NOTE---
LCO 3.0.4.a is not applicable when entering MODE 4.

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. One or more DC electrical power distribution subsystems inoperable.	C.1 Restore DC electrical power distribution subsystems to OPERABLE status.	2 hours
D. Required Action and associated Completion Time not met. ----------NOTE---------- LCO 3.0.4.a is not applicable when entering MODE 4. ----------	D.1 Be in MODE 3. AND D.2 Be in MODE ~~5~~ 4.	6 hours ~~36~~ 12 hours
E. Two or more electrical power distribution subsystems inoperable that result in a loss of function.	E.1 Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.9.1	Verify correct breaker alignments and voltage to required AC, DC, and AC vital bus electrical power distribution subsystems.	In accordance with the Surveillance Frequency Control Program

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Marked-Up Technical Specifications Bases Pages

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BASES

ACTIONS (continued)

B.1, B.2.1, and B.2.2

Condition B applies to manual initiation of:

- SI;
- Containment Spray; and
- Phase A Isolation.

This action addresses the channel orientation of the SSPS for the functions listed above. If a channel is inoperable, 48 hours is allowed to return it to an OPERABLE status. Note that for containment spray, failure of one or both handswitches in one channel renders the channel inoperable. Condition B, therefore, encompasses both situations. The specified Completion Time is reasonable considering that there are two automatic actuation trains and another manual initiation channel OPERABLE for each Function, and the low probability of an event occurring during this interval. If the channel cannot be restored to OPERABLE status, the unit must be placed in a MODE in which ~~the LCO does not apply.~~ This is done by placing the unit in at least MODE 3 within an additional 6 hours (54 hours total time) and in MODE ~~5~~ 4 within an additional ~~30~~ 60 hours (~~84~~ hours total time). The allowable Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

overall plant risk is reduced.

INSERT - BASES 3.3.2 Condition B

C.1, C.2.1, and C.2.2

Condition C applies to the automatic actuation logic and actuation relays for the following functions:

- SI;
- Containment Spray;
- Phase A Isolation; and
- Semi-Automatic Switchover to Containment Sump.

This Condition contains bypass times and Completion Times that are risk-informed. The Configuration Risk Management Program (CRMP) is used to assess changes in core damage frequency resulting from applicable plant configurations. The CRMP uses the equipment out of service risk monitor, a computer based tool that may be used to aid in

(continued)

INSERT – BASES 3.3.2 Condition B

. . .

Remaining within the Applicability of the LCO is acceptable to accomplish short duration repairs to restore inoperable equipment because the plant risk in MODE 4 is similar to or lower than MODE 5 (Ref. 18). In MODE 4 the Steam Generators and Residual Heat Removal System are available to remove decay heat, which provides diversity and defense in depth. As stated in Reference 18, the steam turbine driven Auxiliary Feedwater Pump must be available to remain in MODE 4. Should Steam Generator cooling be lost while relying on this Required Action, there are preplanned actions to ensure long-term decay heat removal. Voluntary entry into MODE 5 may be made as it is also acceptable from a risk perspective.

Required Action B.2.2 is modified by a Note that states that LCO 3.0.4.a is not applicable when entering MODE 4. This Note prohibits the use of LCO 3.0.4.a to enter MODE 4 during startup with the LCO not met. However, there is no restriction on the use of LCO 3.0.4.b, if applicable, because LCO 3.0.4.b requires performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering MODE 4, and establishment of risk management actions, if appropriate. LCO 3.0.4 is not applicable to, and the Note does not preclude, changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

. . .

BASES

ACTIONS

C.1, C.2.1, and C.2.2 (continued)

the risk assessment of on-line maintenance and to evaluate the change in risk from a component failure. The equipment out of service risk monitor uses the plant probabilistic risk assessment model to evaluate the risk of removing equipment from service based on current plant configuration and equipment condition.

This action addresses the train orientation of the SSPS and the master and slave relays. If one train is inoperable, 24 hours are allowed to restore the train to OPERABLE status. The 24 hours allowed for restoring the inoperable train to OPERABLE status is justified in Reference 8. The specified Completion Time is reasonable considering that there is another train OPERABLE, and the low probability of an event occurring during this interval. If the train cannot be restored to OPERABLE status, the unit must be placed in a MODE in which ~~the LCO does not apply.~~ This is done by placing the unit in at least MODE 3 within an additional 6 hours (30 hours total time) and in MODE 5 within an additional 30 hours (60 hours total time). The Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

overall plant risk is reduced.

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INSERT - BASES 3.3.2 Condition C

4

6

The Required Actions are modified by a Note that allows one train to be bypassed for up to 4 hours for surveillance testing or maintenance, provided the other train is OPERABLE. This allowance is based on the reliability analysis assumption of WCAP-10271-P-A (Ref. 9) that 4 hours is the average time required to perform train surveillance.

D.1, D.2.1, and D.2.2

Condition D applies to:

- Containment Pressure — High 1;
- Pressurizer Pressure — Low;
- Steam Line Pressure — Low;
- Containment Pressure — High 2;

(continued)

INSERT – BASES 3.3.2 Condition C

. . .

Remaining within the Applicability of the LCO is acceptable to accomplish short duration repairs to restore inoperable equipment because the plant risk in MODE 4 is similar to or lower than MODE 5 (Ref. 18). In MODE 4 the Steam Generators and Residual Heat Removal System are available to remove decay heat, which provides diversity and defense in depth. As stated in Reference 18, the steam turbine driven Auxiliary Feedwater Pump must be available to remain in MODE 4. Should Steam Generator cooling be lost while relying on this Required Action, there are preplanned actions to ensure long-term decay heat removal. Voluntary entry into MODE 5 may be made as it is also acceptable from a risk perspective.

Required Action C.2.2 is modified by a Note that states that LCO 3.0.4.a is not applicable when entering MODE 4. This Note prohibits the use of LCO 3.0.4.a to enter MODE 4 during startup with the LCO not met. However, there is no restriction on the use of LCO 3.0.4.b, if applicable, because LCO 3.0.4.b requires performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering MODE 4, and establishment of risk management actions, if appropriate. LCO 3.0.4 is not applicable to, and the Note does not preclude, changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

. . .

BASES

ACTIONS

J.1 and J.2 (continued)

transients or conditions that require the explicit use of the protection function noted above. The allowance of 48 hours to return the train to an OPERABLE status is justified in Reference 9.

K.1, K.2.1, and K.2.2

Condition K applies to:

- RWST Level — Low Low Coincident with Safety Injection.

This Condition contains bypass times and Completion Times that are risk-informed. The Configuration Risk Management Program (CRMP) is used to assess changes in core damage frequency resulting from applicable plant configurations. The CRMP uses the equipment out of service risk monitor, a computer based tool that may be used to aid in the risk assessment of on-line maintenance and to evaluate the change in risk from a component failure. The equipment out of service risk monitor uses the plant probabilistic risk assessment model to evaluate the risk of removing equipment from service based on current plant configuration and equipment condition.

RWST Level — Low Low Coincident With SI provides actuation of switchover to the containment sump. Note that this Function requires the bistables to energize to perform their required action. The failure of up to two channels will not prevent the operation of this Function. However, placing a failed channel in the tripped condition could result in a premature switchover to the sump, prior to the injection of the minimum volume from the RWST. Placing the inoperable channel in bypass results in a two-out-of-three logic configuration, which satisfies the requirement to allow another failure without disabling actuation of the switchover when required. Restoring the channel to OPERABLE status or placing the inoperable channel in the bypass condition within 72 hours is sufficient to ensure that the Function remains OPERABLE, and minimizes the time that the Function may be in a partial trip condition (assuming the inoperable channel has failed high). The 72 hour Completion Time is justified in Reference 8. If the channel cannot be returned to OPERABLE status or placed in the bypass condition within 72 hours, the unit must be ~~brought~~ to MODE 3 within the following 6 hours and MODE 5 within the next 30 hours.

placed in a MODE in which overall plant risk is reduced. This is done by placing the unit in at least

4

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INSERT - BASES 3.3.2 Condition K

(continued)

INSERT – BASES 3.3.2 Condition K

Remaining within the Applicability of the LCO is acceptable to accomplish short duration repairs to restore inoperable equipment because the plant risk in MODE 4 is similar to or lower than MODE 5 (Ref. 18). In MODE 4 the Steam Generators and Residual Heat Removal System are available to remove decay heat, which provides diversity and defense in depth. As stated in Reference 18, the steam turbine driven Auxiliary Feedwater Pump must be available to remain in MODE 4. Should Steam Generator cooling be lost while relying on this Required Action, there are preplanned actions to ensure long-term decay heat removal. Voluntary entry into MODE 5 may be made as it is also acceptable from a risk perspective.

Required Action K.2.2 is modified by a Note that states that LCO 3.0.4.a is not applicable when entering MODE 4. This Note prohibits the use of LCO 3.0.4.a to enter MODE 4 during startup with the LCO not met. However, there is no restriction on the use of LCO 3.0.4.b, if applicable, because LCO 3.0.4.b requires performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering MODE 4, and establishment of risk management actions, if appropriate. LCO 3.0.4 is not applicable to, and the Note does not preclude, changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

BASES

ACTIONS

K.1, K.2.1, and K.2.2 (continued)

The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems. ~~In MODE 5, the unit does not have any analyzed transients or conditions that require the explicit use of the protection functions noted above.~~

The Required Actions are modified by a Note that allows placing one channel in bypass for up to 12 hours while performing routine surveillance testing. The channel to be tested can be tested in bypass with the inoperable channel also in bypass. The 12 hour time limit is justified in Reference 8.

L.1, L.2.1, and L.2.2

Condition L applies to the P-11 interlock.

With one or more channels inoperable, the operator must verify that the interlock is in the required state for the existing unit condition. This action manually accomplishes the function of the interlock. Determination must be made within 1 hour. The 1 hour Completion Time is equal to the time allowed by LCO 3.0.3 to initiate shutdown actions in the event of a complete loss of ESFAS function. If the interlock is not in the required state (or placed in the required state) for the existing unit condition, the unit must be placed in MODE 3 within the next 6 hours and MODE 4 within the following 6 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems. Placing the unit in MODE 4 removes all requirements for OPERABILITY of this interlock.

SURVEILLANCE REQUIREMENTS

The SRs for each ESFAS Function are identified by the SRs column of Table 3.3.2-1.

A Note has been added to the SR Table to clarify that Table 3.3.2-1 determines which SRs apply to which ESFAS Functions.

Note that each channel of process protection supplies both trains of the ESFAS. When testing channel I, train A and train B must be examined. Similarly, train A and train B must be examined when

(continued)

BASES

REFERENCES (continued)

17. STI Evaluation 417332.

INSERT - BASES 3.3.2
Reference

INSERT – BASES 3.3.2 Reference

18. WCAP-16294-NP-A, Rev. 1, "Risk-Informed Evaluation of Changes to Technical Specification Required Action Endstates for Westinghouse NSSS PWRs," June 2010.

BASES (continued)

ACTIONS

A.1

Unidentified LEAKAGE or identified LEAKAGE in excess of the LCO limits must be reduced to within limits within 4 hours. This Completion Time allows time to verify leakage rates and either identify unidentified LEAKAGE or reduce LEAKAGE to within limits before the reactor must be shut down. This action is necessary to prevent further deterioration of the RCPB.

