Entergy

Entergy Nuclear Northeast
Indian Point Energy Center
450 Broadway, GSB
P.O. Box 249
Buchanan, N.Y. 10511-0249
Tel (914) 254-6700

John A Ventosa
Site Vice President
Administration

NL-13-078

May 23, 2013

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

SUBJECT: Proposed License Amendment Regarding
Technical Change Traveler TSTF-432-A Revision 1
Indian Point Nuclear Generating Unit Nos. 2 and 3
Docket Nos. 50-247 and 50-286
License Nos. DPR-26 and DPR-64

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

Dear Sir or Madam:

Pursuant to 10 CFR 50.90, Entergy Nuclear Northeast, (Entergy) hereby requests a License Amendment to operating license DPR-26, Docket No. 50-247 Indian Point Nuclear Generating Unit 2 (IP-2) and to operating license DPR-64, Docket No. 50-286 Indian Point Nuclear Generating Unit 3 (IP-3). The proposed change would modify Technical Specifications (TS) to risk-inform requirements regarding selected Required Action End States. Specifically, the proposed change would permit an end state of Mode 4 rather than an end state of Mode 5 contained in the current TS. The proposed changes are consistent with NRC-approved Technical Specification Task Force (TSTF) Technical Change Traveler 432-A Revision 1 (Reference 1). This traveler revised the Improved Standard Technical Specifications.

Entergy has evaluated the proposed changes in accordance with 10 CFR 50.91(a)(1) using criteria in 10 CFR 50.92(c) and has determined that the changes involve no significant hazards considerations, as described in Attachment 1. The marked up pages showing the proposed Technical Specification changes are provided in Attachment 2. The proposed changes for the associated Bases changes are provided in Attachment 3. A copy of this application and the associated attachments are being submitted to the designated New York State official in accordance with 10 CFR 50.91.

Entergy requests approval of the proposed amendment by May 30, 2014 and an allowance of 30 days for implementation. There are no new commitments identified in

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this submittal. If you have any questions, or require additional information, please contact Mr. Robert Walpole at 914-254-6710.

I declare under penalty of perjury that the foregoing is true and correct. Executed on May 23, 2013.

Sincerely,

D. M. Mary for J Ventosa

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Attachments:
1. Analysis of Proposed Technical Specification Changes Regarding Traveler TSTF-432-A Rev 1
2. Markup of Technical Specification Pages for Proposed Changes Regarding Traveler TSTF-432-A Rev 1
3. Markup of Technical Specification Bases Associated with the Proposed Changes Regarding Traveler TSTF-432-A Rev 1

cc: Mr. Douglas Pickett, Senior Project Manager, NRC NRR DORL
Mr. William Dean, Regional Administrator, NRC Region 1
NRC Senior Resident Inspector
Mr. Francis J. Murray, Jr., President and CEO, NYSERDA
Ms. Bridget Frymire, New York State Dept. of Public Service

ATTACHMENT 1 TO NL-13-078

Analysis of Proposed Technical Specification Changes Regarding Traveler TSTF-432-A Rev 1

ENTERGY NUCLEAR OPERATIONS, INC
INDIAN POINT NUCLEAR GENERATING UNITS 2 AND 3
DOCKET NOS. 50-247 & 50-286

1.0 DESCRIPTION

Entergy Nuclear Northeast, (Entergy) requests an amendment to Operating Licenses DPR-26 for the Indian Point Nuclear Generating Unit 2 (IP-2) and DPR-64 for the Indian Point Nuclear Generating Unit 3 (IP-3). The proposed amendment would modify Technical Specifications (TS) to risk-inform requirements regarding 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 (FR 77 27814) as part of the Consolidated Line Item Improvement Process (CLIIP).

2.0 ASSESSMENT

2.1 Applicability of Topical Report, TSTF-432, and Published Safety Evaluation

Entergy has reviewed Westinghouse Topical Report (TR) WCAP-16294 (Reference 1), the Nuclear Regulatory Commission (NRC) safety evaluation for WCAP-16294 (Reference 2), TSTF-432, Revision 1 (Reference 3), and the NRC model safety evaluation (Reference 4). Entergy has concluded that the technical bases described in the Westinghouse topical report and TSTF-432, as well as the associated safety evaluation prepared by the NRC staff are applicable to IP-2 and IP-3 and support incorporation of this amendment request into the respective plant Technical Specifications. Tables 1 and 2 show a comparison of the TSTF-432 Technical Specifications action requirements and the corresponding IP-2 and IP-3 Technical Specifications action requirements respectively, which are proposed for modification.

2.2 Optional Changes and Variations

Entergy is not proposing any variations or deviations from the Westinghouse topical report, the TS changes described in the TSTF-432 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. As seen from Tables 1 and 2, while in some instances, the Technical Specification number and or title may be different between the generic (WOG STS) and the IP-2/IP-3 specific TS, the justification for the proposed mode change is directly applicable. In addition, the completion time for IP-3 TS 3.3.2 Action C.2.2 uses the same 6 hours time for going from Mode 3 to Mode 4 as TSTF #432, resulting in a more restrictive time of 18 hours as compared to TSTF#432 completion time of 36 hours.

3.0 REGULATORY ANALYSIS

3.1 No Significant Hazards Consideration

Entergy has evaluated the safety significance of the proposed change to the Indian Point 2 and 3 Technical Specifications. The proposed change has been evaluated according to the criteria of 10 CFR 50.92, "Issuance of Amendment", and has determined that the

proposed change does not involve a Significant Hazards Consideration as discussed below:

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

   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?

   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?

   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 change does 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) (ML 120200384). Entergy has reviewed the NRC staff's model SE referenced in the CLIIP Notice of Availability and concluded that the regulatory evaluation section is applicable to Indian Point Units 2 and 3.

3.3 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.

4.0 REFERENCES

1. WCAP-16294-NP-A, Revision 1, "Risk-Informed Evaluation of Changes to Technical Specification Required Endstates for Westinghouse NSSS [Nuclear Steam Supply System] PWRs [Pressurized Water Reactors], June 2010 (NRC ADAMS Accession Number ML052620374).

2. Letter from Thomas B. Blount (NRC) to Biff Bradley (NEI), "Final Safety Evaluation for Nuclear Energy Institute 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]," dated March 29, 2010.

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.

Table 1 – TSTF#432 Technical Specifications and corresponding IP2 Technical Specifications Required Actions

TSTF #432 Technical Specification	Corresponding IP2 Technical Specification
3.3.2-B: ESFAS Instrumentation 3.3.2-C: ESFAS Instrumentation	3.3.2-B: ESFAS Instrumentation 3.3.2-C: ESFAS Instrumentation
3.3.7-C: Control Room Emergency Filtration System Actuation Instrumentation	3.3.7-B: Control Room Ventilation System Actuation 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-E: RCS Leakage Detection Instrumentation
3.5.3-A, B, C: Emergency Core Cooling System - Shutdown	3.5.3-A, B, C, D: Emergency Core Cooling System - Shutdown
3.5.4-C: Refueling Water Storage Tank	3.5.4-D: Refueling Water Storage Tank
3.6.6-B,E: Containment Spray and Cooling Systems (Atmospheric and Dual)	3.6.6-B,E: Containment Spray System and Containment Fan Cooler Unit (FCU) System
3.6.7-B: Spray Additive System (Atmospheric, Subatmospheric, Ice Condenser, and Dual)	3.6.7-B: Recirculation 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-E: Service Water System
3.7.9-C: Ultimate Heat Sink	3.7.9-A: Ultimate Heat Sink
3.7.10-C: Control Room Emergency Filtration System	3.7.10-D: Control Room Ventilation System
3.8.1.G: AC Sources – Operating	3.8.1.F: AC Sources – Operating
3.8.4-D: DC Sources – Operating	3.8.4-C: 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

Table 2 – TSTF#432 Technical Specifications and corresponding IP3 Technical Specifications Required Actions

TSTF #432 Technical Specification	Corresponding IP3 Technical Specification
3.3.2-B: ESFAS Instrumentation 3.3.2-C: ESFAS Instrumentation	3.3.2-B: ESFAS Instrumentation 3.3.2-C: ESFAS Instrumentation
3.3.7-C: Control Room Emergency Filtration System Actuation Instrumentation	3.3.7-C: Control Room Ventilation System Actuation 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-E: RCS Leakage Detection Instrumentation
3.5.3-A, B, C: Emergency Core Cooling System - Shutdown	3.5.3-A, B, C: Emergency Core Cooling System - Shutdown
3.5.4-C: Refueling Water Storage Tank	3.5.4-D: Refueling Water Storage Tank
3.6.6-B,E: Containment Spray and Cooling Systems (Atmospheric and Dual)	3.6.6-B,E: Containment Spray System and Containment Fan Cooler System
3.6.7-B: Spray Additive System (Atmospheric, Subatmospheric, Ice Condenser, and Dual)	3.6.7-B: Recirculation pH Control System
3.7.7-B: Component Cooling Water System	3.7.8-B: Component Cooling Water System
3.7.8-B: Service Water System	3.7.9-F: Service Water System
3.7.9-C: Ultimate Heat Sink	3.7.10-A: Ultimate Heat Sink
3.7.10-C: Control Room Emergency Filtration System	3.7.11-D: Control Room Ventilation System
3.7.11-B: Control Room Emergency Air Temperature Control System	3.7.12-C: Control Room Air Conditioning System
3.8.1.G: AC Sources – Operating	3.8.1.F: AC Sources – Operating
3.8.4-D: DC Sources – Operating	3.8.4-C: DC Sources – Operating
3.8.7-B: Inverters – Operating	3.8.7-D: Inverters – Operating
3.8.9-D: Distribution Systems – Operating	3.8.9-D: Distribution Systems – Operating

ATTACHMENT 2 TO NL-13-078

Markup of Technical Specification Pages for Proposed Changes Regarding Traveler TSTF-432-A Rev 1

Bold, italics for added text ~~Strikeout~~ for deleted text

AFFECTED PAGES (IP2)

3.3.2-1
3.3.2-2
3.3.7-1
3.4.13-1
3.4.14-2
3.4.15-3
3.5.3-1
3.5.4-1
3.6.6-1
3.6.6-2
3.6.7-1
3.7.7-1
3.7.8-2
3.7.9-1
3.7.10-1
3.8.1-4
3.8.4-2
3.8.7-1
3.8.9-2

AFFECTED PAGES (IP3)

3.3.2-1
3.3.2-2
3.3.7-1
3.4.13-1
3.4.14-2
3.4.15-3
3.5.3-1
3.5.4-1
3.6.6-1
3.6.6-2
3.6.7-1
3.7.8-1
3.7.9-2
3.7.9-2
3.7.10-1
3.7.11-2
3.7.12-1
3.8.1-5
3.8.4-2
3.8.7-2
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 or trains inoperable.	A.1 Enter the Condition referenced in Table 3.3.2-1 for the channel(s) or train(s).	Immediately
B. One channel or train inoperable.	B.1 Restore channel or train to OPERABLE status.	48 hours
	OR	
	B.2.1 Be in MODE 3.	54 hours
	AND	
	-------- NOTE ---------- ***LCO 3.0.4.a is not applicable when entering MODE 4.*** ***----------***	
	B.2.2 Be in MODE ~~5~~ ***4***.	~~84~~ ***60*** hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. One train inoperable.	---------- **- NOTE -** One train may be bypassed for up to 8 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	
	-------- NOTE ---------- LCO 3.0.4.a is not applicable when entering MODE 4. ----------	
	C.2.2 Be in MODE ~~5~~***4***.	~~60~~***36*** hours
D. One channel inoperable.	---------- **- NOTE -** One 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

3.3 INSTRUMENTATION

3.3.7 Control Room Ventilation System (CRVS) Actuation Instrumentation

LCO 3.3.7 The CRVS actuation instrumentation for each Function in Table 3.3.7-1 shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4,
During movement of recently irradiated fuel assemblies.

