BASES

ACTIONS (continued)

system flow capability. However, the overall reliability is reduced because a single failure could result in less than the required number of pumps to assure this flow. The 7 day Completion Time is based on the redundant capabilities afforded by the remaining OPERABLE pumps, and the low probability of a DBA occurring during this time period.

The second Completion Time for Required Action A.1 establishes a limit on the maximum time allowed for any combination of Conditions to be inoperable during any continuous failure to meet this LCO. The 14 day Completion Time provides a limitation on the time allowed in this specified Condition after discovery of failure to meet the LCO. This limit is considered reasonable for situations in which multiple Conditions are entered concurrently. The AND connector between 7 days and 14 days dictates that both Completion Times apply simultaneously, and the more restrictive must be met.

B.1

If two or three SW pumps are inoperable, action must be taken to restore at least the minimum number of pumps to OPERABLE status required to exit this Condition within 72 hours. In this Condition, the remaining OPERABLE SW pumps are capable of providing the required system flow capability provided the SW ring header continuous flowpath is not interrupted (i.e. no SW ring header valves are closed), and all other requirements of the LCO are met (e.g. no inoperable and open non-essential SW isolation valves and the opposite Unit's containment fan cooler service water outlet valves are not open). With two or more SW pumps inoperable in conjunction with an interrupted ring header, Condition F must be entered. With two or more SW pumps inoperable in conjunction with one or more open opposite unit containment fan cooler outlet isolation valves, Condition G must be entered. With three or more inoperable SW pumps inoperable in conjunction with one or more non-essential SW isolation valves being open and inoperable, Condition H must be entered.

The 72 hour Completion Time is based on the redundant capabilities afforded by the remaining OPERABLE pumps, the probability for an additional active or passive failure, and the low probability of a DBA occurring during this time

BASES

ACTIONS (continued)

period.

C.1

If one or more SW ring header isolation valves are closed, the valves must be restored to the open condition within 7 days.

With one or more ring header isolation valves inoperable, the SW System may continue to be capable of providing the required cooling water flow to required equipment (providing the valves remain open). however, the ability to isolate a break in the system while continuing to provide cooling water to required equipment is impaired.

With one or more ring header isolation valves closed, the SW System is capable of providing the required cooling water flow to the minimum required number of components provided at least five SW pumps are OPERABLE. With less than five OPERABLE SW pumps in conjunction with an interrupted ring header (ring header isolation valve closed), Condition F must be entered. Multiple closed ring header isolation valves could result in loss of cooling water to required equipment (e.g. closure of the SW-2869 and SW-2870 will render two of the four containment fan coolers inoperable on each Unit). If multiple closed ring header isolation valves result in required equipment being inoperable, the Note to the ACTIONS Table requires entry into the applicable conditions and required actions for the systems made inoperable.

The 7 day Completion Time is acceptable based on the redundant capabilities afforded by the remaining OPERABLE equipment, and the low probability of a DBA or SW System line break occurring during this time period.

The second Completion Time for Required Action C.1 establishes a limit on the maximum time allowed for any combination of Conditions to be in effect during any continuous failure to meet this LCO. The 14 day Completion Time provides a limitation on the time allowed in this specified Condition after discovery of failure to meet the

BASES

ACTIONS (continued)

LCO. This limit is considered reasonable for situations in which multiple Conditions are entered concurrently. The AND connector between 7 days and 14 days dictates that both Completion Times apply simultaneously, and the more restrictive must be met.

D.1

If one or more SW automatic non-essential isolation valves are inoperable and open, the valves must be restored to OPERABLE status or the flowpath isolated within 72 hours. With one or more automatic non-essential isolation valves inoperable and open, the SW System is capable of providing the required cooling water flow to required components provided at least four SW pumps are OPERABLE. With less than four OPERABLE SW pumps in conjunction with an open inoperable SW automatic non-essential isolation valve, Condition H must be entered.

In this Condition, the SW System has adequate system flow capability. However, the overall reliability is reduced because a single failure could result in system configuration which could not assure adequate flow to required equipment. The 72 hour Completion Time is based on the flow capabilities afforded by the number of OPERABLE pumps, and the low probability of a DBA occurring during this time period.

The second Completion Time for Required Action D.1 establishes a limit on the maximum time allowed for any combination of Conditions to be in effect during any continuous failure to meet this LCO.

The 14 day Completion Time provides a limitation on the time allowed in this specified Condition after discovery of failure to meet the LCO. This limit is considered reasonable for situations in which multiple Conditions are entered concurrently. The AND connector between 72 hours and 14 days dictates that both Completion Times apply simultaneously, and the more restrictive must be met.

BASES

ACTIONS (continued)

E.1

If one or more opposite unit containment fan cooler service water outlet valves are open, the flowpath must be isolated within 72 hours. The 72 hour Completion Time is contingent upon maintaining five or six SW pumps operable.

In this Condition, the SW System is capable of providing the required cooling water flow to all required components during the injection phase of a Loss Of Coolant Accident (LOCA) provided at least five SW pumps are OPERABLE. However, prior to the accident unit transitioning to containment sump recirculation phase, the containment fan cooler outlet isolation valves in the non-accident unit must be closed. With less than five OPERABLE SW pumps in conjunction with an open opposite unit containment fan cooler outlet isolation valve, Condition G must be entered.

The 72 hour Completion Time is based on the flow capabilities afforded by the number of OPERABLE pumps, in combination with retaining remote closure capability prior to the accident unit transitioning to the containment sump recirculation phase. This time frame is also considered acceptable based on the low probability of a DBA occurring which requires the establishment of containment recirculation during this time period.

The second Completion Time for Required Action E.1 establishes a limit on the maximum time allowed for any combination of Conditions to be in effect during any continuous failure to meet this LCO. The 14 day Completion Time provides a limitation on the time allowed in this specified Condition after discovery of failure to meet the LCO. This limit is considered reasonable for situations in which multiple Conditions are entered concurrently. The AND connector between 72 hours and 14 days dictates that both Completion Times apply simultaneously, and the more restrictive must be met.

ACTIONS (continued)

F.1

If two or more SW pumps are inoperable in combination with one or more SW ring header isolation valves are closed, action must be taken within 1 hour to configure the SW System such that it is capable of providing the required cooling water flow to all required equipment. The 1 hour Completion Time for this ACTION effectively limits the allowed system configuration to alignments previously evaluated and found acceptable. Additionally, the 1 hour Completion Time provides sufficient time to accommodate transitory operations (e.g. additional equipment inoperabilities, operations required to realign systems and equipment, etc;) without requiring initiation of a unit shutdown. The 1 hour Completion Time is commensurate with the importance of maintaining the SW System in an OPERABLE configuration.