B.1 and B.2

If any pressure boundary LEAKAGE exists, or primary to secondary LEAKAGE is not within limit, or if unidentified or identified LEAKAGE cannot be reduced to within limits within 4 hours, the reactor must be brought to lower pressure conditions to reduce the severity of the LEAKAGE and its potential consequences. It should be noted that LEAKAGE past seals and gaskets is not pressure boundary LEAKAGE. The reactor must be ~~brought~~ to MODE 3 within 6 hours and MODE 5 within 36 hours. This action reduces the LEAKAGE and also reduces the factors that tend to degrade the pressure boundary.

placed in a MODE in which overall plant risk is reduced. This is done by placing the unit in at least

4

the next 6

INSERT - BASES 3.4.13 Condition B

The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems. ~~In MODE 5, the pressure stresses acting on the RCPB are much lower, and further deterioration is much less likely.~~

SURVEILLANCE REQUIREMENTS

SR 3.4.13.1

Verifying RCS LEAKAGE to be within the LCO limits ensures the integrity of the RCPB is maintained. Pressure boundary LEAKAGE would at first appear as unidentified LEAKAGE and can only be positively identified by inspection. It should be noted that LEAKAGE past seals and gaskets is not pressure boundary LEAKAGE. Unidentified LEAKAGE and identified LEAKAGE are determined by performance of an RCS water inventory balance.

(continued)

INSERT – BASES 3.4.13 Condition B

Remaining within the Applicability of the LCO is acceptable to accomplish short duration repairs to restore inoperable equipment because the plant risk in MODE 4 is similar to or lower than MODE 5 (Ref. 6). In MODE 4 the Steam Generators and Residual Heat Removal System are available to remove decay heat, which provides diversity and defense in depth. As stated in Reference 6, the steam turbine driven Auxiliary Feedwater Pump must be available to remain in MODE 4. Should Steam Generator cooling be lost while relying on this Required Action, there are preplanned actions to ensure long-term decay heat removal. Voluntary entry into MODE 5 may be made as it is also acceptable from a risk perspective.

Required Action K.2.2 is modified by a Note that states that LCO 3.0.4.a is not applicable when entering MODE 4. This Note prohibits the use of LCO 3.0.4.a to enter MODE 4 during startup with the LCO not met. However, there is no restriction on the use of LCO 3.0.4.b, if applicable, because LCO 3.0.4.b requires performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering MODE 4, and establishment of risk management actions, if appropriate. LCO 3.0.4 is not applicable to, and the Note does not preclude, changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

BASES

SR 3.4.13.2 (continued)

Reference 5. The operational LEAKAGE rate limit applies to LEAKAGE through any one SG. If it is not practical to assign the LEAKAGE to an individual SG, all the primary to secondary LEAKAGE should be conservatively assumed to be from one SG.

The Surveillance is modified by a Note which states that the Surveillance is not required to be performed until 12 hours after establishment of steady state operation. For RCS primary to secondary LEAKAGE determination, steady state is defined as stable RCS pressure, temperature, power level, pressurizer and makeup tank levels, makeup and letdown, and RCP seal injection and return flows.

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program. The primary to secondary LEAKAGE is determined using continuous process radiation monitors or radiochemical grab sampling in accordance with the EPRI guidelines (Ref. 5).

REFERENCES

1. 10 CFR 50, Appendix A, GDC 30.
2. Regulatory Guide 1.45, May 1973.
3. FSAR, Section 15.
4. NEI 97-06, "Steam Generator Program Guidelines."
5. EPRI, "Pressurized Water Reactor Primary-to-Secondary Leak Guidelines."

INSERT - BASES 3.4.13
Reference

INSERT – BASES 3.4.13 Reference

6. WCAP-16294-NP-A, Rev. 1, "Risk-Informed Evaluation of Changes to Technical Specification Required Action Endstates for Westinghouse NSSS PWRs," June 2010.

BASES

ACTIONS
(continued)

A.1 and A.2

The flow path must be isolated by two valves. Required Actions A.1 and A.2 are modified by a Note that the valves used for isolation must meet the same leakage requirements as the PIVs and must be within the RCPB or the high pressure portion of the system.

Required Action A.1 requires that the isolation with one valve must be performed within 4 hours. Four hours provides time to reduce leakage in excess of the allowable limit and to isolate the affected system if leakage cannot be reduced. The 4 hour Completion Time allows the actions and restricts the operation with leaking isolation valves.

Required Action A.2 specifies that the double isolation barrier of two valves be restored by closing some other valve qualified for isolation or restoring one leaking PIV. The 72 hour Completion Time after exceeding the limit considers the time required to complete the Action and the low probability of a second valve failing during this time period.

B.1 and B.2

overall plant risk is reduced.

If leakage cannot be reduced, the system cannot be isolated, or the other Required Actions accomplished, the plant must be brought to a MODE in which ~~the requirement does not apply.~~ To achieve this status, the plant must be brought to MODE 3 within 6 hours and MODE 5 within ~~36~~ hours. This Action may reduce the leakage and also reduces the potential for a LOCA outside the containment. The allowed Completion Times are reasonable based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

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INSERT - BASES 3.4.14
Condition B

C.1

The inoperability of the RHR suction isolation valve interlock could allow inadvertent opening of the valves at RCS pressures in excess of the RHR systems design pressure. If the RHR suction isolation valve interlock is inoperable, operation may continue as long as the affected RHR suction

(continued)

INSERT – BASES 3.4.14 Condition B

. . .

Remaining within the Applicability of the LCO is acceptable to accomplish short duration repairs to restore inoperable equipment because the plant risk in MODE 4 is similar to or lower than MODE 5 (Ref. 8). In MODE 4 the Steam Generators and Residual Heat Removal System are available to remove decay heat, which provides diversity and defense in depth. As stated in Reference 8, the steam turbine driven Auxiliary Feedwater Pump must be available to remain in MODE 4. Should Steam Generator cooling be lost while relying on this Required Action, there are preplanned actions to ensure long-term decay heat removal. Voluntary entry into MODE 5 may be made as it is also acceptable from a risk perspective.

Required Action B.2 is modified by a Note that states that LCO 3.0.4.a is not applicable when entering MODE 4. This Note prohibits the use of LCO 3.0.4.a to enter MODE 4 during startup with the LCO not met. However, there is no restriction on the use of LCO 3.0.4.b, if applicable, because LCO 3.0.4.b requires performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering MODE 4, and establishment of risk management actions, if appropriate. LCO 3.0.4 is not applicable to, and the Note does not preclude, changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

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BASES

SURVEILLANCE REQUIREMENTS

SR 3.4.14.2 (continued)

valves from being opened is set so the actual RCS pressure must be < 450 psig to open the valves. This setpoint ensures the RHR design pressure will not be exceeded. To ensure that the RHR relief valves will not lift, the actual interlock setpoint used in performing the surveillance is < 365 psig, and takes into consideration various allowances for relief valve setting variation, transmitter elevation, and the total instrument channel uncertainty. The total instrument channel uncertainty is calculated in accordance with reference 9, and the allowance for process instrumentation (rack drift) is 1%. Once the interlock setpoint is initially reached, administrative controls ensure that the RHR suction isolation valves are closed prior to reaching an RCS pressure that could cause the RHR suction relief valves to open. Due to the bistable reset design, the valves could be opened at a pressure above the interlock setpoint, but below the reset pressure. The administrative controls ensure that the valves will not be opened if RCS pressure exceeds 365 psig after RCS pressure has decreased below the interlock setpoint.

REFERENCES

1. 10 CFR 50.2.
2. 10 CFR 50.55a(c).
3. 10 CFR 50, Appendix A, Section V, GDC 55.
4. WASH-1400 (NUREG-75/014), Appendix V, October 1975.
5. NUREG-0677, May 1980.
6. FSAR Section 5.4.
7. 1983 ASME, Boiler and Pressure Vessel Code, Section XI.

INSERT - BASES 3.4.14
Reference

(continued)

INSERT – BASES 3.4.14 Reference

8. WCAP-16294-NP-A, Rev. 1, "Risk-Informed Evaluation of Changes to Technical Specification Required Action Endstates for Westinghouse NSSS PWRs," June 2010.

BASES

ACTIONS

E.1 and E.2 (continued)

monitors to OPERABLE status within 30 days to regain the intended leakage detection diversity. The 30 day Completion Time ensures that the plant will not be operated in a reduced configuration for a lengthy time period.

F.1, F.2.1, and F.2.2

With the required containment sump monitors and the required containment air cooler condensate flow rate monitor inoperable, the only means of detecting LEAKAGE is the required containment atmosphere radiation monitor. A Note clarifies that this Condition is applicable when the only OPERABLE monitor is the containment atmosphere gaseous radiation monitor. The containment atmosphere gaseous radioactivity monitor typically cannot detect a 1 gpm leak within 1 hour when the RCS activity is low. In addition, this configuration does not provide the required diverse means of leakage detection. Indirect methods of monitoring RCS leakage must be implemented. Grab samples of the containment atmosphere must be taken to provide alternate periodic information. The 12 hour interval is sufficient to detect increasing RCS leakage. The Required Action provides 7 days to restore another RCS leakage monitor to OPERABLE status to regain the intended leakage detection diversity. The 7 day Completion Time ensures that the plant will not be operated in a degraded configuration for a lengthy time period.

G.1 and G.2

overall plant risk is reduced.

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If a Required Action of Condition A, B, C, D, E, or F cannot be met, the plant must be brought to a MODE in which ~~the requirement does not apply.~~ To achieve this status, the plant must be brought to at least MODE 3 within 6 hours and to MODE 5 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

INSERT - BASES 3.4.15 Condition G

H.1

With all required leakage detection systems inoperable, no automatic means of monitoring leakage are available, and immediate plant shutdown in accordance with LCO 3.0.3 is required. For the purpose of this Condition, the leakage

(continued)

INSERT – BASES 3.4.15 Condition G

. . .

Remaining within the Applicability of the LCO is acceptable to accomplish short duration repairs to restore inoperable equipment because the plant risk in MODE 4 is similar to or lower than MODE 5 (Ref. 4). In MODE 4 the Steam Generators and Residual Heat Removal System are available to remove decay heat, which provides diversity and defense in depth. As stated in Reference 4, the steam turbine driven Auxiliary Feedwater Pump must be available to remain in MODE 4. Should Steam Generator cooling be lost while relying on this Required Action, there are preplanned actions to ensure long-term decay heat removal. Voluntary entry into MODE 5 may be made as it is also acceptable from a risk perspective.

Required Action G.2 is modified by a Note that states that LCO 3.0.4.a is not applicable when entering MODE 4. This Note prohibits the use of LCO 3.0.4.a to enter MODE 4 during startup with the LCO not met. However, there is no restriction on the use of LCO 3.0.4.b, if applicable, because LCO 3.0.4.b requires performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering MODE 4, and establishment of risk management actions, if appropriate. LCO 3.0.4 is not applicable to, and the Note does not preclude, changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

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BASES

SURVEILLANCE REQUIREMENTS

SR 3.4.15.4, SR 3.4.15.5, and SR 3.4.15.6 (continued)

instrument string, including the instruments located inside containment. The Frequency of 18 months is a typical refueling cycle and considers channel reliability. Again, operating experience has proven that this Frequency is acceptable.

REFERENCES

1. 10 CFR 50, Appendix A, Section IV, GDC 30.
2. Regulatory Guide 1.45, Revision 0, "Reactor Coolant Pressure Boundary Leakage Detection Systems," May 1973.
3. FSAR, Subsection 5.2.5.

INSERT - BASES 3.4.15
Reference

INSERT – BASES 3.4.15 Reference

4. WCAP-16294-NP-A, Rev. 1, "Risk-Informed Evaluation of Changes to Technical Specification Required Action Endstates for Westinghouse NSSS PWRs," June 2010.