ACTIONS

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

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. **- NOTE -** Only applicable in MODE 1, 2, 3 or 4. One or more Functions inoperable.	A.1 Place one CRVS train in pressurization mode.	72 hours
B. Required Action and associated Completion Time for Condition A not met.	B.1 Be in MODE 3. AND ***NOTE*** ***LCO 3.0.4.a is not applicable when entering MODE 4.*** B.2 Be in MODE ~~5~~***4***.	6 hours ~~36~~***12*** hours
C. **- NOTE -** Only applicable during movement of recently irradiated fuel assemblies. One or more Functions inoperable.	C.1 Suspend movement of recently irradiated fuel assemblies.	Immediately

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. --------- ***NOTE*** ---------- ***LCO 3.0.4.a is not applicable when entering MODE 4.*** ----------	6 hours
	B.2	Be in MODE ~~5~~***4***.	~~36~~***12*** hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
	A.2	Restore RCS PIV to within limits.	72 hours
B. Required Action and associated Completion Time for Condition A not met.	B.1	Be in MODE 3.	6 hours
	AND		
		--------- ***NOTE*** ---------- ***LCO 3.0.4.a is not applicable when entering MODE 4.*** ----------	
	B.2	Be in MODE ~~5~~***4***.	~~36~~***12*** hours
C. One or both RCS boundary valves 730 and 731 not closed and de-energized.	C.1	Verify RCS boundary valves 730 and 731 are closed and de-energized.	24 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. Required Action and associated Completion Time of Condition A, B, C or D not met.	E.1 Be in MODE 3. AND --------- ***NOTE*** ---------- ***LCO 3.0.4.a is not applicable when entering MODE 4.*** ---------- E.2 Be in MODE ~~5~~***4***.	6 hours ~~36~~***12*** hours
F. All required monitors inoperable.	F.1 Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.15.1	Perform CHANNEL CHECK of the required containment atmosphere radioactivity monitor.	12 hours
SR 3.4.15.2	Perform CHANNEL CHECK of the required sump monitor.	12 hours
SR 3.4.15.3	Perform CHANNEL CHECK of the required containment fan cooler condensate flow rate monitor.	12 hours
SR 3.4.15.4	Perform COT of the required sump discharge flow monitor.	31 days
SR 3.4.15.5	Perform COT of the required containment atmosphere radioactivity monitor.	31 days
SR 3.4.15.6	Perform CHANNEL CALIBRATION of the required containment sump monitor.	24 months
SR 3.4.15.7	Perform CHANNEL CALIBRATION of the required containment atmosphere radioactivity monitor.	24 months
SR 3.4.15.8	Perform CHANNEL CALIBRATION of the required containment FCU condensate flow rate monitor.	24 months

3.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

3.5.3 ECCS - Shutdown

LCO 3.5.3 Two ECCS High Head Safety Injection (HHSI) subsystems and one ECCS Residual Heat Removal (RHR) subsystem shall be OPERABLE.

- NOTE -

An RHR subsystem may be considered OPERABLE during alignment and operation for decay heat removal if capable of being manually realigned to the ECCS mode of operation.

APPLICABILITY: MODE 4.

ACTIONS

- NOTE -

LCO 3.0.4.b is not applicable to ECCS High Head Safety Injection subsystems.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Required ECCS ~~RHR subsystem~~***train*** inoperable.	A.1 --------- ***NOTE*** ---------- ***LCO 3.0.4.a is not applicable when entering MODE 4.*** ---------- Initiate action to restore required ECCS ~~RHR subsystem~~***train*** to OPERABLE status.	Immediately
~~B. One required ECCS HHSI subsystem inoperable.~~	~~B.1 Restore required ECCS HHSI subsystem to OPERABLE status.~~	~~48 hours~~
~~C. Two required ECCS HHSI subsystems inoperable.~~	~~C.1 Restore one required ECCS HHSI subsystem to OPERABLE status.~~	~~1 hour~~
~~D. Required Action and associated Completion Time of Condition B or C not met.~~	~~D.1 Be in MODE 5.~~	~~24 hours~~

3.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

3.5.4 Refueling Water Storage Tank (RWST)

LCO 3.5.4 The RWST shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. RWST boron concentration not within limits. OR RWST borated water temperature not within limits.	A.1	Restore RWST to OPERABLE status.	8 hours
B. One of the two required channels of the RWST level low low alarm inoperable.	B.1	Restore RWST level low low alarm to OPERABLE status.	7 days
C. RWST inoperable for reasons other than Condition A or B.	C.1	Restore RWST to OPERABLE status.	1 hour
D. Required Action and associated Completion Time not met.	D.1	Be in MODE 3.	6 hours
	AND		
		--------- NOTE ---------- ***LCO 3.0.4.a is not applicable when entering MODE 4.*** ***----------***	
	D.2	Be in MODE ~~5~~***4***.	~~36~~***12*** hours

3.6 CONTAINMENT SYSTEMS

3.6.6 Containment Spray System and Containment Fan Cooler Unit (FCU) System

LCO 3.6.6 Two trains of containment spray and three trains of FCUs 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 AND 10 days from discovery of failure to meet the LCO
B. Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 3. AND --------- ***NOTE*** ---------- ***LCO 3.0.4.a is not applicable when entering MODE 4.*** ---------- B.2 Be in MODE ~~5~~***4***.	6 hours ~~84~~***54*** hours
C. One containment FCU train inoperable.	C.1 Restore containment FCU train to OPERABLE status.	7 days AND 10 days from discovery of failure to meet the LCO
D. Two containment FCU trains inoperable.	D.1 Restore one containment FCU train to OPERABLE status.	72 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. Required Action and associated Completion Time of Condition C or D not met.	E.1 Be in MODE 3. AND --------- ***NOTE*** ---------- ***LCO 3.0.4.a is not applicable when entering MODE 4.*** ---------- E.2 Be in MODE ~~5~~***4***.	6 hours ~~36~~***12*** hours
F. Two containment spray trains inoperable. OR Any combination of three or more trains inoperable.	F.1 Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.6.1	Verify each containment spray manual, power operated, and automatic valve in the flow path that is not locked, sealed, or otherwise secured in position is in the correct position.	31 days
SR 3.6.6.2	Operate each containment FCU fan unit for ≥ 15 minutes.	31 days
SR 3.6.6.3	Verify each containment FCU cooling water flow rate is ≥ 1600 gpm.	92 days
SR 3.6.6.4	Verify each containment spray pump's developed head at the flow test point is greater than or equal to the required developed head.	In accordance with the Inservice Testing Program

3.6 CONTAINMENT SYSTEMS

3.6.7 Recirculation pH Control System

LCO 3.6.7 The Recirculation pH Control System shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. Recirculation pH Control System inoperable.	A.1	Restore Recirculation pH Control System to OPERABLE status.	72 hours
B. Required Action and associated Completion Time not met.	B.1	Be in MODE 3.	6 hours
	AND		
		--------- ***NOTE*** ---------- ***LCO 3.0.4.a is not applicable when entering MODE 4.*** ----------	
	B.2	Be in MODE ~~5~~***4***.	~~84~~***54*** hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.7.1	Perform a visual inspection of the four sodium tetraborate storage baskets to verify each of the following: a. Each storage basket is in place and intact; and, b. Collectively contain ≥ 8096 pounds (160 cubic feet) of sodium tetraborate decahydrate, or equivalent.	24 months

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 Be in MODE 3. AND --------- ***NOTE*** ---------- ***LCO 3.0.4.a is not applicable when entering MODE 4.*** ---------- B.2 Be in MODE ~~5~~***4***.	6 hours ~~72~~***12*** hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. Required Action and associated Completion Time of Condition A, B, C or D not met.	E.1 Be in MODE 3. AND --------- ***NOTE*** ---------- ***LCO 3.0.4.a is not applicable when entering MODE 4.*** ---------- E.2 Be in MODE ~~5~~***4***.	6 hours ~~36~~***12*** hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.8.1	---------- **- NOTE -** Isolation of SWS flow to individual components does not render the SWS header inoperable. ---------- Verify each SWS manual, power operated, and automatic valve in the flow path servicing safety related equipment, that is not locked, sealed, or otherwise secured in position, is in the correct position.	92 days
SR 3.7.8.2	Verify each SWS automatic valve in the flow path that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.	24 months
SR 3.7.8.3	Verify each essential SWS pump starts automatically on an actual or simulated actuation signal.	24 months

3.7 PLANT SYSTEMS

3.7.9 Ultimate Heat Sink (UHS)

LCO 3.7.9 The UHS shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. UHS inoperable.	A.1 Be in MODE 3.	7 hours
	AND	
	--------- ***NOTE*** ---------- ***LCO 3.0.4.a is not applicable when entering MODE 4.*** ----------	
	A.2 Be in MODE ~~5~~***4***.	~~36~~***12*** hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.9.1	Verify water temperature of UHS is ≤ 95°F.	24 hours

3.7 PLANT SYSTEMS

3.7.10 Control Room Ventilation System (CRVS)

LCO 3.7.10 Two CRVS trains shall be OPERABLE.

- NOTE -
The control room envelope (CRE) boundary may be opened intermittently under administrative control.

APPLICABILITY: MODES 1, 2, 3 and 4,
During movement of recently irradiated fuel assemblies.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One CRVS train inoperable for reasons other than Condition B.	A.1	Restore CRVS train to OPERABLE status.	7 days
B. One or more CRVS trains inoperable due to inoperable CRE boundary in Mode 1,2,3, or 4.	B.1	Initiate action to implement mitigating actions.	Immediately
	AND		
	B.2	Verify mitigating actions ensure CRE occupant exposures to radiological, chemical, and smoke hazards will not exceed limits.	24 hours
	AND		
	B.3	Restore CRE boundary to OPERABLE status.	90 days
C. Two CRVS trains inoperable for reasons other than Condition B.	C.1	Restore CRVS to OPERABLE status.	72 hours
D. Required Action and associated Completion Time of Condition A, B or C not met in Mode 1,2,3, or 4.	D.1	Be in MODE 3.	6 hours
	AND		
		--------- ***NOTE*** ---------- ***LCO 3.0.4.a is not applicable when entering MODE 4.*** ----------	
	D.2	Be in MODE ~~5~~***4***.	~~36~~***12*** hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
D. One offsite circuit inoperable. AND One DG inoperable.		---------- **- NOTE -** Enter applicable Conditions and Required Actions of LCO 3.8.9, "Distribution Systems - Operating," when Condition D is entered with no offsite or DG AC power source automatically available to any train. ----------	
	D.1	Restore offsite circuit to OPERABLE status.	12 hours
	OR		
	D.2	Restore DG to OPERABLE status.	12 hours
E. Two or more DGs inoperable.	E.1	Restore at least two DGs to OPERABLE status.	2 hours
F. Required Action and associated Completion Time of Condition A, B, C, D or E not met.	F.1	Be in MODE 3.	6 hours
	AND		
		--------- NOTE ---------- ***LCO 3.0.4.a is not applicable when entering MODE 4.*** ----------	
	F.2	Be in MODE ~~5~~***4***.	~~36~~***12*** hours
G. One or more offsite circuits and two or more DGs inoperable.	G.1	Enter LCO 3.0.3.	Immediately
H. Two offsite circuits and one or more DGs inoperable.	H.1	Enter LCO 3.0.3.	Immediately

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. One DC electrical power subsystem inoperable for reasons other than Condition A. AND Not in Condition A for any other battery charger.	B.1.1 Verify that associated DC control power is supplied from an OPERABLE DC electrical power subsystem. OR B.1.2 Verify by administrative means that associated DC control power autotransfer switch is OPERABLE. AND B.2 Verify that inverters associated with all other DC electrical power subsystems are OPERABLE. AND B.3 Restore DC electrical power subsystem to OPERABLE status.	2 hours 2 hours 2 hours 24 hours
C. Required Action and Associated Completion Time not met.	C.1 Be in MODE 3. AND --------- ***NOTE*** ---------- ***LCO 3.0.4.a is not applicable when entering MODE 4.*** ---------- C.2 Be in MODE ~~5~~***4***.	6 hours ~~36~~***12*** hours

3.8 ELECTRICAL POWER SYSTEMS

3.8.7 Inverters - Operating

LCO 3.8.7 Four inverters shall be OPERABLE.

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

ACTIONS

- NOTE -
Enter applicable Conditions and Required Actions of LCO 3.8.9, "Distribution Systems - Operating" with any 118 VAC instrument bus de-energized.