G.1 and G.2

If two or more SW pumps are inoperable in combination with one or more open opposite unit containment fan cooler service water outlet isolation valve, action must be taken within 1 hour to isolate the opposite un it flowpath or return the number of SW pumps required to exit this Condition to OPERABLE status. In this Condition, the SW System is not capable of providing the required cooling water flow to all required components. The 1 hour Completion Time is an acceptable time frame to isolate the SW flowpath or return the number of SW pumps required to exit this Condition to OPERABLE status based on the probability of a DBA occurring during this time frame and the importance of maintaining the SW System in an OPERABLE configuration.

H.1 and H.2

If three or more SW pumps are inoperable in combination with one or more open and inoperable non-essential SW isolation valves, action must be taken within 1 hour to isolate the inoperable and open flowpath or return the number of SW pumps required to exit this Condition to OPERABLE status. In this Condition, the SW System is not capable of providing the required cooling water flow to all required components. The 1 hour Completion Time is

BASES

ACTIONS (continued)

an acceptable time frame to isolate the SW flowpath or return the number of SW pumps required to exit this Condition to OPERABLE status based on the probability of a DBA occurring during this time frame and the importance of maintaining the SW System in an OPERABLE configuration.

I.1 and I.2

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

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

SURVEILLANCE REQUIREMENTS

SR 3.7.8.1

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

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

The 31 day Frequency is based on engineering judgment, is consistent with the procedural controls governing valve operation, and ensures correct valve positions.

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.7.8.2

This SR verifies proper automatic operation of the SW System non-essential-SW-load isolation valves on an actual or simulated actuation signal. The SW System is a normally operating system that cannot be fully actuated as part of normal testing. This Surveillance is not required for valves that are locked, sealed, or otherwise secured in the required position under administrative controls. The 18 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 18 month Frequency. Therefore, the Frequency is acceptable from a reliability standpoint.

SR 3.7.8.3

This SR verifies proper automatic operation of the SW System pumps on an actual or simulated actuation signal. The SW System is a normally operating system that cannot be fully actuated as part of normal testing during normal operation. The 18 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 18 month Frequency. Therefore, the Frequency is acceptable from a reliability standpoint.

REFERENCES

1. FSAR, Section 9.6.

2. FSAR, Section 14.3.4.

3. FSAR, Section 9.2.

Justification For Deviations - NUREG-1431 Section 3.07.09

13-Nov-99

JFD Number	JFD Text

01

Adoption of an Ultimate Heat Sink (UHS) Limiting Condition for Operation (LCO) is not necessary for Point Beach. The Point Beach current Technical Specification do not contain an UHS LCO, Action, or Surveillance Requirements. The purpose of the UHS LCO is to establish assurance that the UHS will be maintained within the minimum acceptable operational limits assumed in the safety analysis. For plants which utilize a lake as the UHS, the NUREG LCO requires periodic verification of lake level and temperature. The NUREG Actions for an out of tolerance UHS requires the unit to be placed in Mode 3 within 6 hours and Mode 5 within 36 hours.

The Point Beach UHS is Lake Michigan. Analysis assumptions for the UHS assume lake level to be four feet under normal level (574 ft msl) and temperature to be no greater than 80 degrees F. The minimum recorded lake level reached 575.4 ft msl in 1964. Temperature stratification and circulation characteristics for Lake Michigan tend to limit the maximum lake temperature to 65 to 70 degrees F. Since sufficient margins exist between the UHS parameters and analysis limits, the burden of establishing an auditable record for monitoring lake parameters is unnecessary. Without an UHS LCO, the Required Actions for an out of tolerance UHS result in the Service Water System being declared inoperable, which requires the unit to be placed in Mode 3 within 6 hours and Mode 5 within 36 hours.

ITS:	NUREG:
N/A	LCO 3.07.09
	LCO 3.07.09 COND A
	LCO 3.07.09 COND A RA A.1
	LCO 3.07.09 COND B
	LCO 3.07.09 COND B RA B.1
	LCO 3.07.09 COND B RA B.2
	SR 3.07.09.01
	SR 3.07.09.02
	SR 3.07.09.03
	SR 3.07.09.04

1

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. One or more cooling towers with one cooling tower fan inoperable.	A.1 Restore cooling tower fan(s) to OPERABLE status.	7 days
B. Required Action and associated Completion Time of Condition A not met. OR UHS inoperable [for reasons other than Condition A].	B.1 Be in MODE 3. AND B.2 Be in MODE 5.	6 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.7.9.1 Verify water level of UHS is $\geq$ [562] ft [mean sea level].	[24] hours

(continued)

Cross-Reference Report - NUREG-1431 Section 3.07.10

ITS to CTS

13-Nov-99

ITS	CTS	DOC
B 3.07.09	15.03.12 OBJ	A.03
	15.04.11 OBJ	A.03
	BASES	A.04
LCO 3.07.09	15.03.12	A.01
	15.03.12 APPL	A.02
	15.03.12.01	A.05
	15.03.12.01	LA.01
	15.04.11	A.01
	15.04.11 APPL	A.02
LCO 3.07.09 COND A	15.03.12.03	A.10
LCO 3.07.09 COND A RA A.1	15.03.12.03	A.10
LCO 3.07.09 COND B	15.03.12.04	A.10
LCO 3.07.09 COND B RA B.1	15.03.12.04	A.10
LCO 3.07.09 COND B RA B.2	15.03.12.04	A.10
LCO 3.07.09 COND B RA B.3	15.03.12.04	M.02
LCO 3.07.09 COND B RA B.4	15.03.12.04	A.10
SR 3.07.09.01	15.04.11.03	L.05
SR 3.07.09.02	15.03.12.02.a	A.01
	15.03.12.02.b	A.01
	15.04.11.01	A.01
	15.04.11.04	A.07
SR 3.07.09.03	15.04.11.02	A.09
	15.04.11.02	L.03
SR 3.07.09.04	15.04.11.02	A.09
	15.04.11.02	L.03
	15.04.11.02	L.04
SR 3.07.09.05	NEW	M.03
SR 3.07.09.06	15.03.12.02.c	L.01
	15.03.12.02.c	M.01
	15.04.11.04.e	L.01

Cross-Reference Report - NUREG-1431 Section 3.07.10
CTS to ITS

13-Nov-99

CTS	ITS	DOC
15.03.12	LCO 3.07.09	A.01
15.03.12 APPL	LCO 3.07.09	A.02
15.03.12 OBJ	B 3.07.09	A.03
15.03.12.01	DELETED	A.06
	LCO 3.07.09	A.05
	LCO 3.07.09	LA.01
15.03.12.02.a	SR 3.07.09.02	A.01
15.03.12.02.b	SR 3.07.09.02	A.01
15.03.12.02.c	SR 3.07.09.06	L.01
	SR 3.07.09.06	M.01
15.03.12.03	LCO 3.07.09 COND A	A.10
	LCO 3.07.09 COND A RA A.1	A.10
15.03.12.04	LCO 3.07.09 COND B	A.10
	LCO 3.07.09 COND B RA B.1	A.10
	LCO 3.07.09 COND B RA B.2	A.10
	LCO 3.07.09 COND B RA B.3	M.02
	LCO 3.07.09 COND B RA B.4	A.10
15.04.11	LCO 3.07.09	A.01
15.04.11 APPL	LCO 3.07.09	A.02
15.04.11 OBJ	B 3.07.09	A.03
15.04.11.01	SR 3.07.09.02	A.01
15.04.11.02	SR 3.07.09.03	A.09
	SR 3.07.09.03	L.03
	SR 3.07.09.04	A.09
	SR 3.07.09.04	L.03
	SR 3.07.09.04	L.04
15.04.11.03	SR 3.07.09.01	L.05
15.04.11.04	SR 3.07.09.02	A.07
15.04.11.04.e	DELETED	A.08
	DELETED	L.02
	SR 3.07.09.06	L.01
BASES	B 3.07.09	A.04