BASES

ACTIONS
(continued)

B.1 and C.1

The sludge mixing system isolation valves serve to isolate the non-safety grade mixing system from the RWST when the RWST level reaches the low level alarm. With this isolation capability inoperable, the potential exists for the inadvertent draining of the RWST below the required level via a failure (breach) in the sludge mixing system. Therefore, action must be taken to restore the isolation valve(s) to OPERABLE status within 24 hours. If the isolation valve(s) cannot be restored to OPERABLE status within the required time, action must be taken within the following 6 hours to isolate the sludge mixing system from the RWST. This may be accomplished by closing the manual isolation valve(s) or deenergizing the OPERABLE solenoid pilot valve. The times allowed for restoration or remedial action are reasonable considering the low probability of an event occurring during the specified time that would require the RWST, coincident with a sludge mixing system failure that would drain the RWST.

D.1

With the RWST inoperable for reasons other than Condition A or B (e.g., water volume), it must be restored to OPERABLE status within 1 hour.

In this Condition, neither the ECCS nor the Containment Spray System can perform its design function. Therefore, prompt action must be taken to restore the tank to OPERABLE status or to place the plant in a MODE in which the RWST is not required. The short time limit of 1 hour to restore the RWST to OPERABLE status is based on this condition simultaneously affecting redundant trains.

E.1 and E.2

Condition E is applicable to Conditions A and D. If the RWST cannot be returned to OPERABLE status within the associated Completion Time, the plant must be brought to a MODE in which ~~the LCO does not apply.~~ To achieve this status, the plant must be brought to at least MODE 3 within 6 hours and to MODE ~~5~~ 4 within ~~36~~ 12 hours. The allowed

overall plant risk is reduced.

INSERT - BASES 3.5.4
Condition E

(continued)

INSERT – BASES 3.5.4 Condition E

. . .

Remaining within the Applicability of the LCO is acceptable to accomplish short duration repairs to restore inoperable equipment because the plant risk in MODE 4 is similar to or lower than MODE 5 (Ref. 2). In MODE 4 the Steam Generators and Residual Heat Removal System are available to remove decay heat, which provides diversity and defense in depth. As stated in Reference 2, the steam turbine driven Auxiliary Feedwater Pump must be available to remain in MODE 4. Should Steam Generator cooling be lost while relying on this Required Action, there are preplanned actions to ensure long-term decay heat removal. Voluntary entry into MODE 5 may be made as it is also acceptable from a risk perspective.

Required Action C.2 is modified by a Note that states that LCO 3.0.4.a is not applicable when entering MODE 4. This Note prohibits the use of LCO 3.0.4.a to enter MODE 4 during startup with the LCO not met. However, there is no restriction on the use of LCO 3.0.4.b, if applicable, because LCO 3.0.4.b requires performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering MODE 4, and establishment of risk management actions, if appropriate. LCO 3.0.4 is not applicable to, and the Note does not preclude, changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

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BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.5.4.3

The boron concentration of the RWST should be verified to be within the required limits. This SR ensures that the reactor will remain subcritical following a LOCA, and that boron precipitation in the core will not occur. Further, it assures that the resulting sump pH will be maintained in an acceptable range so that the effect of chloride and stress corrosion on mechanical systems and components will be minimized. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

SR 3.5.4.4

(LI-0990, LI-0991)

This Surveillance demonstrates that each automatic sludge mixing pump isolation valve actuates to the closed position on an actual or simulated RWST low-level signal. Automatic isolation of this system is required to ensure adequate RWST level during a Design Bases Event. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

REFERENCES

1. FSAR, Chapter 6 and Chapter 15.

INSERT - BASES 3.5.4
Reference

INSERT – BASES 3.5.4 Reference

2. WCAP-16294-NP-A, Rev. 1, "Risk-Informed Evaluation of Changes to Technical Specification Required Action Endstates for Westinghouse NSSS PWRs," June 2010.

BASES

APPLICABILITY (continued)

limitations in these MODES. Thus, the ECCS Recirculation Fluid pH Control System is not required OPERABLE in MODES 5 and 6.

ACTIONS

A.1

With the ECCS Recirculation Fluid pH Control System inoperable, the system must be restored to OPERABLE status within 72 hours.

The ability to adjust the recirculation fluid pH to the required range and the resulting iodine retention and corrosion protection may be reduced in this condition. The 72 hour Completion Time is based on the passive nature of the system design and the low probability of an event occurring during this time that would require the ECCS Recirculation Fluid pH Control System function.

B.1 and B.2

If the ECCS Recirculation Fluid pH Control System cannot be restored to OPERABLE status within the required Completion Time, the unit must be placed in a MODE in which ~~the LCO does not apply~~. To achieve this status, the unit must be placed in at least MODE 3 within 6 hours and in MODE 5 within 84 hours. The allowed completion Time of 6 hours is reasonable, based on operating experience, to reach MODE 3 from full power conditions in an orderly manner without challenging plant systems. The extended interval to reach MODE 5 allows additional time for restoration of the system and is reasonable considering that the driving force for a release of radioactive material from the RCS is reduced in MODE 3.

overall plant risk is reduced.

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INSERT - BASES 3.5.6
Condition B

SURVEILLANCE REQUIREMENTS

SR 3.5.6.1

In order to achieve the desired pH range of 7.5 to 10.5 in the post-LOCA recirculation solution, a total of between 11,484 pounds (220 ft^3) and 14,612 pounds (260 ft^3) of TSP is required. A visual inspection is performed to verify the structural integrity and content volume of the three TSP storage baskets. The baskets are marked with a minimum and

(continued)

INSERT – BASES 3.5.6 Condition B

. . .

Remaining within the Applicability of the LCO is acceptable to accomplish short duration repairs to restore inoperable equipment because the plant risk in MODE 4 is similar to or lower than MODE 5 (Ref. 3). In MODE 4 the Steam Generators and Residual Heat Removal System are available to remove decay heat, which provides diversity and defense in depth. As stated in Reference 3, the steam turbine driven Auxiliary Feedwater Pump must be available to remain in MODE 4. Should Steam Generator cooling be lost while relying on this Required Action, there are preplanned actions to ensure long-term decay heat removal. Voluntary entry into MODE 5 may be made as it is also acceptable from a risk perspective.

Required Action B.2 is modified by a Note that states that LCO 3.0.4.a is not applicable when entering MODE 4. This Note prohibits the use of LCO 3.0.4.a to enter MODE 4 during startup with the LCO not met. However, there is no restriction on the use of LCO 3.0.4.b, if applicable, because LCO 3.0.4.b requires performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering MODE 4, and establishment of risk management actions, if appropriate. LCO 3.0.4 is not applicable to, and the Note does not preclude, changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

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BASES

SURVEILLANCE REQUIREMENTS

SR 3.5.6.1 (continued)

maximum fill level that corresponds to a total TSP volume of between 220 ft^3 and 260 ft^3. The verification that the storage baskets contain the required amount of trisodium phosphate is accomplished by verifying that the TSP level is between the indicated fill marks on the baskets. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

REFERENCES

1. FSAR, Section 6.2
2. FSAR, Chapter 15

INSERT - BASES 3.5.6
Reference

INSERT – BASES 3.5.6 Reference

3. WCAP-16294-NP-A, Rev. 1, "Risk-Informed Evaluation of Changes to Technical Specification Required Action Endstates for Westinghouse NSSS PWRs," June 2010.

BASES

overall plant risk is reduced.

ACTIONS (continued)

C.1 and C.2

INSERT - BASES 3.6.6 Condition C

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If the inoperable containment spray or cooling train cannot be restored to OPERABLE status within the required Completion Time, the plant must be brought to a MODE in which ~~the LCO does not apply~~. To achieve this status, the plant must be brought to at least MODE 3 within 6 hours and to MODE ~~5~~ within ~~84~~ hours. The allowed Completion ~~Time of 6 hours is~~ reasonable, based on operating experience, to reach ~~MODE 3 from full power~~ conditions in an orderly manner and without challenging plant systems. ~~The extended interval to reach MODE 5 allows additional time for attempting restoration of the containment spray or cooling train and is reasonable when considering the driving force for a release of radioactive material from the Reactor Coolant System is reduced in MODE 3~~.

Times are

the required plant

SURVEILLANCE REQUIREMENTS

SR 3.6.6.1

Verifying the correct alignment for manual, power operated, and automatic valves in the containment spray flow path provides assurance that the proper flow paths will exist for Containment Spray System operation. This SR does not apply to valves that are locked, sealed, or otherwise secured in position, since these were verified to be in the correct position prior to locking, sealing, or securing. This SR does not require any testing or valve manipulation. Rather, it involves verification that those valves outside containment (only check valves are inside containment) and capable of potentially being mispositioned are in the correct position.

SR 3.6.6.2

Operating each pair of containment cooling fan units for ≥ 15 minutes ensures that all fan units are OPERABLE and that all associated controls are functioning properly. It also ensures that blockage or fan or motor failure can be detected for corrective action. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

(continued)

INSERT – BASES 3.6.6 Condition C

. . .

Remaining within the Applicability of the LCO is acceptable to accomplish short duration repairs to restore inoperable equipment because the plant risk in MODE 4 is similar to or lower than MODE 5 (Ref. 8). In MODE 4 the Steam Generators and Residual Heat Removal System are available to remove decay heat, which provides diversity and defense in depth. As stated in Reference 8, the steam turbine driven Auxiliary Feedwater Pump must be available to remain in MODE 4. Should Steam Generator cooling be lost while relying on this Required Action, there are preplanned actions to ensure long-term decay heat removal. Voluntary entry into MODE 5 may be made as it is also acceptable from a risk perspective.

Required Action C.2 is modified by a Note that states that LCO 3.0.4.a is not applicable when entering MODE 4. This Note prohibits the use of LCO 3.0.4.a to enter MODE 4 during startup with the LCO not met. However, there is no restriction on the use of LCO 3.0.4.b, if applicable, because LCO 3.0.4.b requires performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering MODE 4, and establishment of risk management actions, if appropriate. LCO 3.0.4 is not applicable to, and the Note does not preclude, changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

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BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.6.5 and SR 3.6.6.6 (continued)

The surveillance of containment sump isolation valves is also required by SR 3.5.2.5. A single surveillance may be used to satisfy both requirements.

SR 3.6.6.7

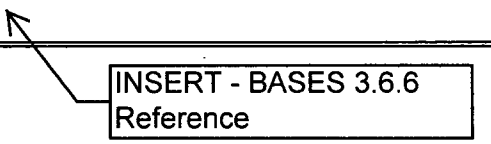
This SR requires verification that each containment cooling train actuates upon receipt of an actual or simulated safety injection signal and operates at low speed. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

SR 3.6.6.8

With the containment spray inlet valves closed and the spray header drained of any solution, low pressure air or smoke can be blown through test connections. This SR ensures that each spray nozzle is unobstructed and provides assurance that spray coverage of the containment during an accident is not degraded. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

REFERENCES

1. 10 CFR 50, Appendix A, GDC 38, GDC 39, GDC 40, GDC 41, GDC 42, and GDC 43.
2. 10 CFR 50, Appendix K.
3. FSAR, Chapter 7.
4. FSAR, Section 6.2.
5. Not used.
6. ASME, Boiler and Pressure Vessel Code, Section XI.
7. STI Evaluation 417332.



INSERT – BASES 3.6.6 Reference

8. WCAP-16294-NP-A, Rev. 1, "Risk-Informed Evaluation of Changes to Technical Specification Required Action Endstates for Westinghouse NSSS PWRs," June 2010.

BASES

overall plant risk is reduced.

ACTIONS (continued)

B.1 and B.2

If the CCW train cannot be restored to OPERABLE status within the associated Completion Time, the unit must be placed in a MODE in which ~~the LCO does not apply.~~ To achieve this status, the unit must be placed in at least MODE 3 within 6 hours and in MODE 5 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

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INSERT - BASES 3.7.7
Condition B

SURVEILLANCE REQUIREMENTS

SR 3.7.7.1

This SR is modified by a Note indicating that the isolation of the CCW flow to individual components may render those components inoperable but does not affect the OPERABILITY of the CCW System.