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One inverter inoperable.	A.1	**- NOTE -** Only applicable to feature(s) that require power to perform the required safety function. Declare required feature(s) supported by associated inverter inoperable when the required redundant feature(s) is inoperable.	2 hours from discovery of Condition A concurrent with inoperability of redundant required feature(s)
	AND		
	A.2	Restore inverter to OPERABLE status.	24 hours
B. Required Action and associated Completion Time not met.	B.1	Be in MODE 3.	6 hours
	AND		
		-------- NOTE ---------- ***LCO 3.0.4.a is not applicable when entering MODE 4.*** ***----------***	
	B.2	Be in MODE ~~5~~***4***.	~~36~~***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 subsystem(s) to OPERABLE status.	2 hours AND 16 hours from discovery of failure to meet LCO
D. Required Action and associated Completion Time not met.	D.1 Be in MODE 3. AND --------- ***NOTE*** ---------- ***LCO 3.0.4.a is not applicable when entering MODE 4.*** ---------- 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 safety 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 118 VAC instrument bus electrical power distribution subsystems.	7 days

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 or trains inoperable.	A.1	Enter the Condition referenced in Table 3.3.2-1 for the channel(s) or train(s).	Immediately
B. One channel or train inoperable.	B.1	Restore channel or train to OPERABLE status.	48 hours
	OR		
	B.2.1	Be in MODE 3.	54 hours
	AND		
		----- ***NOTE*** -------- ***LCO 3.0.4.a is not applicable when entering MODE 4.*** ----------	
	B.2.2	Be in MODE ~~5~~***4***.	~~84~~***60*** hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. One train inoperable.	C.1 ------NOTE---------- One train may be bypassed for up to 8 hours for surveillance testing provided the other train is OPERABLE. ----------	
	Restore train to OPERABLE status.	6 hours
	OR	
	C.2.1 Be in MODE 3.	12 hours
	AND ----- ***NOTE*** -------- ***LCO 3.0.4.a is not applicable when entering MODE 4.*** ----------	
	C.2.2 Be in MODE ~~5~~***4***.	~~42~~***18*** hours

3.3 INSTRUMENTATION

3.3.7 Control Room Ventilation System (CRVS) Actuation Instrumentation

LCO 3.3.7 The CRVS actuation instrumentation for each Function in Table 3.3.7-1 shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, 4

ACTIONS

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

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more Functions with one channel or train inoperable.	A.1 Place CRVS in CRVS Mode 3.	7 days
B. One or more Functions with two channels or two trains inoperable.	B.1.1 Place CRVS in CRVS Mode 3.	72 hours
C. Required Action and associated Completion Time for Condition A or B not met.	C.1 Be in MODE 3. AND ----- ***NOTE*** -------- ***LCO 3.0.4.a is not applicable when entering MODE 4.*** ---------- C.2 Be in MODE ~~5~~***4***.	6 hours ~~36~~***12*** hours

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 B.2	Be in MODE 3. ***----- NOTE -------*** ***LCO 3.0.4.a is not applicable when entering MODE 4.*** ***----------*** Be in MODE ~~5~~***4***.	6 hours ~~36~~***12*** hours

ACTIONS (continued)

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.2.1 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
	OR	
	A.2.2 Restore RCS PIV to within limits.	72 hours
B. Required Action and associated Completion Time for Condition A not met.	B.1 Be in MODE 3.	6 hours
	AND	
	----- ***NOTE*** ------- ***LCO 3.0.4.a is not applicable when entering MODE 4.*** ----------	
	B.2 Be in MODE ~~5~~***4***.	~~36~~***12*** hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Required containment atmosphere radioactivity monitor inoperable. AND Required containment fan cooler unit condensate measuring system inoperable.	D.1 Restore required containment atmosphere radioactivity monitor to OPERABLE status. OR D.2 Restore required containment fan cooler unit condensate measuring system to OPERABLE status.	30 days 30 days
E. Required Action and associated Completion Time not met.	E.1 Be in MODE 3. AND ***----- NOTE -----*** ***LCO 3.0.4.a is not applicable when entering MODE 4.*** ***----------*** E.2 Be in MODE ~~5~~***4***.	6 hours ~~36~~***12*** hours
F. All required monitors inoperable.	F.1 Enter LCO 3.0.3.	Immediately

3.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

3.5.3 ECCS-Shutdown

LCO 3.5.3 One ECCS residual heat removal (RHR) subsystem and one ECCS recirculation subsystem shall be OPERABLE.

----------NOTE----------
An RHR train may be considered OPERABLE during alignment and operation for decay heat removal, and during valve, if capable of being manually realigned to the ECCS mode of operation.

APPLICABILITY: MODE 4.

ACTIONS

----------NOTE----------
LCO 3.0.4.b is not applicable to the ECCS residual heat removal and ECCS recirculation subsystems.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Required ECCS ~~residual heat removal (RHR) subsystem~~ ***train*** inoperable.	A.1 ***----- NOTE ------- LCO 3.0.4.a is not applicable when entering MODE 4. ----------*** Initiate action to restore required ECCS ~~RHR subsystem~~ ***train*** to OPERABLE status.	Immediately
~~B. Required ECCS Recirculation subsystem inoperable.~~	~~B.1 Restore required ECCS recirculation subsystem to OPERABLE status.~~	~~1 hour~~
~~C. Required Action and associated Completion Time of Condition B not met.~~	~~C.1 Be in MODE 5.~~	~~24 hours~~

3.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

3.5.4 Refueling Water Storage Tank (RWST)

LCO 3.5.4 The RWST and two channels of RWST low level alarm shall be OPERABLE.

.....

NOTE 1
The RWST isolation valves connected to non-safety related piping may be opened under administrative controls for up to 14 days per fuel cycle for filtration until the end of refuel outage 18.

.....

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

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. RWST boron concentration not within limits of SR 3.5.4.3. OR RWST borated water temperature not within limits of SR 3.5.4.1.	A.1	Restore RWST to OPERABLE status.	8 hours
B. One channel of RWST low level alarm inoperable.	B.1	Restore RWST low level alarm to OPERABLE status.	7 days
C. RWST inoperable for reasons other than Condition A or B.	C.1	Restore RWST to OPERABLE status.	1 hour
D. Required Action and associated Completion Time not met.	D.1	Be in MODE 3.	6 hours
	AND	***----- NOTE -------*** ***LCO 3.0.4.a is not applicable when entering MODE 4.*** ***----------***	
	D.2	Be in MODE ~~5~~***4***.	~~36~~***12*** hours

3.6 CONTAINMENT SYSTEMS

3.6.6 Containment Spray System and Containment Fan Cooler System

LCO 3.6.6 Two Containment Spray trains and three Containment Fan Cooler 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 AND 10 days from discovery of failure to meet the LCO
B. Required Action and associated Completion Time of Condition A not met.	B.1	Be in MODE 3.	6 hours
	AND	----- ***NOTE*** ----- ***LCO 3.0.4.a is not applicable when entering MODE 4.*** ----------	
	B.2	Be in MODE ~~5~~***4***.	~~84~~***54*** hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
C. One containment fan cooler train inoperable.	C.1	Restore containment fan cooler train to OPERABLE status.	7 days AND 10 days from discovery of failure to meet the LCO
D. Two containment fan cooler trains inoperable.	D.1	Restore one containment fan cooler train to OPERABLE status.	72 hours
E. Required Action and associated Completion Time of Condition C or D not met.	E.1 AND	Be in MODE 3.	6 hours
		----- NOTE ----- ***LCO 3.0.4.a is not applicable when entering MODE 4.*** ***----------***	
	E.2	Be in MODE ~~5~~***4***.	~~36~~***12*** hours
F. Two containment spray trains inoperable. OR Any combination of three or more trains inoperable.	F.1	Enter LCO 3.0.3.	Immediately

3.6 CONTAINMENT SYSTEMS

3.6.7 Recirculation pH Control System

LCO 3.6.7 The Recirculation pH Control System shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. Recirculation pH Control System inoperable.	A.1	Restore Recirculation pH Control System to OPERABLE status.	72 hours
B. Required Action and associated Completion Time not met.	B.1	Be in MODE 3.	6 hours
	AND		
		----- NOTE ----- ***LCO 3.0.4.a is not applicable when entering MODE 4.*** ***----------***	
	B.2	Be in MODE ~~5~~***4***.	~~84~~***54*** hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.7.1 Perform a visual inspection of eight sodium tetraborate storage baskets to verify each of the following: a. Each storage basket is in place and intact; and, b. Collectively contain $\geq$ 8096 pounds (160 cubic feet) of sodium tetraborate decahydrate, or equivalent.	24 Months

3.7 PLANT SYSTEMS

3.7.8 Component Cooling Water (CCW) System

LCO 3.7.8 Two CCW loops shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One CCW loop 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 loop to OPERABLE status.	72 hours
B. Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 3.	6 hours
	AND	
	----- ***NOTE*** ------- ***LCO 3.0.4.a is not applicable when entering MODE 4.*** ----------	
	B.2 Be in MODE ~~5~~***4***.	~~36~~***12*** hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. One EDG ESFAS Service Water valve inoperable.	C.1 Restore both EDG ESFAS Service Water valves to OPERABLE status.	12 hours
D. One FCU ESFAS Service Water valve inoperable.	D.1 Restore both FCU ESFAS Service Water valves to OPERABLE status.	12 hours
E. SWS piping and valves inoperable for reasons other than Conditions A, B, C, or D, with no loss of safety function.	E.1 Restore SWS to OPERABLE Status	12 hours
F. Required Action and associated Completion Time of Condition A, B, C, D or E not met.	F.1 Be in MODE 3 AND ----- ***NOTE*** ------- ***LCO 3.0.4.a is not applicable when entering MODE 4.*** ---------- F.2 Be in MODE ~~5~~***4***.	6 hours ~~36~~***12*** hours

3.7 PLANT SYSTEMS

3.7.10 Ultimate Heat Sink (UHS)

LCO 3.7.10 The UHS shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. UHS temperature > 95°F. OR UHS inoperable for reasons other than temperature > 95°F.	A.1 Be in MODE 3. AND ***----- NOTE --------*** ***LCO 3.0.4.a is not applicable when entering MODE 4.*** ***----------*** A.2 Be in MODE ~~5~~***4***.	7 hours ~~37~~***12*** hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.7.10.1 Verify average water temperature of UHS is ≤ 95°F.	24 hours

ACTIONS (continued)

D. Required Action and associated Completion Time of Condition A, B or C not met in Mode 1, 2, 3, or 4.	D.1 Be in MODE 3. AND ***----- NOTE ------*** ***LCO 3.0.4.a is not applicable when entering MODE 4.*** ***----------*** D.2 Be in MODE ~~5~~***4.***	6 hours ~~36~~***12*** hours
E. One CRVS train inoperable during movement of recently irradiated fuel assemblies.	E.1 Place OPERABLE CRVS train in pressurization mode. OR E.2 Suspend movement of recently irradiated fuel assemblies.	Immediately Immediately
F. Two CRVS trains inoperable during movement of recently irradiated fuel assemblies. OR One or more CRVS trains inoperable due to an inoperable CRE boundary during movement of recently irradiated fuel assemblies.	F.1 Suspend movement of recently irradiated fuel assemblies.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.11.1	Operate each CRVS train for ≥ 15 minutes.	31 days
SR 3.7.11.2	Perform required CRVS filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with VFTP
SR 3.7.11.3	Verify each CRVS train actuates on an actual or simulated actuation signal.	24 months
SR 3.7.11.4	Perform required CRE unfiltered air inleakage testing in accordance with the Control Room Envelope Habitability Program.	In accordance with the Control Room Envelope Habitability Program

3.7 PLANT SYSTEMS

3.7.12 Control Room Air Conditioning System (CRACS)

LCO 3.7.12 Two CRACS trains shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4,

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One CRACS train inoperable.	A.1	Restore CRACS train to OPERABLE status.	30 days
B. Two CRACS trains inoperable.	B.1	Restore one CRACS 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		
		----- ***NOTE*** ------- ***LCO 3.0.4.a is not applicable when entering MODE 4.*** ----------	
	C.2	Be in MODE ~~5~~***4***.	~~36~~***12*** hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.7.12.1 Verify each CRACS train has the capability to remove the assumed heat load.	24 months

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. Two or more DGs inoperable.	E.1 Restore at least two DGs to OPERABLE status.	2 hours
F. Required Action and associated Completion Time of Condition A, B, C, D, or E not met.	F.1 Be in MODE 3. AND --- ***NOTE*** ---- ***LCO 3.0.4.a is not applicable when entering MODE 4.*** ---------- F.2 Be in MODE ~~5~~***4***.	6 hours ~~36~~***12*** hours
G. One or more offsite circuits and two DGs inoperable.	G.1 Enter LCO 3.0.3.	Immediately
H. Two offsite circuits and one or more DGs inoperable.	H.1 Enter LCO 3.0.3.	Immediately

3.8 ELECTRICAL POWER SYSTEMS

3.8.4 DC Sources - Operating

LCO 3.8.4 The following four DC electrical power subsystems shall be OPERABLE:

Battery 31 and associated Battery Charger;
Battery 32 and associated Battery Charger;
Battery 33 and associated Battery Charger; and
Battery 34.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. DC electrical power subsystem 34 Inoperable.	A.1 Declare Inverter 34 inoperable and take Required Actions specified in LCO 3.8.7, Inverters-Operating.	2 hours
B. One DC electrical power subsystem (31 or 32 or 33) inoperable.	B.1 Restore DC electrical power subsystem to OPERABLE status.	2 hours
C. Required Action and Associated Completion Time not met.	C.1 Be in MODE 3. AND --- ***NOTE*** ---- ***LCO 3.0.4.a is not applicable when entering MODE 4.*** ---------- C.2 Be in MODE ~~5~~***4***.	6 hours ~~36~~***12*** hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. One inverter inoperable.	C.1 ----NOTE--------- Only applicable to feature(s) that require power to perform the required safety function. ----------	
	Declare required feature(s) supported by associated inverter inoperable when the required redundant feature(s) is inoperable.	2 hours from discovery of Condition C concurrent with inoperability of redundant required feature(s)
	AND	
	C.2 Restore inverter to OPERABLE status.	7 days
D. Required Action and associated Completion Time not met.	D.1 Be in MODE 3.	6 hours
	AND	
	----- NOTE -- LCO 3.0.4.a is not applicable when entering MODE 4. ----------	
	D.2 Be in MODE ~~5~~***4***.	~~36~~***12*** hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. One DC electrical power distribution subsystem inoperable with no loss of safety function.	C.1 Restore DC electrical power distribution subsystem to OPERABLE status.	2 hours AND 16 hours from discovery of failure to meet LCO
D. Required Action and associated Completion Time not met.	D.1 Be in MODE 3. AND ----- ***NOTE*** ------- ***LCO 3.0.4.a is not applicable when entering MODE 4.*** ---------- D.2 Be in MODE ~~5~~***4***.	6 hours ~~36~~***12*** hours
E. One or more trains with inoperable distribution subsystems that result in a loss of safety 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 VIB electrical power distribution subsystems.	7 days