Description of Changes - NUREG-1431 Section 3.07.10

13-Nov-99

DOC Number	DOC Text

A.01 In the conversion of Point Beach current Technical Specifications (CTS) to the proposed plant specific Improved Technical Specifications (ITS), certain wording preferences or conventions are adopted which do not result in technical changes (either actual or interpretational). Editorial changes, reformatting, and revised numbering are adopted to make the ITS consistent with the Standard Technical Specifications, Westinghouse Plants, NUREG-1431, Revision 1 (i.e., Improved Standard Technical Specifications (ISTS)).

CTS:	ITS:
15.03.12	LCO 3.07.09
15.03.12.02.a	SR 3.07.09.02
15.03.12.02.b	SR 3.07.09.02
15.04.11	LCO 3.07.09
15.04.11.01	SR 3.07.09.02

A.02 The CTS provides an introductory statement (Applicability) which simply states which systems/components are addressed within a given section. This same information, while worded differently, is contained within the title of each ITS LCO. Accordingly, this change is a change in format with no change in technical requirement.

CTS:	ITS:
15.03.12 APPL	LCO 3.07.09
15.04.11 APPL	LCO 3.07.09

A.03 The CTS provides an introductory statement (Objective) at the beginning of this Section of the Technical Specifications which provides a brief summary of the purpose for this Section. This information is contained in the Bases Section of the ITS. This information does not establish any regulatory requirements for the systems and components addressed within this Section. Accordingly, deletion of this information does not alter any requirement set forth in the Technical Specifications. This change is administrative and consistent with the format and presentation for the ITS as provided in NUREG 1431.

CTS:	ITS:
15.03.12 OBJ	B 3.07.09
15.04.11 OBJ	B 3.07.09

A.04 The Bases of the current Technical Specifications for this section have been completely replaced by revised Bases that reflect the format and applicable content of PBNP ITS, consistent with the Standard Technical Specifications for Westinghouse Plants, NUREG-1431. The revised Bases are as shown in the PBNP ITS Bases.

CTS:	ITS:
BASES	B 3.07.09

DOC Number	DOC Text
A.05	The CTS 15.3.12.1 requires the control room emergency filtration system to be operable during power operation (greater than or equal to 2% power) of either unit. However, CTS 15.3.12.1.c.4 requires the operating reactors to be placed into Cold Shutdown (ITS Mode 5) within 36 hours, if this system is inoperable in excess of the allowable outage time, implying an Applicability of ITS Modes 1, 2, 3, and 4. Proposed LCO 3.7.9 will require the Control Room Emergency Ventilation System to be operable in Modes 1, 2, 3, and 4. As such, this change is considered administrative relative to Modes 1, 2, 3, and 4, as it is clarifying an ambiguous relationship between the LCO Applicability and Action Statement. CTS 15.3.12.1 also requires the control room emergency filtration system to be operable during refueling operations. Proposed LCO 3.7.9 will require the Control Room Emergency Ventilation System to be operable during Core Alterations and movement of irradiated fuel. The change in Applicability to Core Alterations and movement of irradiated fuel is addressed by Discussion of Change LA.01 of this Section. **CTS:** 15.03.12.01 **ITS:** LCO 3.07.09
A.06	CTS 15.3.12.1 states that "except as specified in 15.3.12.3, the emergency control room ventilation system shall be operable during power and refueling operations of either unit. Deletion of the statements, "except as specified in 15.3.12.3 below" and "of either unit" are unnecessary in the ITS and have therefore been deleted. These Statements establish the structure and usage of remedial actions and application of the LCO. The ITS contains specific usage rules for usage and application of the LCOs, Conditions, and Required Actions. System inoperabilities are addressed within specific Conditions, while Applicability is addressed on a unit specific basis. Accordingly, retention of these statements is unnecessary, as it duplicates ITS usage rules. This change is administrative. **CTS:** 15.03.12.01 **ITS:** DELETED

DOC Number	DOC Text
A.07	CTS 15.4.11.4 establishes the required testing and associated testing frequencies for the control room emergency filtration system HEPA filter and charcoal adsorbers. Proposed ITS SR 3.7.9.2 will establish the requirement to perform control room emergency make-up filter unit testing, in accordance with the Ventilation Filter Testing Program (VFTP). The VFTP establishes the required tests, acceptance criteria, and test frequencies for the HEPA filter and charcoal adsorber. CTS 15.3.12.2 provides the acceptance criteria for the control room emergency filtration system HEPA filter and charcoal adsorbers. HEPA filter and charcoal adsorber testing will continue to be required as referenced by SR 3.7.9.2, making this change in presentation administrative, consistent with NUREG 1431. The acceptance criteria, tests and associated testing frequencies have been moved to Section 5.5 of the ITS. Changes to HEPA filter and charcoal adsorber acceptance criteria, tests and associated testing frequencies are addressed in the VFTP, Section 5.0 of this conversion package. **CTS:** 15.04.11.04 — **ITS:** SR 3.07.09.02
A.08	Specification 15.4.11.4.e requires the control room emergency filtration system fans to be tested following fan maintenance or repair. The requirement to perform fan testing following fan maintenance or repair is not necessary in the proposed ITS. Post maintenance testing is captured through application of SR 3.0.1 and SR 3.0.2. SR 3.0.1 establishes the requirement that surveillances must be met when the LCO is applicable. Implicit in the application of SR 3.0.1, is the need to ensure that all Surveillance Requirements remain valid upon completion of maintenance. Following any maintenance, a review of applicable Surveillance Requirements must be conducted to determine the appropriate post maintenance testing that must be completed in order to declare the affected equipment operable. This includes ensuring applicable surveillances are not invalidated by the maintenance performed and their most recent performance is within its required frequency of performance in accordance with SR 3.0.2. Deletion of this provision is administrative. **CTS:** 15.04.11.04.e — **ITS:** DELETED
A.09	CTS 15.4.11.2 requires testing of the control room emergency filtration automatic actuation. This requirement has been divided into two Surveillance Requirements in the proposed ITS. SR 3.7.9.3 verifies that each control room emergency make-up fan start on an actual or simulated actuation signal. SR 3.7.9.4 similarly tests the control room emergency filtration automatic dampers. These Surveillance Requirements, taken in combination with the required testing specified in ITS LCO 3.3.7 for the control room emergency filtration actuation instrumentation, is equivalent to the CTS requirement, making this change administrative. **CTS:** 15.04.11.02 — **ITS:** SR 3.07.09.03, SR 3.07.09.04

Description of Changes - NUREG-1431 Section 3.07.10

13-Nov-99

DOC Number	DOC Text

A.10 CTS 15.3.12.3 and 15.3.12.4 allow reactor and refueling operations to continue for up to seven days with the control room emergency filtration system inoperable, before requiring the unit(s) to be placed in Cold Shutdown and termination of refueling operations. The CTS allows 36 hours to achieve cold shutdown (ITS Mode 5), while refueling operations must be terminated as soon as practicable.