Verifying the correct alignment for manual, power operated, and automatic valves in the CCW flow path provides assurance that the proper flow paths exist for CCW operation. This SR does not apply to valves that are locked, sealed, or otherwise secured in position, since these valves are verified to be in the correct position prior to locking, sealing, or securing. This SR also does not apply to valves that cannot be inadvertently misaligned, such as check valves. This Surveillance does not require any testing or valve manipulation; rather, it involves verification that those valves capable of being mispositioned are in the correct position.

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

SR 3.7.7.2

This SR verifies proper automatic operation of the CCW pumps on an actual or simulated actuation signal. The CCW System is a normally operating system that cannot be fully actuated as part of routine testing during normal operation. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

(continued)

INSERT – BASES 3.7.7 Condition B

. . .

Remaining within the Applicability of the LCO is acceptable to accomplish short duration repairs to restore inoperable equipment because the plant risk in MODE 4 is similar to or lower than MODE 5 (Ref. 5). In MODE 4 the Steam Generators and Residual Heat Removal System are available to remove decay heat, which provides diversity and defense in depth. As stated in Reference 5, the steam turbine driven Auxiliary Feedwater Pump must be available to remain in MODE 4. Should Steam Generator cooling be lost while relying on this Required Action, there are preplanned actions to ensure long-term decay heat removal. Voluntary entry into MODE 5 may be made as it is also acceptable from a risk perspective.

Required Action B.2 is modified by a Note that states that LCO 3.0.4.a is not applicable when entering MODE 4. This Note prohibits the use of LCO 3.0.4.a to enter MODE 4 during startup with the LCO not met. However, there is no restriction on the use of LCO 3.0.4.b, if applicable, because LCO 3.0.4.b requires performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering MODE 4, and establishment of risk management actions, if appropriate. LCO 3.0.4 is not applicable to, and the Note does not preclude, changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

. . .

BASES (continued)

REFERENCES

1. FSAR, Subsection 9.2.2.
2. Regulatory Guide 1.139, Guidance for Residual Heat Removal, May 1978.
3. Branch Technical Position RSB 5-1, Design Requirements of the Residual Heat Removal System, Rev. 2, July 1981.
4. FSAR, Subsection 5.4.7.

INSERT - BASES 3.7.7
Reference

INSERT – BASES 3.7.7 Reference

5. WCAP-16294-NP-A, Rev. 1, "Risk-Informed Evaluation of Changes to Technical Specification Required Action Endstates for Westinghouse NSSS PWRs," June 2010.

BASES (continued)

ACTIONS

A.1

If one NSCW System train is inoperable, action must be taken to restore the train to OPERABLE status within 72 hours. In this Condition, the remaining OPERABLE NSCW System train is adequate to perform the heat removal function. However, the overall reliability is reduced because a single failure in the OPERABLE NSCW System train could result in loss of NSCW System function. Required Action A.1 is modified by two Notes. The first Note indicates that the applicable Conditions and Required Actions of LCO 3.8.1, "AC Sources — Operating," should be entered if an inoperable NSCW System train results in an inoperable emergency diesel generator. The second Note indicates that the applicable Conditions and Required Actions of LCO 3.4.6, "RCS Loops — MODE 4," should be entered if an inoperable NSCW System train results in an inoperable decay heat removal train. This is an exception to LCO 3.0.6 and ensures the proper actions are taken for these components. The 72 hour Completion Time is based on the redundant capabilities afforded by the OPERABLE train, and the low probability of a DBA occurring during this time period.

B.1 and B.2

overall plant risk is reduced.

If the NSCW System train cannot be restored to OPERABLE status within the associated Completion Time, the unit must be placed in a MODE in which ~~the LCO does not apply~~. To achieve this status, the unit must be placed in at least MODE 3 within 6 hours and in MODE ~~5~~ 4 within ~~36~~ 12 hours.

INSERT - BASES 3.7.8 Condition B

The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

SURVEILLANCE REQUIREMENTS

SR 3.7.8.1

This SR is modified by a Note indicating that the isolation of the NSCW System components or systems may render those components inoperable, but does not necessarily affect the OPERABILITY of the NSCW System.

(continued)

INSERT – BASES 3.7.8 Condition B

Remaining within the Applicability of the LCO is acceptable to accomplish short duration repairs to restore inoperable equipment because the plant risk in MODE 4 is similar to or lower than MODE 5 (Ref. 4). In MODE 4 the Steam Generators and Residual Heat Removal System are available to remove decay heat, which provides diversity and defense in depth. As stated in Reference 4, the steam turbine driven Auxiliary Feedwater Pump must be available to remain in MODE 4. Should Steam Generator cooling be lost while relying on this Required Action, there are preplanned actions to ensure long-term decay heat removal. Voluntary entry into MODE 5 may be made as it is also acceptable from a risk perspective.

Required Action B.2 is modified by a Note that states that LCO 3.0.4.a is not applicable when entering MODE 4. This Note prohibits the use of LCO 3.0.4.a to enter MODE 4 during startup with the LCO not met. However, there is no restriction on the use of LCO 3.0.4.b, if applicable, because LCO 3.0.4.b requires performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering MODE 4, and establishment of risk management actions, if appropriate. LCO 3.0.4 is not applicable to, and the Note does not preclude, changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.7.8.3

This SR verifies proper automatic operation of the NSCW System pumps on an actual or simulated SI actuation signal. The NSCW System is a normally operating system that cannot be fully actuated as part of normal testing during normal operation. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

REFERENCES

1. FSAR, Subsection 9.2.1.
2. FSAR, Section 6.2.
3. FSAR, Subsection 5.4.7.

INSERT - BASES 3.7.8
Reference

INSERT – BASES 3.7.8 Reference

4. WCAP-16294-NP-A, Rev. 1, "Risk-Informed Evaluation of Changes to Technical Specification Required Action Endstates for Westinghouse NSSS PWRs," June 2010.

BASES

ACTIONS

D.1, D.2.1, and D.2.2 (continued)

The Completion Times are reasonable based on the low probability of an accident occurring during the time allowed to restore the pump or implement an alternate method, the availability of alternate methods, and the amount of time available to transfer the water from one basin to the other under the worst case accident assumptions.

E.1 and E.2

overall plant risk is reduced.

If the Required Actions of Conditions A, B, C, or D are not completed within their associated Completion Times or if the UHS is inoperable for reasons other than described in Conditions A, B, C, or D, the unit must be placed in a MODE in which ~~the LCO does not apply.~~ To achieve this status, the unit must be placed in at least MODE 3 in 6 hours and in MODE 5 within 36 hours.

4

12

INSERT - BASES 3.7.9 Condition E

The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

SURVEILLANCE REQUIREMENTS

SR 3.7.9.1

This SR verifies that adequate long term (30 day) cooling can be maintained. The specified level also ensures that sufficient NPSH is available to operate the NSCW System pumps. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

SR 3.7.9.2

This SR verifies that the NSCW System is available to cool the CCW System to at least its maximum design temperature with the maximum accident or normal design heat loads for 30 days following a Design Basis Accident. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

SR 3.7.9.3

Operating each required NSCW cooling tower fan for $\geq$ 15 minutes ensures that all required fans are OPERABLE and that all associated controls are functioning properly.

(continued)

INSERT – BASES 3.7.9 Condition E

Remaining within the Applicability of the LCO is acceptable to accomplish short duration repairs to restore inoperable equipment because the plant risk in MODE 4 is similar to or lower than MODE 5 (Ref. 4). In MODE 4 the Steam Generators and Residual Heat Removal System are available to remove decay heat, which provides diversity and defense in depth. As stated in Reference 4, the steam turbine driven Auxiliary Feedwater Pump must be available to remain in MODE 4. Should Steam Generator cooling be lost while relying on this Required Action, there are preplanned actions to ensure long-term decay heat removal. Voluntary entry into MODE 5 may be made as it is also acceptable from a risk perspective.

Required Action E.2 is modified by a Note that states that LCO 3.0.4.a is not applicable when entering MODE 4. This Note prohibits the use of LCO 3.0.4.a to enter MODE 4 during startup with the LCO not met. However, there is no restriction on the use of LCO 3.0.4.b, if applicable, because LCO 3.0.4.b requires performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering MODE 4, and establishment of risk management actions, if appropriate. LCO 3.0.4 is not applicable to, and the Note does not preclude, changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

BASES

SURVEILLANCE REQUIREMENTS

SR 3.7.9.3 (continued)

It also ensures that fan or motor failure, or excessive vibration, can be detected for corrective action. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

SR 3.7.9.4

The verification of NSCW basin transfer pump operation includes testing to verify the pump's developed head at the flow test point is greater than or equal to the required developed head. Flow and differential head are normal tests of centrigual pump performance required by Section XI of the ASME Code (Ref. 3). This test confirms one point on the pumps design curve and is indicative of overall performance. Such inservice tests confirm component OPERABILITY, trend performance, and detect incipient failures by indicating abnormal performance. The performance of this surveillance in accordance with the Inservice Testing Program satisfies the requirements of Ref. 3.

SR 3.7.9.5

With one tower fan/spray cell out-of-service this SR verifies that ambient wet-bulb temperature remains within the three fan/spray cell region specified in Figure 3.7.9-1 so that the NSCW system remains capable of performing its design basis function. Requiring this SR when forecasted temperature is > 48°F provides assurance that the ambient wet-bulb temperature specified in Figure 3.7.9-1 will not be exceeded while the fan is out-of-service. The 24-hour frequency is sufficient since the daily peak temperature is expected to occur once in a 24-hour interval. Measurement of the ambient wet-bulb temperature should be made, near the time when the daily peak temperature is expected to occur, with a psychrometer in an open area away from sources of moisture, heat or wind, and within the owner-controlled area at Plant Vogtle.

REFERENCES

1. FSAR, Subsection 9.2.5.

2. Regulatory Guide 1.27.

3. ASME, Boiler and Pressure Vessel Code, Section XI.

INSERT - BASES 3.7.9
Reference

INSERT – BASES 3.7.9 Reference

4. WCAP-16294-NP-A, Rev. 1, "Risk-Informed Evaluation of Changes to Technical Specification Required Action Endstates for Westinghouse NSSS PWRs," June 2010.

BASES

ACTIONS

D.1 (continued)

that CRE occupants are protected from hazardous chemicals and smoke. These mitigating actions (i.e., actions that are taken to offset the consequences of the inoperable CRE boundary) should be preplanned for implementation upon entry into the condition, regardless of whether entry is intentional or unintentional. The 24 hour Completion Time is reasonable based on the low probability of a DBA occurring during this time period, and the use of mitigating actions.

The 90 day Completion Time is reasonable based on the determination that the mitigating actions will ensure protection of CRE occupants within analyzed limits while limiting the probability that CRE occupants will have to implement protective measures that may adversely affect their ability to control the reactor and maintain it in a safe shutdown condition in the event of a DBA. In addition, the 90 day Completion Time is a reasonable time to diagnose, plan and possibly repair, and test most problems with the CRE boundary.

E.1

With the CRE air temperature outside its limit, action must be taken to restore the air temperature to within the limit within 7 days. If the CRE air temperature exceeds its limit, the ability of a single train of CREFS to maintain CRE temperature after a CRI may be affected. The completion time of 7 days is reasonable considering the number of CREFS trains available to perform the required temperature control function and the low probability of an event occurring that would require the CREFS operation during that time.