ATTACHMENT 3 TO NL-13-078

Markup of Technical Specification Bases Associated with the Proposed Changes Regarding Traveler TSTF-432-A Rev 1

Bold, italics for added text ~~Strikeout~~ for deleted text

AFFECTED PAGES (IP2)	AFFECTED PAGES (IP3)
B3.3.2 - 28 & 38	B3.3.2 - 32, 33 & 45
B3.3.7 - 4 & 6	B3.3.7 - 5 & 6
B3.4.13 - 5 & 7	B3.4.13 - 4 & 7
B3.4.14 - 5 & 8	B3.4.14 - 6 & 10
B3.4.15 - 5 & 7	B3.4.15 - 6 & 7
B3.5.3 - 4	B3.5.3 - 4
B3.5.4 - 6 & 7	B3.5.4 - 6 & 9
B3.6.6 - 7, 8 & 11	B3.6.6 - 8, 9,10 & 13
B3.6.7 - 2 & 3	B3.6.7 - 3 & 4
B3.7.7 - 4 & 6	B3.7.8 - 5 & 7
B3.7.8 - 5 & 7	B3.7.9 - 7 & 9
B3.7.9 - 2 & 3	B3.7.10 - 3
B3.7.10 - 8 &10	B3.7.11 - 7 & 10
B3.8.1-17 & 29	B3.7.12 - 3 & 4
B3.8.4 - 7 & 10	B3.8.1 - 19 & 33
B3.8.7- 5	B3.8.4 - 6 & 11
B3.8.9 - 8 & 9	B3.8.7 - 6, 7 & 8
	B3.8.9 - 11 & 12

BASES
ACTIONS (continued)

unit must be placed in a MODE in which ~~the LCO does not apply~~***overall plant risk is reduced***. 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~~***6*** hours (~~84~~***60*** hours total time).

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. 12). 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 12, 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.

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.

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
- Phase B Isolation.

This action addresses the train orientation of the relay logic and the master and slave relays. If one train is inoperable, 24 hours are allowed

BASES

ACTIONS (continued)

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~~***overall plant risk is reduced***. 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~~***4*** within an additional ~~30~~***6*** hours (~~60~~***36*** hours total time).

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. 12). 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 12, 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.

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.

The Required Actions are modified by a Note that allows one train to be bypassed for up to 8 hours for surveillance testing, provided the other train is OPERABLE. This allowance is based on the reliability analysis assumption of WCAP-14333 (Ref. 8) that 8 hours is required to perform train surveillance. This Note provides an allowance that when a train is placed in an inoperable status solely for performance of required Surveillances, entry into associated Required Actions may be delayed for up to 8 hours provided the redundant train maintains trip capability. Upon completion of the

BASES

REFERENCES (continued)

6. Indian Point 2 Specification FIX-95-A-001, Guidelines for Preparation Of Instrument Loop Accuracy and Setpoint Determination Calculation.

7. WCAP-10271-P-A, Supplement 2, Rev. 1, June 1990.

8. WCAP-14333-P-A, Rev.1, Probabilistic Risk Analysis of the RPS and ESFAS Test Times and Completion Times.

9. Regulatory Guide 1.105, Revision 3, "Setpoints for Safety-Related Instrumentation."

10. WCAP-15376-P-A, Rev.0, Risk Informed assessment of RTS and ESFAS Surveillance Test Intervals and Reactor Trip Breaker Test and Completion Times, October 2000.

11. WCAP-16041-P, Westinghouse Setpoint Methodology for Protection and Control Systems Indian Point Unit 2.

12. 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

A Note has been added to the ACTIONS indicating that separate Condition entry is allowed for each Function. The Conditions of this Specification may be entered independently for each Function listed in Table 3.3.7-1 in the accompanying LCO. The Completion Time(s) of the inoperable channel(s)/train(s) of a Function will be tracked separately for each Function starting from the time the Condition was entered for that Function.

A.1

Condition A applies if one or more functions in Table 3.3.7-1 are inoperable. If the automatic CRVS start signal from any Function is inoperable, 72 hours is allowed to restore the Function consistent with the limit of 72 hours for loss of CRVS Function allowed by LCO 3.7.10. If the channel/train cannot be restored to OPERABLE status, one CRVS train must be placed in the filtered pressurization mode of operation. This accomplishes the actuation instrumentation Function and places the unit in a conservative mode of operation.

A Note to Condition A clarifies that Required Action A.1 is applicable only in MODE 1, 2, 3 or 4.

B.1 and B.2

Condition B applies when the Required Action and associated Completion Time for Condition A have not been met and the unit is in MODE 1, 2, 3, or 4. The unit must be brought to a MODE in which ~~the LCO requirements are not applicable~~***overall plant risk is reduced.*** To achieve this status, the unit must be brought to MODE 3 within 6 hours and MODE ~~5~~***4*** within ~~36~~***12*** hours.

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

BASES

ACTIONS (continued)

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.

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.

C.1

Condition C applies when one or more functions are not OPERABLE when recently irradiated fuel assemblies are being moved. Movement of recently irradiated fuel assemblies must be suspended immediately to reduce the risk of accidents that could require CRVS actuation.

SURVEILLANCE REQUIREMENTS

A Note has been added to the SR Table to clarify that Table 3.3.7-1 determines which SRs apply to which CRVS Actuation Functions.

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.3.7.4

SR 3.3.7.4 requires the performance of a TADOT for the manual actuation function of the CRVS. This test verifies that CRVS actuates to the pressurization mode (mode 2) using the manual initiation switch. This SR can be satisfied by the performance of SR 3.7.10.3.

SR 3.3.7.5

A CHANNEL CALIBRATION of R-38-1 and R-38-2 is performed every 24 months, or approximately at every refueling. CHANNEL CALIBRATION is a complete check of the instrument loop, including the sensor. The test verifies that the channel responds to a measured parameter within the necessary range and accuracy.

The Frequency is based on operating experience and is consistent with the typical industry refueling cycle.

REFERENCES

1. 10 CFR 50.67.

2. WCAP-16157, "Indian Point Unit 2 Stretch Power Uprating Licensing Report," January 2004.

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

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 limits, 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~~***4*** within ~~36~~***12*** hours. This action reduces the LEAKAGE and also reduces the factors that tend to degrade the pressure boundary.

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. 7). 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 7, 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

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~~4, 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.

The RCS water inventory balance must be met with the reactor at steady state operating conditions. The Surveillance is modified by two Notes. Note 1 states that this SR is not required to be performed until 12 hours after establishing steady state operation. The 12 hour allowance provides sufficient time to collect and process all necessary data after stable plant conditions are established.

BASES

SURVEILLANCE REQUIREMENTS (continued)

The Surveillance Frequency of 72 hours is a reasonable interval to trend primary to secondary LEAKAGE and recognizes the importance of early leakage detection in the prevention of accidents. The primary to secondary LEAKAGE is determined using continuous process radiation monitors or radiochemical grab sampling in accordance with the EPRI guidelines (Ref. 6)

REFERENCES

1. 10 CFR 50, Appendix A, GDC 30.

2. Regulatory Guide 1.45, May 1973.

3. WCAP-16157, "Indian Point Unit 2 Stretch Power Uprating Licensing Report," January 2004.

4. Regulatory Guide 1.183, "Alternative Radiological Source Terms for Evaluating Design Basis Accidents at Nuclear Power Reactors," July 2000.

5. NEI 97-06, "Steam Generator Program Guidelines."

6. EPRI, "Pressurized Water Reactor Primary-to-Secondary Leak Guidelines."

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

ACTIONS

The Actions are modified by two Notes. Note 1 provides clarification that each flow path allows separate entry into a Condition. This is allowed based upon the functional independence of the flow path. Note 2 requires an evaluation of affected systems if a PIV is inoperable. The leakage may have affected system operability, or isolation of a leaking flow path with an alternate valve may have degraded the ability of the interconnected system to perform its safety function.

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.

The 72 hour Completion Time after exceeding the limit allows for the restoration of the leaking PIV to OPERABLE status. This timeframe considers the time required to complete this Action and the low probability of a second valve failing during this period.

B.1 and B.2

If leakage cannot be reduced, the plant must be brought to a MODE in which ~~the requirement does not apply~~***overall plant risk is reduced***. To achieve this status, the plant must be brought to MODE 3 within 6 hours and MODE ~~5~~***4*** within ~~36~~***12*** hours. This Action may reduce the leakage and also reduces the potential for a LOCA outside the containment.

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. 11). 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 11, 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.

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.

BASES

REFERENCES (continued)

4. WASH-1400 (NUREG-75/014), Appendix V, October 1975.

5. NUREG-0677, May 1980.

6. UFSAR, Section 5.2.

7. ASME code for Operation and Maintenance of Nuclear Power Plants.

8. 10 CFR 50.55a(g).

9. Generic Letter 87-006, Periodic Verification of Leak Tight Integrity of Pressure Isolation Valves.

10. WCAP-11736-A, Residual Heat Removal System Autoclosure Interlock (ACI) Removal Report.

11. 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 and C.2

With the required containment FCU condensate flow rate monitor inoperable, alternative action is again required. Either SR 3.4.15.1 must be performed or water inventory balances, in accordance with SR 3.4.13.1, must be performed to provide alternate periodic information. Provided a CHANNEL CHECK is performed every 8 hours or a water inventory balance is performed every 24 hours, reactor operation may continue while awaiting restoration of the containment FCU condensate flow rate monitor to OPERABLE status.

The 24 hour interval provides periodic information that is adequate to detect RCS LEAKAGE. A Note is added allowing that SR 3.4.13.1 is not required to be performed until 12 hours after establishing steady state operation (stable temperature, power level, pressurizer and makeup tank levels, makeup and letdown, and RCP seal injection and return flows). The 12 hour allowance provides sufficient time to collect and process all necessary data after stable plant conditions are established.

D.1 and D.2

With the required containment atmosphere radioactivity monitor and the required containment FCU condensate flow rate monitor inoperable, the only means of detecting leakage is the containment sump monitor. This Condition does not provide the required diverse means of leakage detection. The Required Action is to restore either of the inoperable required 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.

E.1 and E.2

If a Required Action of Condition A, B, C, or D cannot be met, the plant must be brought to a MODE in which ~~the requirement does not apply~~***overall plant risk is reduced***. 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.

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

BASES
ACTIONS (continued)

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.

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.

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.4.15.6, SR 3.4.15.7, and SR 3.4.15.8

These SRs require the performance of a CHANNEL CALIBRATION for each of the RCS leakage detection instrumentation channels. The calibration verifies the accuracy of the instrument string, including the instruments located inside containment. The Frequency of 24 months is a typical refueling cycle and considers channel reliability. 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.

3. UFSAR, Section 6.7.

4. Attachment C of IP2's May 23, 1988 Letter to the NRC requesting elimination of postulated primary loop pipe rupture as a design basis, "Indian Point Unit 2 – Evaluation of R.G. 1.45 Compliance".

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

ACTIONS

A Note prohibits the application of LCO 3.0.4.b to inoperable ECCS High Head Safety Injection subsystems when entering MODE 4. There is an increased risk associated with entering MODE 4 from MODE 5 with an inoperable ECCS high head subsystems and the provisions of LCO 3.0.4.b, which allow entry into a MODE or other specified condition in the Applicability with the LCO not met after performance of a risk assessment addressing inoperable systems and components, should not be applied in this circumstance.

A.1

With no ECCS RHR subsystem OPERABLE, the plant is not prepared to respond to a loss of coolant accident or to continue a cooldown using the RHR pumps and heat exchangers. The Completion Time of immediately to initiate actions that would restore at least one ECCS RHR subsystem to OPERABLE status ensures that prompt action is taken to restore the required cooling capacity. Normally, in MODE 4, reactor decay heat is removed from the RCS by an RHR loop. If no RHR loop is OPERABLE for this function, reactor decay heat must be removed by some alternate method, such as use of the steam generators. The alternate means of heat removal must continue until the inoperable RHR loop components can be restored to operation so that decay heat removal is continuous.

With both RHR pumps and heat exchangers inoperable, it would be unwise to require the plant to go to MODE 5, where the only available heat removal system is the RHR. Therefore, the appropriate action is to initiate measures to restore one ECCS RHR subsystem and to continue the actions until the subsystem is restored to OPERABLE status.