ITS Condition A, Required Action A.1 allows 7 days to restore the control room emergency filtration system to operable status as the CTS allows, making this change administrative. In addition, after expiration of Condition A, ITS Condition B Required Action B.4 requires the unit(s) to be placed in Mode 5 within 36 hours. Accordingly, the time frame allowed to reach Mode 5 has remained unchanged, making this change administrative.

ITS Condition B, Required Actions B.1 and B.2 require immediate suspension of Core Alterations and movement of irradiated fuel. Revising the Required Action to suspend Core Alterations and handling of irradiated fuel is consistent with the revised Applicability for this LCO which is addressed in Description of Change LA.01 of this LCO. As such, for the purposes of this Action, this change is considered administrative.

CTS:	ITS:
15.03.12.03	LCO 3.07.09 COND A
	LCO 3.07.09 COND A RA A.1
15.03.12.04	LCO 3.07.09 COND B
	LCO 3.07.09 COND B
	LCO 3.07.09 COND B RA B.1
	LCO 3.07.09 COND B RA B.2
	LCO 3.07.09 COND B RA B.4

DOC Number	DOC Text

L.01 CTS 15.4.11.4.e requires the control room emergency filtration system fans to be tested once per year. CTS 15.3.12.2.c requires the results of fan testing conducted in accordance with Specification 15.4.11 to show operation within 10% of design flow.

The ITS will require verification that each emergency make-up fan can maintain a positive pressure of greater than or equal to 0.125 inches water gauge in the control room envelope, relative to the adjacent turbine building during the emergency mode of operation at a makeup flow rate within plus or minus 10% of system design. This SR verifies the integrity of the control room enclosure and the capability of the make-up fans/components to achieve flow rate within plus or minus 10% of system design.

In the emergency make-up mode of operation, the control room emergency filtration system is designed to pressurize the control room to greater than or equal to 0.125 inches water gauge positive pressure with respect to adjacent areas minimizing unfiltered inleakage. The control room emergency filtration system is designed to maintain this positive pressure with one emergency make-up fan in operation at a makeup flow rate within 10% of system design.

The nominal make-up pressurization rate for Point Beach is 4950 cfm. NUREG 0800, Section 6.4 states that systems having a make-up pressurization rate in excess of 0.5 volume changes per hour (543 cfm for Point Beach) should be tested every 18 months to assure that the control room envelope will maintain a positive pressure of greater than or equal to 0.125 inches water gauge within plus or minus 10% of system design make-up rate. Therefore, this change in frequency is consistent with the guidance provided in NUREG-0800. Additionally, relaxing the required Frequency of testing is acceptable based on the inherent reliability of the control room boundary and make-up fans.

CTS:	ITS:
15.03.12.02.c	SR 3.07.09.06
15.04.11.04.e	SR 3.07.09.06

L.02 Specification 15.4.11.4.e requires the control room emergency filtration system fans to be tested after 720 hours of operation since the previous test.

Testing of the fans after 720 hours of operation is unnecessary. Boundary degradation is not specifically linked to operation of the emergency make-up fans, and fan degradation during this period is similarly not significant. The proposed 18 month Frequency of ITS SR 3.7.9.6 is adequate for monitoring both boundary and fan performance.

CTS:	ITS:
15.04.11.04.e	DELETED

DOC Number	DOC Text

L.03 CTS 15.4.11.2 requires testing of the control room emergency filtration automatic initiation once per year. As discussed in Description of Change A.09 of this LCO, proposed SR 3.7.9.3 and SR 3.7.9.4 in combination with the required testing specified in ITS LCO 3.3.7 for the control room emergency filtration actuation instrumentation is equivalent to this CTS requirement; however, the frequency of testing for these ITS Surveillance Requirements has been relaxed to 18 months. The CTS control room emergency filtration LCO is based on a set of model Technical Specifications transmitted to Point Beach from the NRC in a letter dated December 16, 1974. Within this letter, the model Technical Specification frequency for CTS 15.4.11.2 was proposed to be 18 months. This frequency was changed at the request of Point Beach to be 12 months for "administrative convenience" as stated in the SER that issued the control room emergency filtration Technical Specifications, dated May 27, 1975. The proposed ITS frequency is based on industry operating and reliability experience for similar circuit and equipment and is consistent with NUREG 1431.

CTS:	ITS:
15.04.11.02	SR 3.07.09.03
	SR 3.07.09.04

L.04 As addressed in Description of Change A.09 of this LCO, CTS 15.4.11.2 requires testing of the control room emergency filtration automatic actuation, which is in part fulfilled by ITS SR 3.7.9.4. Proposed ITS SR 3.7.9.4 verifies that each control room emergency filtration system automatic damper in the emergency mode flow path that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal. Exclusion of automatic dampers secured in their required positions is acceptable based on these components being secured in their required positions, fulfilling their required safety functions. While this exception is not specifically stated in the CTS, the CTS definition of operability states that "a system, subsystem, train, component, or device shall be operable or have operability when it is capable of performing its function(s) as analyzed in the safety analysis report." In securing these component in their required positions, they are fulfilling their required functions.