F.1, F.2, and F.3

If the Required Actions and associated Completion Times of Conditions A, B, C, D, or E are not met, action must be taken to place the unit in a condition where the inoperable CREFS train(s) are no longer required. Locking closed the outside air (OSA) dampers in the affected unit and locking open the OSA dampers in the unaffected unit within 1 hour, ensure that all CRE air intake is monitored by redundant radiogas monitors that actuate OPERABLE CREFS trains. The affected unit(s) must also be placed in MODE 3 within the following 6 hours and MODE 5 within

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(continued)

BASES

ACTIONS

F.1, F.2, and F.3 (continued)

in which overall plant risk is reduced.

the following 36 hours, which removes the requirement for CRE occupant protection in the event of an SI in the affected unit(s). These actions ensure that if the CRE occupants cannot be protected from all postulated accident and single failure conditions, the unit or units are placed in a MODE ~~where the protection is no longer required~~. The allowed Completion Times are reasonable, based on operating experience, to perform the Required Actions and to reach the required unit conditions from full power conditions in an orderly manner without challenging unit systems.

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INSERT - BASES 3.7.10 Condition F

Required Action F.1 is modified by a Note that excepts Conditions B, D, and E. Conditions B, D, and E affect both units, and Required Action F.1 is based on a single affected unit. Therefore, upon entry into Condition F from Condition B, D, or E, only Required Actions F.2 and F.3 apply.

SURVEILLANCE REQUIREMENTS

SR 3.7.10.1

The CREFS is required to maintain the CRE temperature ≤ 85°F in the event of a CRI. The maintenance of the CRE below this temperature ensures the operational requirements of equipment located in the CRE will not be exceeded. To accomplish this function, the CREFS air flow is directed through cooling coils which are supplied by the Essential Chilled Water System. The design cooling capacity of the CREFS and the limitation of the normal CRE ambient temperature (before CRI) ensure the capability of the CREFS to maintain the CRE temperature within limit after a CRI. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

SR 3.7.10.2

Standby systems should be checked periodically to ensure that they function properly. As the environment and normal operating conditions on this system are not too severe, testing each train once every month provides an adequate check of this system. Monthly operations with the heater control circuit energized allows the heaters to operate as necessary to reduce the humidity in the

(continued)

INSERT – BASES 3.7.10 Condition F

. . .

Remaining within the Applicability of the LCO is acceptable to accomplish short duration repairs to restore inoperable equipment because the plant risk in MODE 4 is similar to or lower than MODE 5 (Ref. 8). In MODE 4 the Steam Generators and Residual Heat Removal System are available to remove decay heat, which provides diversity and defense in depth. As stated in Reference 8, the steam turbine driven Auxiliary Feedwater Pump must be available to remain in MODE 4. Should Steam Generator cooling be lost while relying on this Required Action, there are preplanned actions to ensure long-term decay heat removal. Voluntary entry into MODE 5 may be made as it is also acceptable from a risk perspective.

Required Action F.3 is modified by a Note that states that LCO 3.0.4.a is not applicable when entering MODE 4. This Note prohibits the use of LCO 3.0.4.a to enter MODE 4 during startup with the LCO not met. However, there is no restriction on the use of LCO 3.0.4.b, if applicable, because LCO 3.0.4.b requires performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering MODE 4, and establishment of risk management actions, if appropriate. LCO 3.0.4 is not applicable to, and the Note does not preclude, changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

. . .

BASES

SURVEILLANCE REQUIREMENTS

SR 3.7.10.5 (continued)

basis analyses of DBA consequences. When unfiltered air inleakage is greater than the assumed flow rate, Condition D must be entered. Required Action D.3 allows time to restore the CRE boundary to OPERABLE status provided mitigating actions can ensure that the CRE remains within the licensing basis habitability limits for the occupants following an accident. Compensatory measures are discussed in Regulatory Guide 1.196, Section C.2.7.3, (Ref. 5) which endorses, with exceptions, NEI 99-03, Section 8.4 and Appendix F (Ref. 6). These compensatory measures may also be used as mitigating actions as required by Required Action D.2. Temporary analytical methods may also be used as compensatory measures to restore OPERABILITY (Ref. 7). Options for restoring the CRE boundary to OPERABLE status include changing the licensing basis DBA consequence analysis, repairing the CRE boundary, or a combination of these actions. Depending upon the nature of the problem and the corrective action, a full scope inleakage test may not be necessary to establish that the CRE boundary has been restored to OPERABLE status.

REFERENCES

1. FSAR, Section 6.4.
2. FSAR, Chapter 15.
3. VEGP Calculation No. X6CNA.09.01, Control Room HVAC Technical Specifications, October 21, 1988.
4. Regulatory Guide 1.52, Rev. 2.
5. Regulatory Guide 1.196.
6. NEI 99-03, "Control Room Habitability Assessment," June 2001.
7. Letter from Eric J. Leeds (NRC) to James W. Davis (NEI) dated January 30, 2004, "NEI Draft White Paper, Use of Generic Letter 91-18 Process and Alternative Source Terms in the Context of Control Room Habitability." (ADAMS Accession No. ML040300694).

INSERT - BASES 3.7.10
Reference

INSERT – BASES 3.7.10 Reference

8. WCAP-16294-NP-A, Rev. 1, "Risk-Informed Evaluation of Changes to Technical Specification Required Action Endstates for Westinghouse NSSS PWRs," June 2010.

BASES

ACTIONS

F.1 (continued)

During the period that the CRE boundary is considered inoperable, action must be initiated to implement mitigating actions to lessen the effect on CRE occupants from the potential hazards of a radiological or chemical event or a challenge from smoke. Actions must be taken within 24 hours to verify that in the event of a DBA, the mitigating actions will ensure that CRE occupant radiological exposures will not exceed the calculated dose of the licensing basis analyses of DBA consequences, and that CRE occupants are protected from hazardous chemicals and smoke. These mitigating actions (i.e., actions that are taken to offset the consequences of the inoperable CRE boundary) should be preplanned for implementation upon entry into the condition, regardless of whether entry is intentional or unintentional. The 24 hour Completion Time is reasonable based on the low probability of a DBA occurring during this time period, and the use of mitigating actions. The 90 day Completion Time is reasonable based on the determination that the mitigating actions will ensure protection of CRE occupants within analyzed limits while limiting the probability that CRE occupants will have to implement protective measures that may adversely affect their ability to control the reactor and maintain it in a safe shutdown condition in the event of a DBA. In addition, the 90 day Completion Time is a reasonable time to diagnose, plan and possibly repair, and test most problems with the CRE boundary.

G.1

With the CRE air temperature outside its limit, action must be taken to restore the air temperature to within the limit within 7 days. If the CRE air temperature exceeds its limit, the ability of a single train of CREFS to maintain CRE temperature after a CRI may be affected. The completion time of 7 days is reasonable considering the number of CREFS trains available to perform the required temperature control function and the low probability of an event occurring that would require the CREFS operation during that time.

H.1 and H.2

If the Required Actions and associated Completion Times for the operating unit are not met, action must be taken to place the unit in a condition where the inoperable CREFS train(s) are no longer required. The operating unit must be placed in MODE 3 within 6 hours and MODE 5 within 36 hours, which removes the requirement for CRE occupant protection in the event of an SI in

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(continued)

BASES

ACTIONS

H.1 and H.2 (continued)

in which overall plant risk is reduced.

the operating unit. These actions ensure that if the CRE occupants cannot be protected from all postulated accident and single failure conditions, the unit is placed in a MODE ~~where the protection is no longer required~~. The allowed Completion Times are reasonable, based on operating experience to reach the required unit conditions from full power conditions in an orderly manner without challenging unit systems.

INSERT - BASES 3.7.11
Condition H

SURVEILLANCE REQUIREMENTS

SR 3.7.11.1

SR 3.7.11.1 requires that the SRs specified in LCO 3.7.10 be applicable for this LCO as well. The description and Frequencies of those required SRs are included in the Bases for LCO 3.7.10.

REFERENCES

1. VEGP Calculation No. X6CNA.09.01, Control Room HVAC Technical Specifications, October 21, 1988.

INSERT - BASES 3.7.11
Reference

INSERT – BASES 3.7.11 Condition H

. . .

Remaining within the Applicability of the LCO is acceptable to accomplish short duration repairs to restore inoperable equipment because the plant risk in MODE 4 is similar to or lower than MODE 5 (Ref. 2). In MODE 4 the Steam Generators and Residual Heat Removal System are available to remove decay heat, which provides diversity and defense in depth. As stated in Reference 2, the steam turbine driven Auxiliary Feedwater Pump must be available to remain in MODE 4. Should Steam Generator cooling be lost while relying on this Required Action, there are preplanned actions to ensure long-term decay heat removal. Voluntary entry into MODE 5 may be made as it is also acceptable from a risk perspective.

Required Action H.2 is modified by a Note that states that LCO 3.0.4.a is not applicable when entering MODE 4. This Note prohibits the use of LCO 3.0.4.a to enter MODE 4 during startup with the LCO not met. However, there is no restriction on the use of LCO 3.0.4.b, if applicable, because LCO 3.0.4.b requires performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering MODE 4, and establishment of risk management actions, if appropriate. LCO 3.0.4 is not applicable to, and the Note does not preclude, changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

. . .

INSERT – BASES 3.7.11 Reference

2. WCAP-16294-NP-A, Rev. 1, "Risk-Informed Evaluation of Changes to Technical Specification Required Action Endstates for Westinghouse NSSS PWRs," June 2010.

BASES

ACTIONS

B.1 (continued)

probability of a DBA occurring during this time period and the use of compensatory measures. The 24-hour Completion Time is a typically reasonable time to test, diagnose, and plan and possibly execute a repair of most problems with the PPAFES boundary.

C.1 and C.2

overall plant risk is reduced.

If the inoperable train cannot be restored to OPERABLE status within the associated Completion Time, the unit must be placed in a MODE in which ~~the LCO does not apply.~~ To achieve this status, the unit must be placed in at least MODE 3 within 6 hours, and in MODE ~~5~~ within ~~36~~ hours. The Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

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INSERT - BASES 3.7.13
Condition C

SURVEILLANCE REQUIREMENTS

SR 3.7.13.1

Standby systems should be checked periodically to ensure that they function properly. As the environmental and normal operating conditions on this system are not severe, testing each train once every month provides an adequate check on this system. Flow (FI-12629 and FI-12542) through the HEPA and charcoal filters is verified. Systems that do not take credit for humidity control (heaters) need only be operated for $\geq$ 15 minutes to demonstrate the function of the system. The 31 day Frequency is based on the known reliability of equipment and the two train redundancy available.

SR 3.7.13.2

This SR verifies that the required PPAFES testing is performed in accordance with the Ventilation Filter Testing Program (VFTP). The PPAFES filter tests are in accordance with Regulatory Guide 1.52 (Ref. 5). The VFTP includes testing HEPA filter performance, charcoal adsorber efficiency, minimum system flow rate, and the physical properties of the activated charcoal (general use and following specific operations). Specific test frequencies and additional information are discussed in detail in the VFTP.

(continued)

INSERT – BASES 3.7.13 Condition C

. . .

Remaining within the Applicability of the LCO is acceptable to accomplish short duration repairs to restore inoperable equipment because the plant risk in MODE 4 is similar to or lower than MODE 5 (Ref. 5). In MODE 4 the Steam Generators and Residual Heat Removal System are available to remove decay heat, which provides diversity and defense in depth. As stated in Reference 5, the steam turbine driven Auxiliary Feedwater Pump must be available to remain in MODE 4. Should Steam Generator cooling be lost while relying on this Required Action, there are preplanned actions to ensure long-term decay heat removal. Voluntary entry into MODE 5 may be made as it is also acceptable from a risk perspective.