~~B.1~~

~~With one of the two required ECCS HHSI subsystems inoperable, the remaining HHSI subsystem and the RHR subsystem maintain substantial capability for the mitigation of a large spectrum of both large and small break LOCAs in MODE 4. Therefore, a Completion Time of 48 hours for restoration of the inoperable subsystem is warranted.~~

With no containment Recirculation subsystem OPERABLE due to the inoperability of the pump or flow path from the recirculation sump, the plant is not prepared to provide long term cooling response to Design Basis Events requiring SI. The Completion Time of immediately to initiate actions that would restore at least one ECCS Recirculation subsystem to OPERABLE status ensures that prompt action is taken to provide the required cooling capacity.

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 A.1 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.

~~C.1~~
~~With no ECCS HHSI subsystem OPERABLE, due to the inoperability of the pump or flow path from the RWST, the plant is not prepared to provide high pressure response to Design Basis Events requiring SI. The 1 hour Completion Time to restore at least one ECCS HHSI subsystem to OPERABLE status ensures that prompt action is taken to provide the required cooling capacity or to initiate actions to place the plant in MODE 5, where an ECCS subsystem is not required.~~

~~D.1~~
~~When the Required Actions of Conditions B or C cannot be completed within the required Completion Time, a controlled shutdown should be initiated. Twenty-four hours is a reasonable time, based on operating experience, to reach MODE 5 in an orderly manner and without challenging plant systems or operators.~~

SURVEILLANCE REQUIREMENTS

SR 3.5.3.1

The applicable Surveillance descriptions from Bases 3.5.2 apply.

REFERENCES

1. The applicable references from Bases 3.5.2 apply.

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 (continued)

C.1

With the RWST inoperable for reasons other than Condition A or B (e.g., water volume not within limit of SR 3.5.4.2 or both RWST level alarms inoperable), 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.

D.1 and D.2

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~~***overall plant risk is reduced***. 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.

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 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.

BASES

ACTIONS (continued)

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.

SURVEILLANCE REQUIREMENTS

SR 3.5.4.1

The RWST borated water temperature should be verified every 24 hours to be within the limits assumed in the accident analyses band. This Frequency is sufficient to identify a temperature change that would approach either limit and has been shown to be acceptable through operating experience.

SR 3.5.4.2

The RWST water volume should be verified every 7 days to be above the required minimum level in order to ensure that a sufficient initial supply is available for injection and containment spray and to support continued ECCS operation on recirculation. Since the RWST volume is normally stable and is protected by an alarm, a 7 day Frequency is appropriate and has been shown to be acceptable through operating experience.

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.5.4.3

The boron concentration of the RWST should be verified every 31 days to be within the required limits. This SR ensures that the reactor will remain subcritical following a LOCA. Further, it assures that the resulting sump pH will be maintained in an acceptable range so that boron precipitation in the core will not occur and the effect of chloride and caustic stress corrosion on mechanical systems and components will be minimized. Since the RWST volume is normally stable, a 31 day sampling Frequency to verify boron concentration is appropriate and has been shown to be acceptable through operating experience.

SR 3.5.4.4

A CHANNEL CALIBRATION of the RWST level alarm is performed at least every 92 days. CHANNEL CALIBRATION is a complete check of the level alarm loop including the required alarm. The test verifies the RWST level alarm responds to RWST level within the required range and accuracy. The test also verifies that the RWST level indicating switch will cause the low low level alarm to annunciate to ensure the operator is alerted to start the switchover to the recirculation mode during accident conditions. The frequency is based on operating experience.

REFERENCES

1. UFSAR, Chapter 6 and Chapter 14.

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

A.1

With one containment spray train inoperable, the inoperable containment spray train must be restored to OPERABLE status within 72 hours. In this Condition, the remaining OPERABLE spray and FCU trains are adequate to perform the iodine removal and containment cooling functions. The 72 hour Completion Time takes into account the redundant heat removal capability afforded by the containment spray and containment FCUs, reasonable time for repairs, and low probability of a DBA occurring during this period.

The 10 day portion of the Completion Time for Required Action A.1 is based upon engineering judgment. It takes into account the low probability of coincident entry into two Conditions in this Specification coupled with the low probability of an accident occurring during this time. Refer to Section 1.3, "Completion Times," for a more detailed discussion of the purpose of the "from discovery of failure to meet the LCO" portion of the Completion Time.

B.1 and B.2

If the inoperable containment spray 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~~***overall plant risk is reduced***. To achieve this status, the plant must be brought to at least MODE 3 within 6 hours and to MODE ~~5~~***4*** within ~~84~~***54*** hours.

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

BASES

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.

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~~***4*** allows ~~additional time for attempting restoration of~~ ***48 hours to restore*** the containment spray train ***to OPERABLE status in MODE 3*** and is reasonable when considering the driving force for a release of radioactive material from the Reactor Coolant System is reduced in MODE 3.

C.1

With one of the containment FCU trains inoperable, the inoperable required containment FCU train must be restored to OPERABLE status within 7 days. The remaining containment spray and fan cooler units when in this degraded condition provide iodine removal capabilities and are capable of providing at least 100% of the heat removal needs. The 7 day Completion Time was developed taking into account the redundant heat removal capabilities afforded by combinations of containment spray and FCUs and the low probability of DBA occurring during this period.

BASES

ACTIONS (continued)

The 10 day portion of the Completion Time for Required Action C.1 is based upon engineering judgment. It takes into account the low probability of coincident entry into two Conditions in this Specification coupled with the low probability of an accident occurring during this time. Refer to Section 1.3 for a more detailed discussion of the purpose of the "from discovery of failure to meet the LCO" portion of the Completion Time.

D.1

With two containment FCU trains inoperable, one of the containment FCU trains must be restored to OPERABLE status within 72 hours. The remaining containment spray and FCUs when in this degraded condition provide iodine removal capabilities and are capable of providing at least 100% of the heat removal needs after an accident. The 72 hour Completion Time was developed taking into account the redundant heat removal capabilities afforded by combinations of the containment spray and FCUs, the iodine removal function of the Containment Spray System, and the low probability of DBA occurring during this period.

E.1 and E.2

If the Required Action and associated Completion Time of Condition C or D of this LCO are not met, 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.

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 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

BASES

ACTIONS (continued)

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.

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.

F.1

With two containment spray trains or any combination of three or more containment spray and FCU trains inoperable, the unit is in a condition outside the accident analysis. Entering this Condition represents a substantial degradation of the containment heat removal and iodine removal function even when minimum capability assumed in the analysis is available. Therefore, LCO 3.0.3 must be entered immediately.

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.6.6.9

This SR verifies that minimum air flow through each FCU equals the air flow assumed in the accident analysis for heat removal from the containment. The 24 month Frequency is based on engineering judgment.

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. UFSAR, Section 6.3.
4. UFSAR, Section 6.4.
5. UFSAR, Section 14.3.
6. ASME code for Operation and Maintenance of Nuclear Power Plants.
7. Safety Evaluation by the Office of Nuclear Reactor Regulation Related to Amendment No. 211 to Facility Operating License No. DPR-26, July 27, 2000.
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 (continued)

B.1 and B.2

If the recirculation pH control system 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~~***overall plant risk is reduced***. To achieve this status, the plant must be brought to at least MODE 3 within 6 hours and to MODE ~~5~~***4*** within ~~84~~***54*** hours.

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.

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~~***4*** allows 48 hours for restoration of recirculation pH control system ~~in MODE 3 and 36 hours to reach MODE 5~~.

BASES

ACTIONS (continued)

This is reasonable when considering the reduced pressure and temperature conditions in MODE 3 for the release of radioactive material from the Reactor Coolant System.

SURVEILLANCE REQUIREMENTS

SR 3.6.7.1

This SR provides visual verification that each of the four storage sodium tetraborate baskets is in place and intact and collectively contain ≥ 8096 pounds (160 cubic feet) of sodium tetraborate decahydrate, or equivalent. This amount of TSP is sufficient to ensure that the recirculation solution following a LOCA is at the correct pH level. The 24 month Frequency is sufficient to ensure that the stainless steel baskets are intact and contain the appropriate amount of STB.

REFERENCES

1. UFSAR, Section 6.3.
2. Standard Review Plan, Section 6.5.2.
3. UFSAR, Section 14.2
4. UFSAR, Section 14.3
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

APPLICABILITY (continued)

In MODE 5 or 6, the OPERABILITY requirements of the CCW System are determined by the systems it supports.

ACTIONS

A.1

Required Action A.1 is modified by a Note indicating that the applicable Conditions and Required Actions of LCO 3.4.6, "RCS Loops - MODE 4," be entered if an inoperable CCW train results in an inoperable RHR loop. This is an exception to LCO 3.0.6 and ensures the proper actions are taken for these components.

If one CCW train is inoperable, action must be taken to restore OPERABLE status within 72 hours. In this Condition, the remaining OPERABLE CCW train is adequate to perform the heat removal function. The 72 hour Completion Time is reasonable, based on the redundant capabilities afforded by the OPERABLE train, and the low probability of a DBA occurring during this period.

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~~***overall plant risk is reduced***. To achieve this status, the unit must be placed in at least MODE 3 within 6 hours and in MODE ~~5~~***4*** within ~~72~~***12*** hours.

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.

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 3.7.7.1

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 because these valves are verified to be in the correct position prior to locking, sealing, or securing. Manually operated valves located inside containment are considered locked. This SR also does not apply to valves that cannot be inadvertently misaligned,

REFERENCES

1. UFSAR, Sections 9.3 and 9.6.

2. UFSAR, Section 6.2.

3. WCAP-16157, "Indian Point Unit 2 Stretch Power Uprate Licensing Report," January 2004.

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

open automatically in response to an ESFAS actuation signal or are maintained open (valves fail open on loss of power or loss of air).

If one of the redundant SW to DG ESFAS valves is inoperable, a single failure of the redundant valve could result in the failure of all three DGs shortly after the initiation of an event. If one of the redundant SW to FCU ESFAS valves is inoperable, a single failure of the redundant valve could result in the failure of all five FCUs. Therefore, a Completion Time of 12 hours is established to restore the required redundancy.

A 12 hour Completion Time is acceptable for the SW to DG valves because SW to the DGs is still available and the low probability of an event with a loss of offsite power during this period. A 12 hour Completion Time is acceptable for the SW to FCU valves because SW to the FCUs is still available, the availability of Containment Spray, and the low probability of an event during this period.

If both SW to DG valves or both SW to FCU valves are inoperable, entry into LCO 3.0.3 is required.

E.1 and E.2

If more than one required SWS pump in either the essential or the non-essential header is inoperable, then the plant must be placed in a MODE in which ~~the LCO does not apply~~***overall plant risk is reduced.*** Additionally, if the SWS 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 the required status, the unit must be placed in at least MODE 3 within 6 hours and in MODE ~~5~~***4*** within ~~36~~***12*** hours.

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 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

BASES

ACTIONS (continued)

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.

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 SWS components or systems may render those components inoperable, but does not affect the OPERABILITY of the SWS.

REFERENCES

1. UFSAR, Section 9.6.

2. WCAP-12312, "Safety Evaluation for An Ultimate Heat Sink Temperature to 95°F at Indian Point Unit 2," July, 1989, and approved supplements.

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

APPLICABLE SAFETY ANALYSES (continued)

The UHS satisfies Criterion 3 of 10 CFR 50.36(c)(2)(ii).

LCO

The UHS is required to be OPERABLE and is considered OPERABLE if it contains water at or below the maximum temperature that would allow the SWS to operate for at least 30 days following the design basis LOCA without the loss of net positive suction head (NPSH), and without exceeding the maximum design temperature of the equipment served by the SWS. To meet this condition, the UHS temperature should not exceed 95°F.

APPLICABILITY

In MODES 1, 2, 3, and 4, the UHS is required to support the OPERABILITY of the equipment serviced by the UHS and required to be OPERABLE in these MODES.

In MODE 5 or 6, the OPERABILITY requirements of the UHS are determined by the systems it supports.

ACTIONS

A.1 and A.2

If the UHS temperature exceeds 95°F, or the UHS is inoperable for any other reason, the unit must be placed in a MODE in which ~~the LCO does not apply~~***overall plant risk is reduced***. To achieve this status, the unit must be placed in at least MODE 3 within 7 hours and in MODE ~~5~~***4*** within ~~36~~***12*** hours.

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 A.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

BASES

APPLICABLE SAFETY ANALYSES (continued)

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.

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. The Completion Time of ~~36~~***12*** hours to reach MODE ~~5~~***4*** assumes that more than one component cooling water pump and more than one nonessential service water pump are available.

SURVEILLANCE REQUIREMENTS

SR 3.7.9.1

This SR requires routine monitoring of the UHS (service water inlet) temperature. Requirements for UHS temperature monitoring instrumentation are governed by the Technical Requirements Manual (Ref. 2). The 24 hour Frequency is based on operating experience related to trending of the parameter variations during the applicable MODES. This SR verifies that the water temperature of the UHS is ≤ 95°F. Reference 2

BASES

APPLICABLE SAFETY ANALYSES (continued)

includes requirements for more frequent monitoring of UHS temperature when UHS temperature is ≥ 90°F.