CTS:	ITS:
15.04.11.02	SR 3.07.09.04

DOC Number	DOC Text
L.05	CTS 15.4.11.3 requires the control room emergency filtration unit to be operated greater than or equal to 10 hours every month. The proposed ITS will required the control room emergency make-up filter unit to be operated at least 15 minute every 31 days. The CTS filter unit run time requirement is based on a set of model Technical Specifications transmitted to Point Beach from the NRC in a letter dated December 16, 1974. There was no specific basis established for the proposed 10 hour run time which was approved as Amendments 6 and 8 (Unit 1 and Unit 2 respectively), May 27 of 1975. NUREG-1431 contains two differing run time requirements, 10 hours and 15 minutes, which are selected dependent upon whether or not the charcoal filtration unit has installed heaters. The run time requirements contained in NUREG 1431 are based on providing assurance that the charcoal does not contain excessive moisture which could degrade charcoal adsorber efficiency. Heaters are installed in some designs to reduce the relative humidity of the incoming air, reducing the moisture levels which the charcoal is exposed to as well as removing or reducing any moisture which may have accumulated in the charcoal between surveillance tests. The Point Beach control room emergency filter unit does not contain heaters. Therefore, the 15 minute run time requirement contained in NUREG 1431 is appropriate and has been adopted. **CTS:** 15.04.11.03 **ITS:** SR 3.07.09.01
LA.01	CTS 15.3.12.1 requires the control room emergency filtration system to be operable during refueling operations. Proposed ITS LCO 3.7.9 will require the Control Room Emergency Ventilation System to be operable during Core Alterations and movement of irradiated fuel. The CTS definition of refueling operation is any operation that involves the movement of core components which affect the reactivity of the core within the containment with the vessel head removed. Core component which affect reactivity are considered to be control rods and fuel assemblies. The ITS definition of Core Alterations is "the movement of any fuel, sources, or reactivity control components, within the reactor vessel with the vessel head removed and fuel in the vessel." In addition to this defined term, the ITS also specifies as an Applicability of "movement of irradiated fuel" for ITS LCO 3.7.9. Accordingly, the ITS Definition of Core Alterations in combination specifying "movement of irradiated fuel" captures all aspects of the CTS definition with the exception of movement of control rods and unirradiated fuel within the containment, outside of the reactor vessel. The operability requirements for these conditions have been moved to licensee controlled documents. Placing these details in controlled documents under 50.59 control provides adequate assurance that control will be maintained and is consistent with licensee commitments made to NUREG 0612. These controls provide assurance that an equivalent level of safety is maintained. **CTS:** 15.03.12.01 **ITS:** LCO 3.07.09

Description of Changes - NUREG-1431 Section 3.07.10

13-Nov-99

DOC Number	DOC Text
M.01	The Point Beach CTS does not contain any requirements which establish or verify the capability of maintaining a positive pressure in the control room when the control room ventilation system is operating in the emergency make-up mode of operation. However, the Point Beach control room habitability analysis assumes a positive pressure in the control room envelope when the control room ventilation system is operating in the emergency make-up mode of operation. Positive pressure is assumed to minimize the inleakage of radioactive materials into the control room under accident conditions. SR 3.7.9.6 will verify the capability of the emergency make-up fans to maintain a positive pressure in the control room of at least 0.125 inches of water, when the control room ventilation system is operating in the emergency make-up mode. Frequency of test and acceptance criteria are consistent with NUREG 0800 for make-up system flow rates in excess of 0.5 control room volumes per hour. This is a new Surveillance Requirement being added to the Technical Specifications consistent with the control room habitability analysis and NUREG 1431. **CTS:** 15.03.12.02.c **ITS:** SR 3.07.09.06
M.02	CTS 15.3.12.4 requires operating reactor(s) to be placed into the cold shutdown (ITS Mode 5) condition within 36 hours if the control room emergency filtration system is not restored to operable status within seven days. The proposed ITS will similarly require the unit be placed in Mode 5 within 36 hours, in addition to establishing a requirement to place the unit in Mode 3 within 6 hours. The addition of the 6 hour requirement for placing the unit in Mode 3 is an added restriction on unit operations, being added consistent with NUREG 1431. **CTS:** 15.03.12.04 **ITS:** LCO 3.07.09 COND B RA B.3

Description of Changes - NUREG-1431 Section 3.07.10

13-Nov-99

DOC Number	DOC Text

M.03 The Point Beach control room habitability analysis assumes a positive pressure in the control room envelope when the control room ventilation system is operating in the emergency make-up mode of operation to minimize control room inleakage under DBA conditions. The control room ventilation system is load shed during a loss of offsite power, requiring the system to be manually restarted. The acceptability of manually re-establishing control room ventilation following a design basis event with loss of offsite power is addressed in Justification for Deviation 01 and the proposed Bases of this LCO. Proposed SR 3.7.9.5 assures the ability to manually start the control room ventilation system in the emergency make-up mode of operation following design basis event coincident with a loss of offsite power. The proposed frequency for this surveillance is consistent with that specified for manual actuation testing of the control room emergency filtration system in NUREG 1431 and is considered acceptable based on the inherent reliability of manual actuation circuits. This change represents an added system operability requirement and periodic surveillance test. The addition of this surveillance is consistent with the Point Beach design and the assumptions made in the control room habitability evaluation.

CTS:	ITS:
NEW	SR 3.07.09.05

A.1

15.3.12 CONTROL ROOM EMERGENCY FILTRATION

Applicability

Applies to the operability of the control room emergency filtration.

LCO 3.7.9 ← A.2

A.3

Objective

To specify functional requirements of the ~~control room~~ emergency filtration during power operation and ~~refueling~~ operation.

LCO 3.7.9

A.5 → Modes 1, 2, 3, and 4

A.6

During movement of irradiated fuel, and During CORE ALTERATIONS ← LA.1

Specification

1. Except as ~~specified in 15.3.12.3 below,~~ the control room emergency filtration system shall be operable at all times during power operation and refueling operation ~~of either unit.~~ ← A.6

2. a. The results of in-place cold DOP and halogenated hydrocarbon tests, conducted in accordance with Specification 15.4.11, on HEPA filter and charcoal adsorber banks shall show a minimum of 99% DOP removal and 99% halogenated hydrocarbon removal.

Required by SR 3.7.9.2

b. The results of laboratory charcoal adsorbent tests, conducted in accordance with Specification 15.4.11, shall show a minimum of 99% removal of methyl iodide. If laboratory analysis results for in-place charcoal indicate less than 99% methyl iodide removal, this specification may be met by replacement with charcoal adsorbent which has been verified to achieve 99% minimum removal and which has been stored in sealed containers, and retesting the charcoal adsorber bank for halogenated hydrocarbon removal.

< See Section 5.0 >

c. The results of fan testing, conducted in accordance with specification 15.4.11, shall show operation within ±10% of design flow.

SR 3.7.9.6	Verify one CREFS emergency make-up fan can maintain a positive pressure of ≥ 0.125 inches water gauge in the control room envelope, relative to the adjacent turbine building during the emergency mode of operation at a makeup flow rate of ± 10% of system design.	18 months	L.1

M.1

A.1

3. From the date that the control room emergency filtration is made or found to be inoperable, reactor operation or refueling operation of either unit may be continued only during the succeeding seven days, unless the system is sooner made operable.
4. If the conditions of 15.3.12.3 cannot be met, the operating reactor(s) shall be brought to cold shutdown conditions within 36 hours and refueling operations shall be terminated as soon as practicable.

Basis

The control room emergency filtration is designed to filter control room atmosphere and makeup air during control room isolation conditions. High efficiency particulate (HEPA) filters are installed before the charcoal adsorbers to prevent clogging and to remove essentially all particulate material. Charcoal adsorbers are installed to reduce the potential intake of radioactive iodine to the control room during accident conditions. If the system is found to be inoperable, there is no immediate threat to the control room and operation may continue for a limited period of time.