Required Action C.2 is modified by a Note that states that LCO 3.0.4.a is not applicable when entering MODE 4. This Note prohibits the use of LCO 3.0.4.a to enter MODE 4 during startup with the LCO not met. However, there is no restriction on the use of LCO 3.0.4.b, if applicable, because LCO 3.0.4.b requires performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering MODE 4, and establishment of risk management actions, if appropriate. LCO 3.0.4 is not applicable to, and the Note does not preclude, changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

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BASES

SURVEILLANCE REQUIREMENTS

SR 3.7.13.4 (continued)

This test is conducted along with the tests for filter penetration; thus, the 18 month Frequency is consistent with that specified in Reference 5. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

REFERENCES

1. FSAR, Subsection 6.5.1.
2. FSAR, Subsection 9.4.3.
3. FSAR, Subsection 15.6.5.
4. 10 CFR 100.

INSERT - BASES 3.7.13 Reference

INSERT – BASES 3.7.13 Reference

5. WCAP-16294-NP-A, Rev. 1, "Risk-Informed Evaluation of Changes to Technical Specification Required Action Endstates for Westinghouse NSSS PWRs," June 2010.

BASES

ACTIONS (continued)

B.1 and B.2

If the ESF room cooler and safety-related chiller system train cannot be restored to OPERABLE status within the associated Completion Time, the unit must be placed in a MODE in which the ~~LCO does not apply~~. To achieve this status, the unit must be placed in at least MODE 3 within 6 hours and MODE 5 within ~~36~~ hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

overall plant risk is reduced.

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INSERT - BASES 3.7.14
Condition B

SURVEILLANCE REQUIREMENTS

SR 3.7.14.1

Verifying the correct alignment for manual, power operated, and automatic valves servicing safety-related equipment provides assurance that the proper flow paths exist for ESF room cooler and safety-related chiller system operation. This SR does not apply to valves that are locked, sealed, or otherwise secured in position, since they are verified to be in the correct position prior to being locked, sealed, or secured. This SR does not require any testing or valve manipulation; rather, it involves verification that those valves capable of being mispositioned are in the correct position. This SR does not apply to valves that cannot be inadvertently misaligned, such as check valves.

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

SR 3.7.14.2

This SR verifies proper automatic operation of the ESF room cooler and safety-related chiller system valves servicing safety-related equipment on an actual or simulated actuation signal. The safety-related chiller trains are also required to operate on a CRI signal. This surveillance is not required for valves that are locked, sealed, or otherwise secured in the required position under administrative

(continued)

INSERT – BASES 3.7.14 Condition B

. . .

Remaining within the Applicability of the LCO is acceptable to accomplish short duration repairs to restore inoperable equipment because the plant risk in MODE 4 is similar to or lower than MODE 5 (Ref. 3). In MODE 4 the Steam Generators and Residual Heat Removal System are available to remove decay heat, which provides diversity and defense in depth. As stated in Reference 3, the steam turbine driven Auxiliary Feedwater Pump must be available to remain in MODE 4. Should Steam Generator cooling be lost while relying on this Required Action, there are preplanned actions to ensure long-term decay heat removal. Voluntary entry into MODE 5 may be made as it is also acceptable from a risk perspective.

Required Action B.2 is modified by a Note that states that LCO 3.0.4.a is not applicable when entering MODE 4. This Note prohibits the use of LCO 3.0.4.a to enter MODE 4 during startup with the LCO not met. However, there is no restriction on the use of LCO 3.0.4.b, if applicable, because LCO 3.0.4.b requires performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering MODE 4, and establishment of risk management actions, if appropriate. LCO 3.0.4 is not applicable to, and the Note does not preclude, changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

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BASES

SURVEILLANCE REQUIREMENTS

SR 3.7.14.2 (continued)

controls. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

SR 3.7.14.3

This SR verifies proper operation of the ESF room cooler and safety-related chiller system fans and pumps on an actual or simulated actuation signal. The safety-related chiller system is also required to automatically start on a CRI signal. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

REFERENCES

1. FSAR, Section 7.3.
2. FSAR, Section 9.4.

INSERT - BASES 3.7.14
Reference

INSERT – BASES 3.7.14 Reference

3. WCAP-16294-NP-A, Rev. 1, "Risk-Informed Evaluation of Changes to Technical Specification Required Action Endstates for Westinghouse NSSS PWRs," June 2010.

BASES

ACTIONS

G.1 (continued)

OPERABILITY. This time period also ensures that the probability of an accident (requiring sequencer OPERABILITY) occurring during periods when the sequencer is inoperable is minimal.

H.1 and H.2

overall plant risk is reduced.

If the inoperable AC electric power sources or an automatic load sequencer cannot be restored to OPERABLE status within the required Completion Time, or Required Actions B.1, B.3, B.4.1, B.4.2, or B.6 cannot be met within the required Completion Times, the unit must be brought to a MODE in which ~~the LCO does not apply.~~ To achieve this status, the unit must be brought to at least MODE 3 within 6 hours and to MODE 5 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging plant systems.

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4

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I.1

INSERT - BASES 3.8.1
Condition H

Condition I corresponds to a level of degradation in which all redundancy in the AC electrical power supplies has been lost. At this severely degraded level, any further losses in the AC electrical power system will cause a loss of function. Therefore, no additional time is justified for continued operation. The unit is required by LCO 3.0.3 to commence a controlled shutdown.

SURVEILLANCE REQUIREMENTS

The AC sources are designed to permit inspection and testing of all important areas and features, especially those that have a standby function, in accordance with 10 CFR 50, Appendix A, GDC 18 (Ref. 8). Periodic component tests are supplemented by extensive functional tests during refueling outages (under simulated accident conditions). The SRs for demonstrating the OPERABILITY of the DGs are in accordance with the recommendations of Regulatory Guide 1.9 (Ref. 3), Regulatory Guide 1.108 (Ref. 9), and Regulatory Guide 1.137 (Ref. 10), as addressed in the FSAR.

(continued)

INSERT – BASES 3.8.1 Condition H

. . .

Remaining within the Applicability of the LCO is acceptable to accomplish short duration repairs to restore inoperable equipment because the plant risk in MODE 4 is similar to or lower than MODE 5 (Ref. 14). In MODE 4 the Steam Generators and Residual Heat Removal System are available to remove decay heat, which provides diversity and defense in depth. As stated in Reference 14, the steam turbine driven Auxiliary Feedwater Pump must be available to remain in MODE 4. Should Steam Generator cooling be lost while relying on this Required Action, there are preplanned actions to ensure long-term decay heat removal. Voluntary entry into MODE 5 may be made as it is also acceptable from a risk perspective.

Required Action H.2 is modified by a Note that states that LCO 3.0.4.a is not applicable when entering MODE 4. This Note prohibits the use of LCO 3.0.4.a to enter MODE 4 during startup with the LCO not met. However, there is no restriction on the use of LCO 3.0.4.b, if applicable, because LCO 3.0.4.b requires performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering MODE 4, and establishment of risk management actions, if appropriate. LCO 3.0.4 is not applicable to, and the Note does not preclude, changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

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BASES

SURVEILLANCE REQUIREMENTS

SR 3.8.1.20 (continued)

This SR is modified by a Note. The reason for the Note is to minimize wear on the DG during testing. For the purpose of this testing, the DGs must be started from standby conditions, that is, with the engine coolant and oil continuously circulated and temperature maintained consistent with manufacturer recommendations.

REFERENCES

1. 10 CFR 50, Appendix A, GDC 17.
2. FSAR, Chapter 8.
3. Regulatory Guide 1.9, Rev. 3, July 1993.
4. FSAR, Chapter 6.
5. FSAR, Chapter 15.
6. Regulatory Guide 1.93, Rev. 0, December 1974.
7. Generic Letter 84-15, "Proposed Staff Actions to Improve and Maintain Diesel Generator Reliability," July 2, 1984.
8. 10 CFR 50, Appendix A, GDC 18.
9. Regulatory Guide 1.108, Rev. 1, August 1977.
10. Regulatory Guide 1.137, Rev. 1, October 1979.
11. IEEE Standard 308-1978.
12. Generic Letter 91-04, "Changes in Technical Specification Intervals to Accommodate a 24-Month Fuel Cycle," April 2, 1991.
13. STI Evaluation 417332.

INSERT - BASES 3.8.1
Reference

INSERT – BASES 3.8.1 Reference

14. WCAP-16294-NP-A, Rev. 1, "Risk-Informed Evaluation of Changes to Technical Specification Required Action Endstates for Westinghouse NSSS PWRs," June 2010.

BASES

ACTIONS (continued)

C.1

Condition C represents one train with a loss of ability to completely respond to an event, and/or a potential loss of ability to remain energized during normal operation. The 2 hour limit is consistent with the allowed time for an inoperable DC distribution system train.

If one of the required DC electrical power sources is inoperable for reasons other than Condition A or B (e.g., inoperable battery charger or inoperable battery charger and associated inoperable battery), the remaining DC electrical power sources have the capacity to support a safe shutdown and to mitigate an accident condition. Since a subsequent worst case single failure could, however, result in the loss of the minimum necessary DC electrical sources to mitigate a worst case accident, continued power operation should not exceed 2 hours. The 2 hour Completion Time is based on Regulatory Guide 1.93 (Ref. 8) and reflects a reasonable time to assess unit status as a function of the inoperable DC electrical power source and, if the DC electrical power source is not restored to OPERABLE status, to prepare to effect an orderly and safe unit shutdown.

D.1 and D.2

overall plant risk is reduced.

If the inoperable DC electrical power source cannot be restored to OPERABLE status within the required Completion Time, the unit must be brought to a MODE in which ~~the LCO does not apply.~~ To achieve this status, the unit must be brought to at least MODE 3 within 6 hours and to MODE ~~5~~ within ~~36~~ hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging plant systems. The Completion Time to bring the unit to MODE 5 is consistent with the time required in Regulatory Guide 1.93 (Ref. 8).

4

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INSERT - BASES 3.8.4 Condition D

SURVEILLANCE REQUIREMENTS

SR 3.8.4.1

Verifying battery terminal voltage while on float charge for the batteries helps to ensure the effectiveness of the battery chargers, which support the ability of the batteries to perform their intended function. Float charge is the condition in which the charger is supplying the continuous charge required to overcome the internal losses of a battery and maintain the battery in a fully charged state while supplying the continuous steady state loads of the associated

(continued)

INSERT – BASES 3.8.4 Condition D

. . .

Remaining within the Applicability of the LCO is acceptable to accomplish short duration repairs to restore inoperable equipment because the plant risk in MODE 4 is similar to or lower than MODE 5 (Ref. 9). In MODE 4 the Steam Generators and Residual Heat Removal System are available to remove decay heat, which provides diversity and defense in depth. As stated in Reference 9, the steam turbine driven Auxiliary Feedwater Pump must be available to remain in MODE 4. Should Steam Generator cooling be lost while relying on this Required Action, there are preplanned actions to ensure long-term decay heat removal. Voluntary entry into MODE 5 may be made as it is also acceptable from a risk perspective.

Required Action D.2 is modified by a Note that states that LCO 3.0.4.a is not applicable when entering MODE 4. This Note prohibits the use of LCO 3.0.4.a to enter MODE 4 during startup with the LCO not met. However, there is no restriction on the use of LCO 3.0.4.b, if applicable, because LCO 3.0.4.b requires performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering MODE 4, and establishment of risk management actions, if appropriate. LCO 3.0.4 is not applicable to, and the Note does not preclude, changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

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BASES

SURVEILLANCE REQUIREMENTS

SR 3.8.4.3 (continued)

2. Post Corrective maintenance testing that requires performance of this Surveillance in order to restore the component to OPERABLE, provided the maintenance was required, or performed in conjunction with maintenance required to maintain OPERABILITY or reliability.