REFERENCES

1. WCAP-12312, "Safety Evaluation for An Ultimate Heat Sink Temperature to 95°F at Indian Point Unit 2," July, 1989, including approved supplements.

2. IP2 Technical Requirements Manual.

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 (continued)

D.1 and D.2

If the inoperable CRVS train(s) or the CRE cannot be restored to OPERABLE status within the required Completion Time, the unit must be placed in a MODE ~~that minimizes accident risk~~***in which the overall plant risk is reduced***. 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.

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. 11). 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 11, 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.

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.

E.1 and E.2

Reference 3 did not address exposure to CRE occupants resulting from fuel handling accidents when less than 84 hours of decay time have elapsed if the CRE ventilation safety function is not met. Therefore, when only one CRVS train is OPERABLE during movement of recently irradiated fuel, action must be taken to immediately place the OPERABLE CRVS train in the

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

BASES

SURVEILLANCE REQUIREMENTS (continued)

following an accident. Compensatory measures are discussed in Regulatory Guide 1.196, Section C.2.7.3, (Ref. 8) which endorses, with exceptions, NEI 99-03, Section 8.4 and Appendix F (Ref. 9). These compensatory measures may also be used as mitigating actions as required by Required Action B.2. Temporary analytical methods may also be used as compensatory measures to restore OPERABILITY (Ref. 10). 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. UFSAR, Section 9.9.

2. UFSAR, Chapter 14.

3. UFSAR, Section [6.4].

4. UFSAR, Section [9.5].

5. UFSAR Section 6.4

6. UFSAR Section 9.5

7. TRM 3.9A Decay Time

8. Regulatory Guide 1.196.

9. NEI 99-03, "Control Room Habitability Assessment," June 2001.

10. 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).

11. 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)

E.1

With two or more DGs inoperable, the remaining standby AC sources are not adequate to satisfy accident analysis assumptions. Thus, with an assumed loss of offsite electrical power, insufficient standby AC sources are available to power the minimum required ESF functions. Since the offsite electrical power system is the only source of AC power for this level of degradation, the risk associated with continued operation for a very short time could be less than that associated with an immediate controlled shutdown (the immediate shutdown could cause grid instability, which could result in a total loss of AC power). Since any inadvertent generator trip could also result in a total loss of offsite AC power, however, the time allowed for continued operation is severely restricted. The intent here is to avoid the risk associated with an immediate controlled shutdown and to minimize the risk associated with this level of degradation.

According to Reference 6, with two or more DGs inoperable, operation may continue for a period that should not exceed 2 hours.

F.1 and F.2

If the inoperable AC electric power sources 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~~ ***overall plant risk is reduced***. To achieve this status, the unit must be brought to at least MODE 3 within 6 hours and to MODE ~~5~~***4*** within ~~36~~***12*** hours.

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. 10). 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 10, 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.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,

BASES

ACTIONS (continued)

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.

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.

G.1 and H.1

Conditions G and H correspond to a level of degradation in which all redundancy in the AC electrical power supplies has been lost or a loss of safety function has already occurred. Therefore, no additional time is justified for continued operation. The unit is required by LCO 3.0.3 to commence a controlled shutdown.

BASES

SURVEILLANCE REQUIREMENTS (continued)

d. No activities that are precursors to events requiring AC power for mitigation (e.g., fuel handling accident or inadvertent RCS draindown) are conducted during performance of this test.

SR 3.8.1.13

This Surveillance demonstrates that the DG starting independence has not been compromised. Also, this Surveillance demonstrates that each engine can achieve proper speed within the specified time when the DGs are started simultaneously.

The 10 year Frequency is consistent with the recommendations of Regulatory Guide 1.9 (Ref. 3).

This SR is modified by two Notes. The reason for Note 1 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. The reason for Note 2 is to allow SR 3.8.1.12 to satisfy the requirements of this SR if SR 3.8.1.12 is performed with more than one safeguards power train concurrently.

REFERENCES

1. 10 CFR 50, Appendix A, GDC 17.
2. UFSAR, Chapter 8.
3. Regulatory Guide 1.9, Rev. 3, July 1993.
4. UFSAR, Chapter 6.
5. UFSAR, Chapter 14.
6. Regulatory Guide 1.93, Rev. 0, December 1974.
7. 10 CFR 50, Appendix A, GDC 18.
8. Regulatory Guide 1.137.
9. IEEE Standard 387-1995, IEEE Standard Criteria for Diesel-Generator Units Applied as Standby Power Supplies for Nuclear Power Generating Stations.
10. ***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)

supported by the inoperable battery and/or charger. Additionally, Completion Time of 24 hours is consistent with the allowable out of service time for RPS and ESFAS Instrumentation actuation logic trains in LCO 3.3.1, "Reactor Protection System (RPS) Instrumentation," and LCO 3.3.2, "Engineered Safety Feature Actuation System (ESFAS) Instrumentation."

C.1 and C.2

If an alternate source of power for the inoperable battery and/or charger are not available or the inoperable DC electrical power 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~~ ***overall plant risk is reduced***. To achieve this status, the unit must be brought to at least MODE 3 within 6 hours and to MODE ~~5~~***4*** within ~~36~~***12*** hours.

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. 10). 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 10, 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.

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~~***4*** is consistent with the time required in Regulatory Guide 1.93 (Ref. 6).

BASES

REFERENCES

1. 10 CFR.50, Appendix A.
2. Regulatory Guide 1.6, March 10, 1971.
3. IEEE-308-1978.
4. UFSAR, Chapter 8.
5. UFSAR, Chapter 14.
6. Regulatory Guide 1.93, December 1974.
7. IEEE-450-1995.
8. Regulatory Guide 1.32, February 1977.
9. Regulatory Guide 1.129, December 1974.
10. ***WCAP-16294-NP-A, Rev. 1, "Risk-Informed Evaluation of Changes to Technical Specification Required Action Endstates for Westinghouse NSSS PWRs," June 2010.***

BASES

LCO (continued)

channels are inoperable and in the tripped condition. This is because these 'de-energize to actuate functions' are relying upon interruptible AC electrical power sources (offsite and onsite). Therefore, only one inverter may be inoperable at one time and an inoperable inverter must be restored to OPERABLE within 24 hours. The 24 hour Completion Time is needed because it ensures that the 118 VAC instrument buses are powered from the uninterruptible inverter source. The 24 hour Completion Time is acceptable because Required Action A.1 ensures that an inoperable inverter does not result in a loss of any safety function.

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~~ ***overall plant risk is reduced***. To achieve this status, the unit must be brought to at least MODE 3 within 6 hours and to MODE ~~5~~***4*** within ~~36~~***12*** hours.

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.

BASES

LCO (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 plant systems.

SURVEILLANCE REQUIREMENTS

SR 3.8.7.1

This Surveillance verifies that the inverters are functioning properly with all required circuit breakers closed and 118 VAC instrument buses energized from the inverter. The verification of proper voltage and frequency output ensures that the required power is readily available for the instrumentation of the RPS and ESFAS connected to the 118 VAC instrument buses. The 7 day Frequency takes into account the redundant capability of the inverters and other indications available in the control room that alert the operator to inverter malfunctions.

REFERENCES

1. UFSAR, Chapter 8.

2. UFSAR, Chapter 14.

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 (continued)

c. The potential for an event in conjunction with a single failure of a redundant component.

The 2 hour Completion Time for DC buses is consistent with Regulatory Guide 1.93 (Ref. 2). The second Completion Time for Required Action C.1 establishes a limit on the maximum time allowed for any combination of required distribution subsystems to be inoperable during any single contiguous occurrence of failing to meet the LCO. If Condition C is entered while, for instance, an AC bus is inoperable and subsequently returned OPERABLE, the LCO may already have been not met for up to 8 hours. This could lead to a total of 10 hours, since initial failure of the LCO, to restore the DC distribution system. At this time, an AC train could again become inoperable, and DC distribution restored OPERABLE. This could continue indefinitely.

This Completion Time allows for an exception to the normal "time zero" for beginning the allowed outage time "clock." This will result in establishing the "time zero" at the time the LCO was initially not met, instead of the time Condition C was entered. The 16 hour Completion Time is an acceptable limitation on this potential to fail to meet the LCO indefinitely.

D.1 and D.2

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~~ ***overall plant risk is reduced***. To achieve this status, the unit must be brought to at least MODE 3 within 6 hours and to MODE ~~5~~***4*** within ~~36~~***12*** hours.

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 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

BASES

ACTIONS (continued)

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.

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.

E.1

Condition E corresponds to a level of degradation in the electrical power distribution system that causes a required safety function to be lost. When more than one inoperable electrical power distribution subsystem results in the loss of a required function, the plant is in a condition outside the accident analysis. Therefore, no additional time is justified for continued operation. LCO 3.0.3 must be entered immediately to commence a controlled shutdown.

BASES

SURVEILLANCE REQUIREMENTS

SR 3.8.9.1

This Surveillance verifies that the AC, DC, and 118 VAC instrument bus electrical power distribution systems listed in Table B 3.8.9-1 are functioning properly, with the 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 7 day Frequency takes into account the redundant capability of the AC, DC, and 118 VAC instrument bus electrical power distribution subsystems, and other indications available in the control room that alert the operator to subsystem malfunctions.

REFERENCES

1. UFSAR, Chapter 14.

2. Regulatory Guide 1.93, December 1974.

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 (continued)

B.1, B.2.1 and B.2.2

Condition B applies to manual initiation of:

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

This action addresses the train orientation of the relay logic for the functions listed above. If a channel or train is inoperable, 48 hours is allowed to return it to an OPERABLE status. Note that for containment spray and Phase B isolation, failure of one or both channels in one train renders the train 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 train OPERABLE for each Function, 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~~***overall plant risk is reduced***. 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~~***6*** hours (~~84~~***60*** hours total time).

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. 10). 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 10, 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

BASES

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.

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.

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;

(continued)

BASES

ACTIONS

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

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

This action addresses the train orientation of the relay logic and the master and slave relays. If one train is inoperable, 6 hours are allowed to restore the train to OPERABLE status. 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~~***overall plant risk is reduced.*** This is done by placing the unit in at least MODE 3 within an additional 6 hours (12 hours total time) and in MODE ~~5~~***4*** within an additional ~~30~~***6*** hours (~~42~~***18*** hours total time).

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. 10). 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 10, 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.

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.

The Required Actions are modified by a Note that allows one train to be bypassed for up to 8 hours for surveillance testing, provided the other train is OPERABLE.

D.1, D.2.1 and D.2.2

Condition D applies to:

- Containment Pressure-High;
- Pressurizer Pressure-Low;
- High Differential Pressure Between Steam Lines;
- High Steam Flow in Two Steam Lines Coincident With Tavg-Low or Coincident With Steam Line Pressure-Low; and

(continued)

BASES

REFERENCES (continued)

7. WCAP-10271-P-A, Supplement 2, Rev. 1, June 1990.

8. Consolidated Edison Company of New York, Inc. Indian Point Nuclear Generating Station Unit No. 3 Plant Manual Volume VI: Precautions, Limitations, and Setpoints, March 1975.

9. Safety Evaluation Report (SER) for IP3 Amendment 224.

10. 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 and C.2

Condition C applies when the Required Action and associated Completion Time for Condition A or B have not been met. The unit must be brought to a MODE in which ~~the LCO requirements are not applicable~~***overall plant risk is reduced.*** To achieve this status, the unit must be brought to MODE 3 within 6 hours and MODE ~~5~~***4*** within ~~36~~***12*** hours.

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 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.

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.

(continued)

BASES

REFERENCES

1. IP3 Technical Requirements Manual.

2. Safety Evaluation Report (SER) for IP3 Amendment 224.

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

APPLICABILITY

In MODES 1, 2, 3, and 4, the potential for RCPB LEAKAGE is greatest when the RCS is pressurized.

In MODES 5 and 6, LEAKAGE limits are not required because the reactor coolant pressure is far lower, resulting in lower stresses and reduced potentials for LEAKAGE.

Leakage past PIVs or other leakage into closed systems is that leakage that can be accounted for and contained by a system not directly connected to the atmosphere. Leakage past PIVs or other leakage into closed systems is not included in the limits for either identified or unidentified LEAKAGE but PIV leakage must be within the limits specified for PIVs in LCO 3.4.14, "RCS Pressure Isolation Valves (PIV)." Leakage past PIVs or other leakage into closed systems is quantified before being exempted from the limits for identified LEAKAGE.

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~~***4*** within ~~36~~***12*** hours. This action reduces the LEAKAGE and also reduces the factors that tend to degrade the pressure boundary.

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

SURVEILLANCE REQUIREMENTS

SR 3.4.13.2 (continued)

The Surveillance Frequency of 72 hours is a reasonable interval to trend primary to secondary LEAKAGE and recognizes the importance of early leakage detection in the prevention of accidents. The primary to secondary LEAKAGE is determined using continuous process radiation monitors or radiochemical grab sampling in accordance with the EPRI guidelines (Ref. 4).