A.10

A.4

A. CREFS inoperable.	A.1	Restore CREFS to OPERABLE status.	7 days
B. Required Action and associated Completion Time not met.	B.1	Suspend CORE ALTERATIONS.	Immediately
	AND		
	B.2	Suspend movement of irradiated fuel assemblies.	Immediately
M.2 →	AND B.3	Be in MODE 3.	6 hours
	AND B.4	Be in MODE 5.	36 hours

A.1

15.4.11 CONTROL ROOM EMERGENCY FILTRATION

Applicability

Applies to periodic testing requirements of the control room emergency filtration equipment. ← A.2

A.3

Objective

To verify the operability of the ~~control~~ room emergency filtration and its ~~ability to remove~~ radioactive contaminants when required.

Specification

Required by SR 3.7.9.2

1. At least once per year the pressure drop across the combined HEPA filters and charcoal adsorber banks shall be demonstrated to be less than 6 inches of water at design flow rate. < See Section 5.0 >

2. The control room emergency filtration automatic initiation shall be demonstrated once per year. ← See Insert 3.7.10-01 and LCO 3.3.7

3. The control room emergency filtration shall be operated at least 10 hours every month.

SR 3.7.9.2 ← A.7

4. Components of the control room emergency filtration shall be tested as follows:

   a. HEPA filters and charcoal adsorbers shall be tested and analyzed at least once per year, or after 720 hours of operation since the previous test, and following significant painting, fire or chemical release in the control room during filtration operation.

   b. Cold DOP testing of the HEPA filter bank shall be performed after each complete or partial replacement of HEPA filters, or after any structural maintenance on the filter housing. DOP testing shall be at design velocity ± 20%. < See Section 5.0 >

SR 3 7.9.1	Operate the CREFS emergency make-up filter unit for ≥ 15 minutes.	31 days

← L.5

A.1

c. Halogenated hydrocarbon testing of the charcoal adsorber bank shall be performed after each complete or partial replacement of charcoal adsorbers or after any structural maintenance of the adsorber housing. Halogenated hydrocarbon testing shall be at design velocity ± 20%. < See Section 5.0 >

d. Laboratory sample analysis of in-place charcoal adsorbent shall be performed at least once per year for standby service or after every 720 hours of system operation and, as a minimum, shall be conducted at velocities within 20% of design, 1.75 mg/m³ inlet iodide concentration, 95% relative humidity and 30°C (86°F).

L.2

e. Fans shall be tested at least once per year or after ~~720~~ hours of operation since the ~~previous test~~, and following fan maintenance ~~or~~ repair.

L.2

A.8

Add new SR 3.7.9.5 - See Insert 3.7.10-02

Basis

The control room emergency filtration system is designed to filter the control room atmosphere and makeup air to the control room during control room isolation conditions. The control room emergency filtration is normally isolated and not in operation and testing more frequently than that specified is not required to insure operability or performance. If the efficiencies of HEPA and charcoal adsorbers are as specified, the resulting control room doses during accident conditions will be less than allowable levels in Criterion 19 of Appendix A to 10 CFR 50. The charcoal adsorbent laboratory sample analysis is performed in accordance with ASTM D3803-89, "Standard Test Method for Nuclear-Grade Activated Carbon."

SR 3.7.9.6	Verify one CREFS emergency make-up fan can maintain a positive pressure of ≥ 0.125 inches water gauge in the control room envelop. relative to the adjacent turbine building during the emergency mode of operation at a makeup flow rate of ± 10% of system design.	18 months

A.4

L.1

LCO 3.7.10 INSERTS

Insert 3.7.10-01:

SR 3.7.9.3	Verify each CREFS emergency make-up fa n actuates on an actual or simulated actuation signal.	18 months
SR 3.7.9.4	Verify each CREFS automatic damper in the emergency mode flow path that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.	18 months

L.3

L.4

A.9

Insert 3.7.10-02:

M.3

SR 3.7.9.5	Verify CREFS manual start capability and alignment.	18 months

Justification For Deviations - NUREG-1431 Section 3.07.10

13-Nov-99

JFD Number	JFD Text
01	NUREG 1431 LCO 3.7.10 has been altered to reflect the design and licensing basis for the Point Beach Control Room Emergency Filtration System (CREFS). The Point Beach CREFS is not a two train system as NUREG 1431 addresses, necessitating numerous changes to the NUREG. The Point Beach CREFS consists of; one emergency make-up charcoal filtration unit, two emergency make-up fans, two recirculation fans, and the required ducts and dampers necessary to establish the required flow paths and isolation boundaries. While the Point Beach CREFS is not completely redundant, most active components are redundant (fans) or fail safe (dampers fail to their accident positions), to maximize system reliability. The CREFS has four modes of operation, with portions of the system operating during normal unit operation to provide control room heating and cooling. The analyses for radiological consequences in the control room are based on operation of CREFS in the emergency make-up mode (Mode 4) as described in the proposed ITS Bases. CREFS does not automatically restart after being load shed following a loss of offsite power; manual action is required to restart CREFS. The radiological effects in the control room, of stopping and restart CREFS after a loss of offsite power would not be greater than the doses associated with continuous operation of CREFS post-accident. The basis for this conclusion is contained in the proposed ITS Bases. CREFS Mode 4 operation is automatically initiated by a high radiation signal from the control room area monitor or noble gas intake monitor. Based on the above, the following changes have been proposed: The LCO has been modified to require CREFS to be operable. Specifying system operability is required as the Point Beach CREFS does not consist of two trains, and is not completely redundant as outlined above. This change is consistent with the CTS which specifies that the system shall be operable. The CTS allows operations to continue for up to seven days with CREFS inoperable. As such, the Actions have been modified to parallel the LCO statement, allowing seven days as the CTS does. Accordingly, only a single default Action is necessary (NUREG Conditions D and E omitted) to direct suspending handling of irradiated fuel, core alterations, and placing the unit into hot and cold shutdown. Terminology has been changed in the Actions and Surveillance Requirement to reflect system design. Complementary Bases changes have been made to Reflect the changes proposed in the Technical Specifications, and where necessary, to fully describe the design and licensing basis for the system. **ITS:** B 3.07.09 LCO 3.07.09 COND A **NUREG:** B 3.07.10 LCO 3.07.10 COND A