REFERENCES

1. IEEE-308-1978.
2. 10 CFR 50, Appendix A, GDC 17.
3. IEEE-485-1983, June 1983.
4. FSAR, Chapter 8.
5. Regulatory Guide 1.32, February 1977.
6. FSAR, Chapter 6.
7. FSAR, Chapter 15.
8. Regulatory Guide 1.93, December 1974.

INSERT - BASES 3.8.4 Reference

INSERT – BASES 3.8.4 Reference

9. WCAP-16294-NP-A, Rev. 1, "Risk-Informed Evaluation of Changes to Technical Specification Required Action Endstates for Westinghouse NSSS PWRs," June 2010.

BASES

ACTIONS (continued)

B.1 and B.2

If the inoperable devices or components cannot be restored to OPERABLE status within the required Completion Time, the unit must be brought to a MODE in which the LCO does not apply. To achieve this status, the unit must be brought to at least MODE 3 within 6 hours and to MODE 5 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging plant systems.

overall plant risk is reduced.

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36

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INSERT - BASES 3.8.7
Condition B

SURVEILLANCE REQUIREMENTS

SR 3.8.7.1

This Surveillance verifies that the inverters are functioning properly with all required circuit breakers closed and AC vital buses energized from the inverter. The verification of proper voltage output ensures that the required power is readily available for the instrumentation of the RPS and ESFAS connected to the AC vital buses. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

REFERENCES

1. FSAR, Chapter 8.
2. FSAR, Chapter 6.
3. FSAR, Chapter 15.

INSERT - BASES 3.8.7
Reference

INSERT – BASES 3.8.7 Condition B

. . .

Remaining within the Applicability of the LCO is acceptable to accomplish short duration repairs to restore inoperable equipment because the plant risk in MODE 4 is similar to or lower than MODE 5 (Ref. 4). In MODE 4 the Steam Generators and Residual Heat Removal System are available to remove decay heat, which provides diversity and defense in depth. As stated in Reference 4, the steam turbine driven Auxiliary Feedwater Pump must be available to remain in MODE 4. Should Steam Generator cooling be lost while relying on this Required Action, there are preplanned actions to ensure long-term decay heat removal. Voluntary entry into MODE 5 may be made as it is also acceptable from a risk perspective.

Required Action B.2 is modified by a Note that states that LCO 3.0.4.a is not applicable when entering MODE 4. This Note prohibits the use of LCO 3.0.4.a to enter MODE 4 during startup with the LCO not met. However, there is no restriction on the use of LCO 3.0.4.b, if applicable, because LCO 3.0.4.b requires performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering MODE 4, and establishment of risk management actions, if appropriate. LCO 3.0.4 is not applicable to, and the Note does not preclude, changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

. . .

INSERT – BASES 3.8.7 Reference

4. WCAP-16294-NP-A, Rev. 1, "Risk-Informed Evaluation of Changes to Technical Specification Required Action Endstates for Westinghouse NSSS PWRs," June 2010.

BASES

ACTIONS

C.1 (continued)

The 2 hour Completion Time for DC buses is consistent with Regulatory Guide 1.93 (Ref. 3).

D.1 and D.2

overall plant risk is reduced.

If the inoperable distribution subsystem cannot be restored to OPERABLE status within the required Completion Time, the unit must be brought to a MODE in which ~~the LCO does not apply.~~ To achieve this status, the unit must be brought to at least MODE 3 within 6 hours and to MODE 5 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging plant systems.

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INSERT - BASES 3.8.9
Condition D

E.1

With two or more electrical power distribution subsystems inoperable that result in a loss of safety function, vital functions for DBA mitigation would be compromised, and immediate plant shutdown in accordance with LCO 3.0.3 is required.

(continued)

INSERT – BASES 3.8.9 Condition D

. . .

Remaining within the Applicability of the LCO is acceptable to accomplish short duration repairs to restore inoperable equipment because the plant risk in MODE 4 is similar to or lower than MODE 5 (Ref. 4). In MODE 4 the Steam Generators and Residual Heat Removal System are available to remove decay heat, which provides diversity and defense in depth. As stated in Reference 4, the steam turbine driven Auxiliary Feedwater Pump must be available to remain in MODE 4. Should Steam Generator cooling be lost while relying on this Required Action, there are preplanned actions to ensure long-term decay heat removal. Voluntary entry into MODE 5 may be made as it is also acceptable from a risk perspective.

Required Action D.2 is modified by a Note that states that LCO 3.0.4.a is not applicable when entering MODE 4. This Note prohibits the use of LCO 3.0.4.a to enter MODE 4 during startup with the LCO not met. However, there is no restriction on the use of LCO 3.0.4.b, if applicable, because LCO 3.0.4.b requires performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering MODE 4, and establishment of risk management actions, if appropriate. LCO 3.0.4 is not applicable to, and the Note does not preclude, changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

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BASES (continued)

SURVEILLANCE REQUIREMENTS

SR 3.8.9.1

This Surveillance verifies that the required AC, DC, and AC vital bus electrical power distribution systems are functioning properly, with correct circuit breaker alignment. The correct breaker alignment ensures the appropriate separation and independence of the electrical divisions is maintained, and the appropriate voltage is available to each required bus. The verification of proper voltage availability on the buses ensures that the required voltage is readily available for motive as well as control functions for critical system loads connected to these buses. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

REFERENCES

1. FSAR, Chapter 6.
2. FSAR, Chapter 15.
3. Regulatory Guide 1.93, December 1974.

INSERT - BASES 3.8.9
Reference

INSERT – BASES 3.8.9 Reference

4. WCAP-16294-NP-A, Rev. 1, "Risk-Informed Evaluation of Changes to Technical Specification Required Action Endstates for Westinghouse NSSS PWRs," June 2010.

Vogtle Electric Generating Plant
License Amendment Request for Adoption of TSTF-432-A, Revision 1,
Change in Technical Specifications End States (WCAP-16294)

Enclosure 4

Clean-Typed Technical Specifications Pages

3.3 INSTRUMENTATION

3.3.2 Engineered Safety Feature Actuation System (ESFAS) Instrumentation

LCO 3.3.2 The ESFAS instrumentation for each Function in Table 3.3.2-1 shall be OPERABLE.

APPLICABILITY: According to Table 3.3.2 1.

ACTIONS

----------NOTE----------
Separate Condition entry is allowed for each Function.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more Functions with one or more required channels inoperable.	A.1 Enter the Condition referenced in Table 3.3.2-1 for the channel(s) or train(s).	Immediately
B. One channel inoperable.	B.1 Restore channel to OPERABLE status. OR B.2.1 Be in MODE 3. AND B.2.2 ----------NOTE---------- LCO 3.0.4.a is not applicable when entering MODE 4. ---------- Be in MODE 4.	48 hours 54 hours 60 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. One train inoperable.	----------NOTE---------- One train may be bypassed for up to 4 hours for surveillance testing provided the other train is OPERABLE. ----------	
	C.1 Restore train to OPERABLE status.	24 hours
	OR	
	C.2.1 Be in MODE 3.	30 hours
	AND	
	C.2.2 ----------NOTE---------- LCO 3.0.4.a is not applicable when entering MODE 4. ---------- Be in MODE 4.	36 hours
D. One channel inoperable.	----------NOTE---------- A channel may be bypassed for up to 12 hours for surveillance testing. ----------	
	D.1 Place channel in trip.	72 hours
	OR	
	D.2.1 Be in MODE 3.	78 hours
	AND	
	D.2.2 Be in MODE 4.	84 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
I. One channel inoperable.	----------NOTE---------- A channel may be bypassed for up to 12 hours for surveillance testing. ----------		
	I.1	Place channel in trip.	72 hours
	OR		
	I.2	Be in MODE 3.	78 hours
J. One Main Feedwater Pumps trip channel inoperable.	J.1	Restore channel to OPERABLE status.	48 hours
	OR		
	J.2	Be in MODE 3.	54 hours
K. One RWST Level - Low Low channel inoperable.	----------NOTE---------- One additional channel may be bypassed for up to 12 hours for surveillance testing. ----------		
	K.1	Place channel in bypass.	72 hours
	OR		
	K.2.1	Be in MODE 3.	78 hours
	AND		
	K.2.2	----------NOTE---------- LCO 3.0.4.a is not applicable when entering MODE 4. ----------	
		Be in MODE 4.	84 hours

(continued)

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.13 RCS Operational LEAKAGE

LCO 3.4.13 RCS operational LEAKAGE shall be limited to:

a. No pressure boundary LEAKAGE;

b. 1 gpm unidentified LEAKAGE;

c. 10 gpm identified LEAKAGE; and

d. 150 gallons per day primary to secondary LEAKAGE through any one steam generator (SG).

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

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. RCS operational LEAKAGE not within limits for reasons other than pressure boundary LEAKAGE or primary to secondary LEAKAGE.	A.1	Reduce LEAKAGE to within limits.	4 hours
B. Required Action and associated Completion Time of Condition A not met. OR Pressure boundary LEAKAGE exists. OR Primary to secondary LEAKAGE not within limit.	B.1 AND	Be in MODE 3.	6 hours
	B.2	----------NOTE---------- LCO 3.0.4.a is not applicable when entering MODE 4. ----------	
		Be in MODE 4.	12 hours

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. (continued)	A.1	Isolate the high pressure portion of the affected system from the low pressure portion by use of one closed manual, deactivated automatic, or check valve.	4 hours
	AND		
	A.2	Isolate the high pressure portion of the affected system from the low pressure portion by use of a second closed manual, deactivated automatic, or check valve.	72 hours
B. Required Action and associated Completion Time for Condition A not met.	B.1	Be in MODE 3.	6 hours
	AND		
	B.2	----------NOTE---------- LCO 3.0.4.a is not applicable when entering MODE 4. ----------	
		Be in MODE 4.	12 hours
C. RHR System suction isolation valve interlock function inoperable.	C.1	Isolate the affected penetration by use of one closed manual or deactivated automatic valve.	4 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. Required containment atmosphere radioactivity monitor inoperable. AND Required containment air cooler condensate flow rate monitor inoperable.	E.1 Restore required containment atmosphere radioactivity monitor to OPERABLE status. OR E.2 Restore required containment air cooler condensate flow rate monitor to OPERABLE status.	30 days 30 days
----------NOTE---------- Only applicable when a containment atmosphere gaseous radiation monitor is the only OPERABLE monitor. ---------- F. Required containment sump monitors inoperable. AND Required containment air cooler condensate flow rate monitor inoperable.	F.1 Analyze grab samples of the containment atmosphere. AND F.2.1 Restore required containment sump monitors to OPERABLE status. OR F.2.2 Restore required containment air cooler condensate flow rate monitor to OPERABLE status.	Once per 12 hours 7 days 7 days

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
G. Required Action and associated Completion Time not met.	G.1	Be in MODE 3.	6 hours
	AND		
	G.2	----------NOTE---------- LCO 3.0.4.a is not applicable when entering MODE 4. ----------	
		Be in MODE 4.	12 hours
H. All required leakage detection systems inoperable.	H.1	Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.15.1	Perform CHANNEL CHECK of containment normal sumps level and reactor cavity sump level monitors.	In accordance with the Surveillance Frequency Control Program
SR 3.4.15.2	Perform CHANNEL CHECK of the required containment atmosphere radioactivity monitor.	In accordance with the Surveillance Frequency Control Program
SR 3.4.15.3	Perform COT of the required containment atmosphere radioactivity monitor.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

	SURVEILLANCE	FREQUENCY
SR 3.4.15.4	Perform CHANNEL CALIBRATION of the containment sump monitors.	In accordance with the Surveillance Frequency Control Program
SR 3.4.15.5	Perform CHANNEL CALIBRATION of the required containment atmosphere radioactivity monitor.	In accordance with the Surveillance Frequency Control Program
SR 3.4.15.6	Perform CHANNEL CALIBRATION of the required containment air cooler condensate flow rate monitor.	In accordance with the Surveillance Frequency Control Program