REFERENCES

1. 10 CFR 50, Appendix A, GDC 30.

2. FSAR, Section 14.

3. NEI 97-06, "Steam Generator Program Guidelines."

4. EPRI, "Pressurized Water Reactor Primary-to-Secondary Leak Guidelines."

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)

leaking flow path with an alternate valve may have degraded the ability of the interconnected system to perform its safety function.

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. If use of a closed manual, deactivated automatic, or check valve to isolate leaking PIV renders a required system or component inoperable, then the Required Actions associated with the affected system or component are initiated when the valve is closed.

B.1 and B.2

If leakage cannot be reduced, the system isolated, or the other Required Actions accomplished, the plant must be brought to a MODE in which the ~~requirement does not apply~~***the overall plant risk is reduced.*** To achieve this status, the plant must be brought to MODE 3 within 6 hours and MODE ~~5~~***4*** within ~~36~~***12*** hours. This Action may reduce the leakage and also reduces the potential for a LOCA outside the containment.

(continued)

ACTIONS

B.1 and B.2 (continued)

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. 11). 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 11, 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.

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.

C.1 and C.2

The inoperability of one or more ACIs or OPIs renders the RHR suction isolation valves incapable of isolating in response to a high pressure condition and/or incapable of preventing inadvertent opening of the valves at RCS pressures in excess of the RHR systems design pressure. If one or more RHR ACIs or OPIs are inoperable, operation may continue as long as the affected RHR isolation valve is closed and de-activated within 7 days and that status re-verified every 31 days thereafter. These Required Actions and associated Completion Times are acceptable in MODES 1,

BASES

REFERENCES (continued)

4. WASH-1400 (NUREG-75/014), Appendix V, October 1975.

5. NUREG-0677, May 1980.

6. FSAR Section 6.2.

7. ASME code for Operation and Maintenance of Nuclear Power Plants.

8. 10 CFR 50.55a(g).

9. Generic Letter 87-006, Periodic Verification of Leak Tight Integrity of Pressure Isolation Valves.

10. WCAP-11736-A, Residual Heat Removal System Autoclosure Interlock (ACI) Removal Report.

11. 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)

D.1 and D.2

With the required containment atmosphere radioactivity monitor and the required containment fan cooler unit condensate measuring system inoperable, the only means of detecting leakage is the containment sump flow monitor. This Condition does not provide the required diverse means of leakage detection. The Required Action is to restore either of the inoperable required 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.

E.1 and E.2

If a Required Action of Condition A, B, C, or D cannot be met, the plant must be brought to a MODE in which ~~the requirement does not apply~~***overall plant risk is reduced.*** 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.

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 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.

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.

F.1

With all required monitors inoperable, no automatic means of monitoring leakage are available, and immediate plant shutdown in accordance with LCO 3.0.3 is required.

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.4.15.1

SR 3.4.15.1 requires the performance of a CHANNEL CHECK of the required containment atmosphere radioactivity monitor. The check gives reasonable confidence that the channel is operating properly. The Frequency of 12 hours is based on instrument reliability and is reasonable for detecting off normal conditions.

SR 3.4.15.2

SR 3.4.15.2 requires the performance of a COT on the required containment atmosphere radioactivity monitor. The test ensures that the monitor can perform its function in the desired manner. The test verifies the alarm setpoint and relative accuracy of the instrument string. The Frequency of 92 days considers instrument reliability, and operating experience has shown that it is proper for detecting degradation.

SR 3.4.15.3, SR 3.4.15.4 and SR 3.4.15.5

These SRs require the performance of a CHANNEL CALIBRATION for each of the RCS leakage detection instrumentation channels. The calibration verifies the accuracy of the instrument string, including the instruments located inside containment. The Frequency of 24 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. FSAR, Section 6.
3. ***WCAP-16294-NP-A, Rev. 1, "Risk-Informed Evaluation of Changes to Technical Specification Required Action Endstates for Westinghouse NSSS PWRs," June 2010.***

ACTIONS (continued)

A.1

With both RHR pumps and heat exchangers inoperable, it would be unwise to require the plant to go to MODE 5, where the only available heat removal system is the RHR. Therefore, the appropriate action is to initiate measures to restore one ECCS RHR subsystem and to continue the actions until the subsystem is restored to OPERABLE status.

~~B.1~~

With no containment Recirculation subsystem OPERABLE, due to the inoperability of the pump or flow path from the recirculation sump, the plant is not prepared to provide long term cooling response to Design Basis Events requiring SI. The ~~1 hour~~ Completion Time ***of immediately*** to ***initiate actions that would*** restore at least one ECCS Recirculation subsystem to OPERABLE status ensures that prompt action is taken to provide the required cooling capacity ~~or to initiate actions to place the plant in MODE 5, where a recirculation subsystem is not required~~.

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 A.1 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.

~~C.1~~

~~When the Required Actions of Condition B cannot be completed within the required Completion Time, a controlled shutdown should be initiated. Twenty-four hours is a reasonable time, based on operating experience, to reach MODE 5 in an orderly manner and without challenging plant systems or operators.~~

~~Note: Condition C should not be entered if Condition A is applicable. Required Action C.1 does not mandate a cooldown to MODE 5 when a required ECCS RHR subsystem is not OPERABLE (i.e., Condition A) because plant cooldown may not be possible with inoperable RHR subsystems.~~

SURVEILLANCE REQUIREMENTS

SR 3.5.3.1

The applicable Surveillance descriptions from Bases 3.5.2 apply.

REFERENCES

1. The applicable references from Bases 3.5.2 apply.
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 (continued)

B.1 (continued)

because the IP3 ESFAS design does not include automatic switchover from the safety injection mode to the recirculation mode of operation based on low level in the RWST coincident with a safety injection signal. This function is performed manually by the operator who is alerted by the RWST low level alarm as the primary indicator for determining the time for the switchover. The 7 day Completion Time for restoration of redundancy for this alarm function is acceptable because of the remaining alarm channel and the availability of containment and recirculation sump level indication in the containment.

C.1

With the RWST inoperable for reasons other than Condition A (e.g., water volume) or B (e.g., two level alarms inoperable), 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.

D.1 and D.2

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~~***overall plant risk is reduced.*** 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.

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 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.

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.

SURVEILLANCE REQUIREMENTS

SR 3.5.4.1

The RWST borated water temperature should be verified every 24 hours to be within the limits assumed in the accident analyses band. This

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.5.4.6 (continued)

the RWST level transmitter loop including the required alarm. The test verifies the RWST level transmitter responds to RWST level within the required range and accuracy.

The test also verifies that the RWST level transmitter will cause the low level alarm to annunciate at ≥10.5 feet and ≤12.5 feet to ensure the operator is alerted to start the switchover to the recirculation mode during accident conditions. The frequency is based on operating experience and previous license commitments.

REFERENCES

1. FSAR, Chapter 6 and Chapter 14.

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

APPLICABILITY

In MODES 1, 2, 3, and 4, a DBA could cause a release of radioactive material to containment and an increase in containment pressure and temperature requiring the operation of the containment spray trains and containment cooling trains.

In MODES 5 and 6, the probability and consequences of these events are reduced due to the pressure and temperature limitations of these MODES. Thus, the Containment Spray System and Containment Fan Cooler System are not required to be OPERABLE in MODES 5 and 6.

ACTIONS

A.1

With one containment spray train inoperable, the inoperable containment spray train must be restored to OPERABLE status within 72 hours. In this Condition, the remaining OPERABLE spray and fan cooler trains are adequate to perform the iodine removal and containment cooling functions. The 72 hour Completion Time takes into account the redundant heat removal capability afforded by the Containment Spray System, reasonable time for repairs, and low probability of a DBA occurring during this period.

The 10 day portion of the Completion Time for Required Action A.1 is based upon engineering judgment. It takes into account the low probability of coincident entry into two Conditions in this Specification coupled with the low probability of an accident occurring during this time. Refer to Section 1.3, "Completion Times," for a more detailed discussion of the purpose of the "from discovery of failure to meet the LCO" portion of the Completion Time.

B.1 and B.2

If the inoperable containment spray 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~~***overall plant risk is reduced.*** To achieve this status, the plant must be brought to at least MODE 3 within 6 hours and to MODE ~~5~~***4*** within ~~84~~***54*** hours.

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. 7). 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 7, 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.

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.

BASES

ACTIONS

B.1 and B.2 (continued)

The extended interval to reach MODE ~~5~~***4*** allows ~~additional time for attempting restoration of~~ ***48 hours to restore*** the containment spray train ***to OPERABLE status in MODE 3,*** and is reasonable when considering the driving force for a release of radioactive material from the Reactor Coolant System is reduced in MODE 3.

C.1

With one of the required containment fan cooler trains inoperable, the inoperable required containment fan cooler train must be restored to OPERABLE status within 7 days. The components in this degraded condition provide iodine removal capabilities and are capable of providing at least 100% of the heat removal needs. The 7 day Completion Time was developed taking into account the redundant heat removal capabilities afforded by combinations of the Containment Spray System and Containment Fan Cooler System and the low probability of DBA occurring during this period.
The 10 day portion of the Completion Time for Required Action C.1 is based upon engineering judgment. It takes into account the low probability of coincident entry into two Conditions in this Specification coupled with the low probability of an accident occurring during this time. Refer to Section 1.3 for a more detailed discussion of the purpose of the "from discovery of failure to meet the LCO" portion of the Completion Time.

D.1

With two required containment fan cooler trains inoperable, one of the required containment cooling trains must be restored to OPERABLE status within 72 hours. This allowable out of service time is acceptable because the minimum required containment cooling and iodine removal function is maintained even though this configuration is a substantial degradation from the design capability, and may be a loss of redundancy for this function.

(continued)

BASES

ACTIONS (continued)

E.1 and E.2

If the Required Action and associated Completion Time of Condition C or D of this LCO are not met, the plant must be brought to a MODE in which ~~the LCO does not apply~~***overall plant risk is reduced.*** 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.

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. 7). 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 7, 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.

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.

F.1

With two containment spray trains or any combination of three or more containment spray and fan cooler trains inoperable, the unit could be in a condition outside the accident analysis. Entering this Condition represents a substantial degradation of the containment heat removal and iodine removal function. Therefore, LCO 3.0.3 must be entered immediately.

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.6.8 (continued)

the physical properties of the activated charcoal. Specific test Frequencies and additional information are discussed in detail in the VFTP.

SR 3.6.6.9

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. Due to the passive design of the nozzle, a test at 10 year intervals is considered adequate to detect obstruction of the nozzles.

REFERENCES

1. 10 CFR 50, Appendix A.
2. 10 CFR 50, Appendix K.
3. FSAR, Sections 6.3 and 6.4.
4. FSAR, Section 14.3 Table 14.3-56.
5. ASME code for Operation and Maintenance of Nuclear Power Plants.
6. WCAP - 16212P, Indian Point Nuclear Power Generating Unit No. 3 Stretch Power Uprate NSSS and BOP Licensing Report, June 2004.
7. ***WCAP-16294-NP-A, Rev. 1, "Risk-Informed Evaluation of Changes to Technical Specification Required Action Endstates for Westinghouse NSSS PWRs," June 2010.***

ACTIONS A.1

If the Recirculation pH Control System is inoperable, it must be restored to OPERABLE within 72 hours. The pH adjustment for corrosion protection and iodine removal enhancement is reduced in this condition. The Containment Spray System and Containment Fan Cooler System are available and would remove iodine from the containment atmosphere in the event of a DBA. The 72 hour Completion Time takes into account the redundant flow path capabilities and the low probability of the worst case DBA occurring during this period.

B.1 and B.2

If the Recirculation pH Control System 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~~***overall plant risk is reduced.*** To achieve this status, the plant must be brought to at least MODE 3 within 6 hours and to MODE ~~5~~***4*** within ~~84~~***54*** hours.

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.

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~~***4*** allows 48 hours for restoration of the Recirculation pH Control System in MODE 3~~ and 36 hours to reach MODE 5~~. This is reasonable when considering the reduced pressure and temperature conditions in MODE 3 for the release of radioactive material from the Reactor Coolant System.

SURVEILLANCE REQUIREMENTS

SR 3.6.7.1

This SR provides visual verification that each of the eight storage sodium tetraborate baskets is in place and intact and collectively contain $\geq$ 8,096 pounds (160 cubic feet) of sodium tetraborate decahydrate, or equivalent. This amount of STB is sufficient to ensure that the recirculation solution following a LOCA is at the correct pH level. The 24 month frequency is sufficient to ensure that the stainless steel baskets are intact and contain the appropriate amount of STB.

(continued)

REFERENCES

1. FSAR, Chapters 6 and 14.

2. NUREG-0800, "Standard Review Plan," Section 6.5.2, "Containment Spray as a Fission Product Cleanup System," Revision 4 dated March 2007 containing Branch Technical Position 6-1 "pH For Emergency Coolant Water for Pressurized Water Reactors" Revision 0 dated March 2007.