Justification For Deviations - NUREG-1431 Section 3.07.10

13-Nov-99

JFD Number	JFD Text	
	LCO 3.07.09 COND A RA A.1	LCO 3.07.10 COND A RA A.1
	N/A	LCO 3.07.10 COND D
		LCO 3.07.10 COND D RA D.1
		LCO 3.07.10 COND D RA D.2
		LCO 3.07.10 COND E
		LCO 3.07.10 COND E RA E.1
	SR 3.07.09.01	SR 3.07.10.01
	SR 3.07.09.03	SR 3.07.10.03
	SR 3.07.09.06	SR 3.07.10.04
02	The Point Beach Control Room Ventilation System design does not have a toxic gas isolation mode. The need for hazardous chemical and toxic gas protections was reviewed and determined to not be necessary as part of the Point Beach NUREG 0737 compliance effort. This conclusion is based on the fact that are no appreciable amount of chlorine stored on site, and the amount and location of hazardous chemicals both on site and within 5 miles of the site do not present a significant risk to control room habitability. In addition, the control room ventilation system is not assumed to function to support control room habitability for uncontrolled gaseous release events. As such, the bracketed LCO Applicability of Modes 5 and 6, Required Actions, and Bases statements related to the chemical and toxic gas protection mode of the control room ventilation system have been omitted.	
	ITS:	**NUREG:**
	B 3.07.09	B 3.07.10
	LCO 3.07.09	LCO 3.07.10
	N/A	LCO 3.07.10 COND C RA C.1 NOTE
03	The brackets have been removed and the proper plant specific information has been provided.	
	ITS:	**NUREG:**
	B 3.07.09	B 3.07.10
	LCO 3.07.09	LCO 3.07.10
	SR 3.07.09.01	SR 3.07.10.01
	SR 3.07.09.02	SR 3.07.10.02
	SR 3.07.09.03	SR 3.07.10.03
	SR 3.07.09.06	SR 3.07.10.04

Justification For Deviations - NUREG-1431 Section 3.07.10

13-Nov-99

JFD Number	JFD Text

04 NUREG 1431 SR 3.7.10.1 provides two bracketed run time requirements for the Control Room Emergency Make-up charcoal filter train. Either 10 hours or 15 minute is to be selected based on whether the make-up filter unit has installed heaters or not. The Point Beach control room emergency charcoal filter unit does not have installed heaters. Accordingly, the 15 minute option has been chosen.

ITS:	NUREG:
B 3.07.09	B 3.07.10
SR 3.07.09.01	SR 3.07.10.01

05 Based on System design as described in Justification for Deviation 1 of this section, NUREG 1431 SR 3.7.10.3 has been divided into two separate SRs. This change is necessary to allow differing acceptance criteria for the system fans and dampers. The fans are an active device, requiring testing of their actuation capability regardless of operating state, while the dampers may be secured in their required positions, placing the dampers in a passive state.

Proposed SR 3.7.9.3 verifies each control room emergency filter system emergency fan starts on an actual or simulated actuation signal.

Proposed ITS SR 3.7.9.4 verifies each control room emergency filter system automatic damper in the emergency mode flow path that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal. If the damper will not automatically actuate, but can be secured in its required position, the proposed SR can still be met maintaining system operability. Exclusion of automatic dampers secured in their required positions is acceptable based on these components being secured in their required positions, fulfilling their required safety functions. While this exception is not specifically stated in the CTS, the CTS definition of operability states that "a system, subsystem, train, component, or device shall be operable or have operability when it is capable of performing its function(s) as analyzed in the safety analysis report." In securing these component in their required positions, they are fulfilling their required functions. In addition, this change will establish consistent treatment of devices which are placed in a passive state (e.g. containment isolation valve SR 3.6.3.8). Subsequent changes to SR numbers have been made to maintain the SRs in an ascending frequency order.

ITS:	NUREG:
B 3.07.09	B 3.07.10
SR 3.07.09.03	SR 3.07.10.03
SR 3.07.09.04	N/A
SR 3.07.09.06	SR 3.07.10.04

Justification For Deviations - NUREG-1431 Section 3.07.10

13-Nov-99

JFD Number	JFD Text

06 Manual emergency mode start capability for the control room ventilation system has been moved from NUREG 1431 LCO 3.3.7 to proposed ITS SR 3.7.9.5. This change is necessary to reflect the Point Beach control room ventilation system design. There is no single control switch which places the control room ventilation system into its emergency operating configuration as NUREG 1431 LCO 3.3.7 addresses, but rather a number switches which must be manipulated to place the system in the emergency operating mode.

Manual actuation capability is required for system operability. As addressed in Justification for Deviation 1 of this LCO, the control room ventilation system does not automatically restart after being load shed following a loss of offsite power. Manual action is required to restart the control room ventilation system after a loss of offsite power, which is verified through performance of this proposed surveillance. Incorporating this surveillance under LCO 3.7.9 recognizes the need to maintain and test manual actuation capability, while directing the appropriate Required Actions if this capability is lost.

ITS:	NUREG:
B 3.07.09	B 3.07.10
SR 3.07.09.05	N/A
SR 3.07.09.06	SR 3.07.10.04

07 NUREG 1431 SR 3.7.10.4 verifies that the control room emergency make-up filtration unit can maintain a positive pressure of at least 0.125 inches of water gage, when operated in the emergency filtration mode at a make-up flow rate of less than or equal to a given value. The proposed ITS for Point Beach will similarly require verification of positive pressure capability, but will require that this capability be verified with a make-up system flow rate within plus or minus 10% of system design flow rate. CTS 15.3.12.2.c requires the make-up fans to achieve a flow rate within plus or minus 10% of design flow. Additionally, NUREG 0800, Section 6.4 states that systems having a make-up pressurization rate in excess of 0.5 volume changes per hour (543 cfm for Point Beach) should be tested every 18 months to assure that the control room envelope will maintain a positive pressure of greater than or equal to 0.125 inches water gauge within plus or minus 10% of system design make-up rate. Nominal make-up pressurization flow is approximately 4950 cfm. Therefore, this change in acceptance criteria is consistent with the guidance provided in NUREG-0800 and the current Technical Specifications.

ITS:	NUREG:
B 3.07.09	B 3.07.10
SR 3.07.09.06	SR 3.07.10.04

Justification For Deviations - NUREG-1431 Section 3.07.10

13-Nov-99

JFD Number	JFD Text
08	CREFS operation for controlling control room doses from a decay tank rupture is not required. The activity released from a decay tank rupture consists primarily of noble gases released from processing of reactor coolant. CREFS does not provide significant protection from noble gas releases and is not assumed in the Point Beach control room habitability analysis. In addition, the Point Beach CTS Applicability for CREFS, does not include the equivalent of ITS Mode 5 or 6. As such, CREFS Applicability in Modes 5 and 6 has been omitted and Bases reference to decay tank rupture events has been omitted.

ITS:	NUREG:
B 3.07.09	B 3.07.10
LCO 3.07.09	LCO 3.07.10

JFD Number	JFD Text
09	The Point Beach CREFS does not contain a heater in the charcoal emergency make-up filtration unit. Accordingly, the 15 minute run time requirement for systems without heaters has been adopted and the associated Bases has been modified as required.

ITS:	NUREG:
B 3.07.09	B 3.07.10

JFD Number	JFD Text
10	The LCO number for NUREG 1431 LCO 3.7.10, Control Room Emergency Filtration has been renumbered to be Point Beach ITS LCO 3.7.9. This change is necessary to maintain a continuous numbering sequence in the Point Beach ITS, as NUREG 1431 LCO 3.7.9, Ultimate Heat Sink (UHS), was not adopted. Exclusion of the UHS LCO is discussed in Justification for Deviation 1 of LCO 3.7.9 of this conversion package.