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. Required Action and associated Completion Time of Condition A or D not met.	E.1 Be in MODE 3. AND E.2 ----------NOTE---------- LCO 3.0.4.a is not applicable when entering MODE 4. ---------- Be in MODE 4.	6 hours 12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.5.4.1	----------NOTE---------- Only required to be performed when ambient air temperature is < 40°F. ---------- Verify RWST borated water temperature is ≥ 44°F and ≤ 116°F.	In accordance with the Surveillance Frequency Control Program
SR 3.5.4.2	Verify RWST borated water volume is ≥ 686,000 gallons.	In accordance with the Surveillance Frequency Control Program
SR 3.5.4.3	Verify RWST boron concentration is ≥ 2400 ppm and ≤ 2600 ppm.	In accordance with the Surveillance Frequency Control Program
SR 3.5.4.4	Verify each sludge mixing pump isolation valve automatically closes on an actual or simulated RWST Low-Level signal.	In accordance with the Surveillance Frequency Control Program

3.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

3.5.6 Recirculation Fluid pH Control System

LCO 3.5.6 The Recirculation Fluid pH Control System shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Recirculation Fluid pH Control System inoperable.	A.1 Restore system to OPERABLE status.	72 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. AND	6 hours
	B.2 ----------NOTE---------- LCO 3.0.4.a is not applicable when entering MODE 4. ---------- Be in MODE 4.	54 hours

3.6 CONTAINMENT SYSTEMS

3.6.6 Containment Spray and Cooling Systems

LCO 3.6.6 Two containment spray trains and two containment cooling trains shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One containment spray train inoperable.	A.1	Restore containment spray train to OPERABLE status.	72 hours
B. One containment cooling train inoperable.	B.1	Restore containment cooling train to OPERABLE status.	72 hours
C. Required Action and associated Completion Time of Condition A or B not met.	C.1	Be in MODE 3.	6 hours
	AND		
	C.2	----------NOTE---------- LCO 3.0.4.a is not applicable when entering MODE 4. ----------	
		Be in MODE 4.	12 hours

3.7 PLANT SYSTEMS

3.7.7 Component Cooling Water (CCW) System

LCO 3.7.7 Two CCW trains shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One CCW train inoperable.	A.1	----------NOTE---------- Enter applicable Conditions and Required Actions of LCO 3.4.6, "RCS Loops - MODE 4," for residual heat removal loops made inoperable by CCW. ---------- Restore CCW train to OPERABLE status.	72 hours
B. Required Action and associated Completion Time of Condition A not met.	B.1 AND	Be in MODE 3.	6 hours
	B.2	----------NOTE---------- LCO 3.0.4.a is not applicable when entering MODE 4. ---------- Be in MODE 4.	12 hours

3.7 PLANT SYSTEMS

3.7.8 Nuclear Service Cooling Water (NSCW) System

LCO 3.7.8 Two NSCW trains shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One NSCW train inoperable.	----------NOTES---------- 1. Enter applicable Conditions and Required Actions of LCO 3.8.1, "AC Sources - Operating," for emergency diesel generator made inoperable by NSCW system. 2. Enter applicable Conditions and Required Actions of LCO 3.4.6, "RCS Loops - MODE 4," for residual heat removal loops made inoperable by NSCW system. ---------- A.1 Restore NSCW system to OPERABLE status.	72 hours
B. Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 3. AND B.2 ----------NOTE---------- LCO 3.0.4.a is not applicable when entering MODE 4. ---------- Be in MODE 4.	6 hours 12 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. One NSCW basin transfer pump inoperable.	D.1 Restore the transfer pump to OPERABLE status. OR D.2.1 Implement an alternate method of basin transfer. AND D.2.2 Restore the transfer pump to OPERABLE status.	8 days 8 days 31 days
E. Required Action and associated Completion Time not met. OR UHS inoperable for reasons other than Conditions A, B, C, or D.	E.1 Be in MODE 3. AND E.2 ----------NOTE---------- LCO 3.0.4.a is not applicable when entering MODE 4. ---------- Be in MODE 4.	6 hours 12 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
F. Required Action and associated Completion Time not met.	F.1	----------NOTE---------- Required Action F.1 is not applicable when entering this Condition from Condition B, D, or E. ---------- Lock closed the outside air (OSA) intake dampers of the affected unit and lock open the OSA intake dampers of the unaffected unit.	1 hour
	AND		
	F.2	Place the affected units(s) in MODE 3.	7 hours
	AND		
	F.3	----------NOTE---------- LCO 3.0.4.a is not applicable when entering MODE 4. ---------- Place the affected unit(s) in MODE 4.	12 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
F. One or more CREFS trains inoperable due to inoperable CRE boundary.	F.1	Initiate action to implement mitigating actions.	Immediately
	AND		
	F.2	Verify mitigating actions ensure CRE occupant exposures to radiological, chemical, and smoke hazards will not exceed limits.	24 hours
	AND		
	F.3	Restore CRE boundary to OPERABLE status.	90 days
G. Control room air temperature not within limit.	G.1	Restore control room air temperature to within limit.	7 days
H. Required Action and associated Completion Time not met for operating unit.	H.1	Place the unit in MODE 3.	6 hours
	AND		
	H.2	----------NOTE---------- LCO 3.0.4.a is not applicable when entering MODE 4. ----------	
		Place the unit in MODE 4.	12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.11.1	The Surveillance Requirements of Specification 3.7.10 are applicable.	In accordance with applicable SRs.

3.7 PLANT SYSTEMS

3.7.13 Piping Penetration Area Filtration and Exhaust System (PPAFES)

LCO 3.7.13 Two PPAFES trains shall be OPERABLE.

----------NOTE----------
The PPAFES boundary may be opened intermittently under administrative control.

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

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One PPAFES train inoperable.	A.1	Restore PPAFES train to OPERABLE status.	7 days
B. Two PPAFES trains inoperable due to inoperable PPAFES boundary.	B.1	Restore PPAFES boundary to OPERABLE status.	24 hours
C. Required Action and associated Completion Time not met.	C.1 AND	Be in MODE 3.	6 hours
	C.2	----------NOTE---------- LCO 3.0.4.a is not applicable when entering MODE 4. ---------- Be in MODE 4.	12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.13.1	Operate each PPAFES train for ≥ 15 minutes.	In accordance with the Surveillance Frequency Control Program
SR 3.7.13.2	Perform required PPAFES filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP
SR 3.7.13.3	Verify each PPAFES train actuates on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.7.13.4	Verify one PPAFES train can maintain a negative pressure ≥ 0.250 inches water gauge relative to atmospheric pressure during the post accident mode of operation at a flow rate of 15,500 cfm ± 10%.	In accordance with the Surveillance Frequency Control Program

3.7 PLANT SYSTEMS

3.7.14 Engineered Safety Features (ESF) Room Cooler and Safety Related Chiller System

LCO 3.7.14 Two ESF Room Cooler and Safety-Related Chiller trains shall be OPERABLE.

----------NOTE----------
One Safety-Related Chiller train may be removed from service for ≤ 2 hours under administrative controls for surveillance testing of the other Safety-Related Chiller train.

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

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One ESF room cooler and safety-related chiller train inoperable.	A.1	Restore the ESF room cooler and safety-related chiller train to OPERABLE status.	72 hours*
B. Required Action and Associated Completion Time not met.	B.1	Be in MODE 3.	6 hours
	AND		
	B.2	----------NOTE---------- LCO 3.0.4.a is not applicable when entering MODE 4. ----------	
		Be in MODE 4.	12 hours

*For the VEGP Unit 2 August 16, 2010 entry into Technical Specifications 3.7.14 Condition A, one ESF room cooler and safety-related chiller train may be inoperable for a period not to exceed 14 days.

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
E. (continued)	E.1	Restore required offsite circuit to OPERABLE status.	12 hours
	OR		
	E.2	Restore DG to OPERABLE status.	12 hours
F. Two DGs inoperable.	F.1	Restore one DG to OPERABLE status.	2 hours
G. One automatic load sequencer inoperable.	G.1	Restore automatic load sequencer to OPERABLE status.	12 hours
H. Required Action and associated Completion Time of Condition A, C, D, E, F, or G not met. OR Required Action B.1, B.3, B.4.1, B.4.2, or B.6 and associated Completion Time not met.	H.1	Be in MODE 3.	6 hours
	AND		
	H.2	----------NOTE---------- LCO 3.0.4.a is not applicable when entering MODE 4. ---------- Be in MODE 4.	12 hours
I. Three or more required AC sources inoperable.	I.1	Enter LCO 3.0.3.	Immediately

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. One DC electrical power source inoperable for reasons other than Condition A or B.	C.1 Restore DC electrical power source to OPERABLE status.	2 hours
D. Required Action and Associated Completion Time not met.	D.1 Be in MODE 3. AND	6 hours
	D.2 ----------NOTE---------- LCO 3.0.4.a is not applicable when entering MODE 4. ---------- Be in MODE 4.	12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.4.1	Verify battery terminal voltage is greater than or equal to the minimum established float voltage.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.4.2	Verify the battery charger supplies: ≥ 400 amps for System A and B ≥ 300 amps for System C, and ≥ 200 amps for System D at greater than or equal to the minimum established float voltage for ≥ 8 hours for Systems A and B and ≥ 3 hours for Systems C and D. OR Verify each battery charger can recharge the battery to the fully charged state within 12 hours while supplying the largest combined demands of the various continuous steady state loads, after a battery discharge to the bounding design basis event discharge state.	In accordance with the Surveillance Frequency Control Program
SR 3.8.4.3	----------NOTES---------- 1. The modified performance discharge test in SR 3.8.6.6 may be performed in lieu of the service test in SR 3.8.4.3. 2. This Surveillance shall not be performed in MODE 1, 2, 3, or 4. However, credit may be taken for unplanned events that satisfy this SR. ---------- Verify battery capacity is adequate to supply, and maintain in OPERABLE status, the required emergency loads for the design duty cycle when subjected to a battery service test.	In accordance with the Surveillance Frequency Control Program

3.8 ELECTRICAL POWER SYSTEMS

3.8.7 Inverters – Operating

LCO 3.8.7 The required Class 1E 120 V inverters shall be OPERABLE.

---NOTE---
Two inverters may be disconnected from their associated DC bus for ≤ 24 hours to perform an equalizing charge on their associated common battery, provided:

a. The associated AC vital bus(es) are energized from their Class 1E regulating transformers; and

b. All other AC vital buses are energized from their associated OPERABLE inverters.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One required inverter inoperable.	---NOTE--- Enter applicable conditions and required actions of LCO 3.8.9 "Distribution Systems - Operating" with any vital bus deenergized. --- A.1 Restore inverter to OPERABLE status.	24 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. AND B.2 ---NOTE--- LCO 3.0.4.a is not applicable when entering MODE 4. --- Be in MODE 4.	6 hours 12 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
C. One or more DC electrical power distribution subsystems inoperable.	C.1	Restore DC electrical power distribution subsystems to OPERABLE status.	2 hours
D. Required Action and associated Completion Time not met.	D.1 AND	Be in MODE 3.	6 hours
	D.2	----------NOTE---------- LCO 3.0.4.a is not applicable when entering MODE 4. ---------- Be in MODE 4.	12 hours
E. Two or more electrical power distribution subsystems inoperable that result in a loss of function.	E.1	Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.9.1	Verify correct breaker alignments and voltage to required AC, DC, and AC vital bus electrical power distribution subsystems.	In accordance with the Surveillance Frequency Control Program