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

ACTIONS

A.1 (continued)

remaining OPERABLE CCW loop is adequate to perform the heat removal function. The 72 hour Completion Time is reasonable, based on the redundant capabilities afforded by the OPERABLE loop, and the low probability of a DBA occurring during this period.

B.1 and B.2

If the CCW loop 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.

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.

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 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. Valves located inside containment are considered to be locked. 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

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.7.8.3 (continued)

the Surveillance were performed with the reactor at power. Operating experience has shown that these components usually pass the Surveillance when performed at the 24 month Frequency. Therefore, the Frequency is acceptable from a reliability standpoint.

REFERENCES

1. FSAR, Section 9.3.

2. FSAR, Section 6.2.

3. WCAP-12313, "Safety Evaluation for an Ultimate Heat Sink Temperature Increased to 95 °F at IP-3."

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

ACTIONS

E.1 (continued)

A 12 hour Completion Time is acceptable for SWS piping and valves other than those listed in Conditions A, B, C, or D based on the low probability of an event during this period. Additionally, the 12 hour Completion Time allows the Operator to perform the evaluations and/or actions necessary for restoring the SWS OPERABILITY. This Action is in lieu of the potential for decreased safety as a result of diverting the Operator's attention to the actions associated with taking the unit to shutdown.

F.1 and F.2

If more than one required SWS pump in either the essential or the nonessential header is inoperable; or, if the flow path associated with either header is not capable of performing its safety function (e.g., both SWS to EDG valves or both SWS to FCU valves are inoperable), then the unit must be placed in a MODE in which the LCO does not apply.

Additionally, if an SWS header 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~~ ***overall plant risk is reduced.***

To achieve the required status, the unit must be placed in at least MODE 3 within 6 hours and in MODE ~~5~~***4*** within ~~36~~***12*** hours.

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 F.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.

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 is modified by a Note indicating that the isolation of the SWS components or systems may render those components inoperable, but does not affect the OPERABILITY of the SW.

(continued)

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.7.9.3

This SR verifies proper automatic operation of the SWS pumps on an actual or simulated actuation signal. The SWS is a normally operating system that cannot be fully actuated as part of normal testing during normal operation. The 24 month Frequency is based on the need to perform this Surveillance under the conditions that apply during a unit outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power. Operating experience has shown that these components usually pass the Surveillance when performed at the 24 month Frequency. Therefore, the Frequency is acceptable from a reliability standpoint.

REFERENCES

1. FSAR, Section 9.6.

2. FSAR, Section 6.2.

3. WCAP - 16212P, Indian Point Nuclear Power Generating Unit No. 3 Stretch Power Uprate NSSS and BOP Licensing Report, June 2004.

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

ACTIONS

A.1 and A.2

If UHS temperature > 95 OF, or is inoperable for reasons other than high temperature, the unit must be placed in a MODE in which ~~the LCO does not apply~~***overall plant risk is reduced.*** To achieve this status, the unit must be placed in at least MODE 3 within 7 hours and in MODE ~~5~~***4*** within ~~37~~***12*** hours.

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 A.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.

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 3.7.10.1

This SR verifies that the SWS 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 24 hour Frequency is based on operating experience related to trending of the parameter variations during the applicable MODES. This SR verifies that the average water temperature of the UHS is < 95EF. Requirements for UHS monitoring instrumentation are governed by the Technical Requirements Manual (Ref. 4).

REFERENCES

1. FSAR, Section 9.6.

2. WCAP - 16212P, Indian Point Nuclear Power Generating Unit No. 3 Stretch Power Uprate NSSS and BOP Licensing Report, June 2004.

3. Regulatory Guide 1.27.

4. IP3 Technical Requirements Manual.

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

ACTIONS (continued)

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.

C.1

When neither CRVS train is Operable, for reasons other than Condition B, action must be taken to restore at least one train to OPERABLE status within 72 hours. The 72 hour Completion Time is acceptable because of the low probability of a DBA occurring during this time period.

D.1 and D.2

If Required Actions of Conditions A, B or C are not met within the required Completion Time, the unit must be placed in a MODE ~~that minimizes accident risk~~ ***in which overall plant risk is reduced.*** 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.

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 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.

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.

E.1 and E.2

Reference 3 did not address exposure to CRE resulting from fuel handling accidents when less than 84 hours of decay time have elapsed if the CRE ventilation safety function is not met.

(continued)

BASES

SURVEILLANCE REQUIREMENTS (continued)

These compensatory measures may also be used as mitigating actions as required by Required Action B.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 9.9.

2. FSAR, Chapter 14.

3. Safety Evaluation Report (SER) for IP3 Amendment 224.

4. IP3 Technical Requirements Manual.

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).

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

APPLICABILITY

In MODES 1, 2, 3 and 4, the CRACS must be OPERABLE to ensure that the control room temperature will not exceed equipment operational requirements following isolation of the control room.

The CRACS is not required in MODE 5 or 6, or during movement of irradiated fuel assemblies and core alterations because analysis indicates that isolation of the control room is not required for maintaining radiation exposure within acceptable limits following a fuel handling accident or gas decay tank rupture.

ACTIONS

A.1

With one CRACS train inoperable, action must be taken to restore OPERABLE status within 30 days. In this Condition, the remaining OPERABLE CRACS train is adequate to maintain the control room temperature within limits. However, the overall reliability is reduced because a single failure in the OPERABLE CRACS train could result in loss of CRACS function. The 30 day Completion Time is based on the low probability of an event requiring control room isolation, the consideration that the remaining train can provide the required protection, and that alternate nonsafety related cooling means are typically available.

B.1

When neither CRACS train is Operable, action must be taken to restore at least one train to OPERABLE status within 72 hours. The 72 hour Completion Time is acceptable because of the low probability of a DBA occurring during this time period and because alternate nonsafety cooling means are typically available.

C.1 and C.2

If Required Actions A.1 or B.1 are not met within the required Completion Time, the unit must be placed in a MODE ~~that minimizes the risk~~ ***in which the overall plant risk is reduced***. 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.

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 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.

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.

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.7.12.1

This SR verifies that the heat removal capability of the system is sufficient to remove the heat load required to maintain functional capacity of the Control Room at all times (Ref. 1). This SR consists of a combination of testing and calculations. Testing consists of installing pressure gauges on the inlet and outlet sides of the CCR HVAC compressor to obtain refrigerant pressures on a periodic basis to provide input to this SR to demonstrate that the unit is performing within the manufacturer's defined performance limit. The 24 month Frequency is appropriate since significant degradation of the CRACS is slow and is not expected over this time period.

REFERENCES

1. FSAR, Section 9.9.

2. Safety Evaluation Report (SER) for IP3 Amendment 224.

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

ACTIONS (continued)

F.1 and F.2

If the inoperable AC electric power sources 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~~***overall plant risk is reduced.*** To achieve this status, the unit must be brought to at least MODE 3 within 6 hours and to MODE ~~5~~***4*** within ~~36~~***12*** hours.

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. 11). 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 11, 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.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.

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.

G.1 and H.1

Conditions G and H correspond to a level of degradation in which all redundancy in the AC electrical power

BASES

REFERENCES (continued)

6. Regulatory Guide 1.93, Rev. 0, December 1974.

7. Generic Letter 84-15, Proposed Staff Actions to Improve and Maintain Diesel Generator Reliability.

8. Regulatory Guide 1.137, Rev. 0, 1978.

9. IEEE Standard 387-1995, IEEE Standard Criteria for Diesel-Generator Units Applied as Standby Power Supplies for Nuclear Power Generating Stations.

10. Calculation SGX-00073-01, Dated February 6, 2004

11. 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)

It is, therefore, imperative that the operator's attention focus on stabilizing the unit, minimizing the potential loss of additional DC subsystems.

If one of the required DC electrical power subsystems is inoperable (e.g., inoperable battery, inoperable battery charger, or inoperable battery charger and associated inoperable battery), the remaining DC electrical power subsystems have the capacity to support a safe shutdown and to mitigate an accident condition. Since a subsequent worst case single failure would, however, result in the loss of another 125 VDC electrical power subsystems with attendant loss of ESF functions, continued power operation should not exceed 2 hours. The 2 hour Completion Time is based on Regulatory Guide 1.93 (Ref. 7) and reflects a reasonable time to assess unit status as a function of the inoperable DC electrical power subsystem and, if the DC electrical power subsystem is not restored to OPERABLE status, to prepare to effect an orderly and safe unit shutdown.

C.1 and C.2

If the inoperable DC electrical power 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~~ ***overall plant risk is reduced***. To achieve this status, the unit must be brought to at least MODE 3 within 6 hours and to MODE ~~5~~***4*** within ~~36~~***12*** hours.

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. 11). 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 11, 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.

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~~***4*** is consistent with the time required in Regulatory Guide 1.93 (Ref. 7).

REFERENCES (continued)

4. FSAR, Chapter 8.

5. IEEE-485-1983, June 1983.

6. FSAR, Chapter 14.

7. Regulatory Guide 1.93, December 1974.

8. IEEE-450-1995.

9. Regulatory Guide 1.32, February 1977.

10. Regulatory Guide 1.129, December 1974.

11. 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 and C.2 (continued)

If a VIB will be de-energized as a result of SI signal or LOOP, a loss of safety function could exist for any VIB powered function that requires power to perform the required safety function (e.g., automatic actuation of core spray, Regulatory Guide 1.97 instrumentation, etc.) if the redundant required feature is inoperable. Therefore, Required Action C.1 requires declaring required feature(s) supported by associated inverter inoperable when its required redundant feature(s) is inoperable. As specified in the associated Note, this requirement only applies to feature(s) that require power to perform the required safety function. The 2 hour Completion Time is consistent with LCO 3.8.9, AC Distribution System - Operating, requirements for an inoperable VIB.

With an inverter inoperable and its associated VIB powered from its associated backup CVT, there is increased potential for inadvertent actuation for ESFAS or RPS functions, especially if redundant channels are inoperable and in the tripped condition. This is because these de-energize to actuate functions are relying upon interruptible AC electrical power sources (offsite and onsite). The uninterruptible inverter source to the VIBs is the preferred source for powering instrumentation trip setpoint devices. Therefore, only one inverter may be inoperable at one time and an inoperable inverter must be restored to OPERABLE within 7 days. The 7 day Completion Time is needed because it ensures that the VIBs are powered from the uninterruptible inverter source. The 7 day Completion Time is acceptable because Required Action C.1 ensures that an inoperable inverter does not result in a loss of any safety function. The 7 day Completion Time is consistent with commitments made in response to Generic Letter 91-011 (Ref. 1).

D.1 and D.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~~***overall plant risk is reduced***.

(continued)

BASES

ACTIONS

D.1 and D.2 (continued)

To achieve this status, the unit must be brought to at least MODE 3 within 6 hours and to MODE ~~5~~***4*** within ~~36~~***12*** hours.

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.

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.

SURVEILLANCE REQUIREMENTS

SR 3.8.7.1

This Surveillance verifies that the inverters are functioning properly with all required circuit breakers

BASES

REFERENCES

1. Generic Letter 91-011, Resolution of Generic Issues 48, "LCOs for Class 1E Vital Instrument Buses," and 49, "Interlocks and LCOS for Class 1E Tie Breakers" pursuant to 10 CFR 50.54(f).

2. FSAR, Chapter 8.

3. FSAR, Chapter 14.

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

ACTIONS

C.1 (continued)

instance, an AC bus is inoperable and subsequently returned OPERABLE, the LCO may already have been not met for up to 8 hours. This could lead to a total of 10 hours, since initial failure of the LCO, to restore the DC distribution system. At this time, an AC train could again become inoperable, and DC distribution restored OPERABLE. This could continue indefinitely.

This Completion Time allows for an exception to the normal "time zero" for beginning the allowed outage time "clock." This will result in establishing the "time zero" at the time the LCO was initially not met, instead of the time Condition C was entered. The 16 hour Completion Time is an acceptable limitation on this potential to fail to meet the LCO indefinitely.

D.1 and D.2

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~~ ***overall plant risk is reduced.*** To achieve this status, the unit must be brought to at least MODE 3 within 6 hours and to MODE ~~5~~***4*** within ~~36~~***12*** hours.

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 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.

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.

E.1

With one or more trains with inoperable distribution subsystems that result in a loss of safety function, adequate core cooling, containment OPERABILITY and other vital functions for DBA mitigation would be compromised, and immediate plant shutdown in accordance with LCO 3.0.3 is required.

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.8.9.1

This Surveillance verifies that the AC, DC, and AC vital instrument bus electrical power distribution systems are functioning properly, with the 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 7 day Frequency takes into account the redundant capability of the AC, DC, and AC vital instrument bus electrical power distribution subsystems, and other indications available in the control room that alert the operator to subsystem malfunctions.

REFERENCES

1. FSAR, Chapter 14.

2. Regulatory Guide 1.93, December 1974.

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