ITS:	NUREG:
B 3.07.09	B 3.07.10
LCO 3.07.09	LCO 3.07.10
SR 3.07.09.01	SR 3.07.10.01
SR 3.07.09.02	SR 3.07.10.02
SR 3.07.09.03	SR 3.07.10.03
SR 3.07.09.06	SR 3.07.10.04

Justification For Deviations - NUREG-1431 Section 3.07.10

13-Nov-99

JFD Number	JFD Text

11 NUREG 1431 SR 3.7.10.4 requires each train of the control room emergency filtration system to be tested once every 18 months on a staggered test basis. Proposed ITS SR 3.7.9.6 will require the control room emergency make-up filter unit to be tested once every 18 months. The latitude to perform this test on a staggered test basis has not been adopted as part of the ITS conversion.

The nominal make-up pressurization rate for Point Beach is approximately 4950 cfm. NUREG 0800, Section 6.4 states that systems having a make-up pressurization rate in excess of 0.5 volume changes per hour (543 cfm for Point Beach) should be tested every 18 months to assure that the control room envelope will maintain a positive pressure of greater than or equal to 0.125 inches water gauge within plus or minus 10% of system design make-up rate. Therefore, this change in frequency is consistent with the guidance provided in NUREG-0800.

ITS:	NUREG:
B 3.07.09	B 3.07.10
SR 3.07.09.06	SR 3.07.10.04

12 CTS does not allow core alterations and movement of irradiated fuel to continue beyond seven days, without restoring CREFS to operable status. Based on the CREFS design as discussed in Justification for Deviation 1 of this LCO and the CTS Actions allowing core alterations and movement of irradiated fuel for up to seven days for partial or complete loss of function, NUREG Condition C and Required Action C.1 are not necessary and have been omitted. IF CREFS is inoperable for greater than seven days, core alterations and movement of irradiated fuel will be suspended.

ITS:	NUREG:
B 3.07.09	B 3.07.10
LCO 3.07.09 COND B	LCO 3.07.10 COND B
LCO 3.07.09 COND B RA B.1	LCO 3.07.10 COND C RA C.2.1
LCO 3.07.09 COND B RA B.2	LCO 3.07.10 COND C RA C.2.2
LCO 3.07.09 COND B RA B.3	LCO 3.07.10 COND B RA B.1
LCO 3.07.09 COND B RA B.4	LCO 3.07.10 COND B RA B.2
N/A	LCO 3.07.10 COND C RA C.1

3.7 PLANT SYSTEMS

3.7.10 Control Room Emergency Filtration System (CREFS)

1

LCO 3.7.10 Two CREFS trains shall be OPERABLE.

10 → 9

APPLICABILITY: MODES 1, 2, 3, 4, [5, and 6,] ← 2/8
During movement of irradiated fuel assemblies.
[During CORE ALTERATIONS]

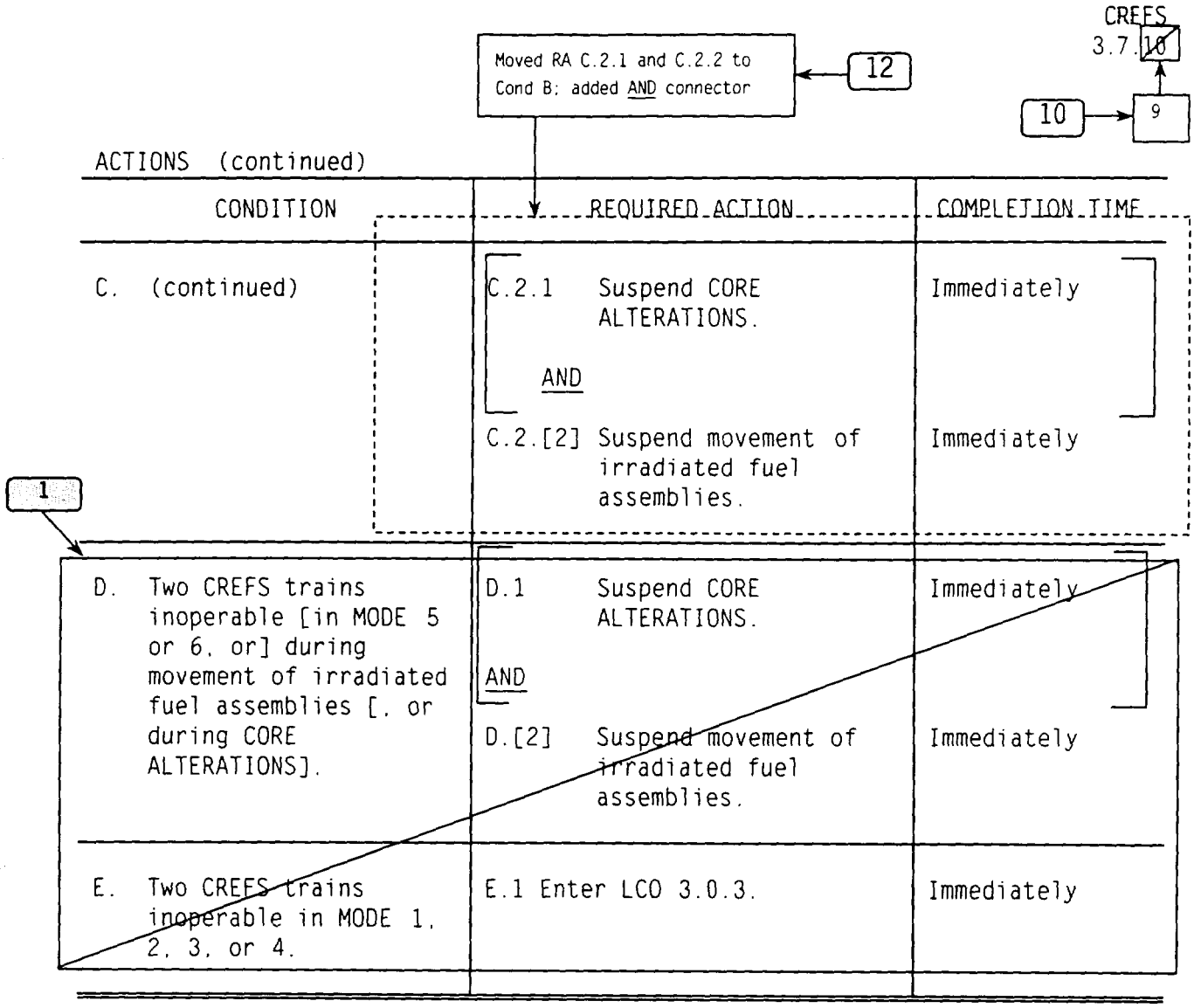
3

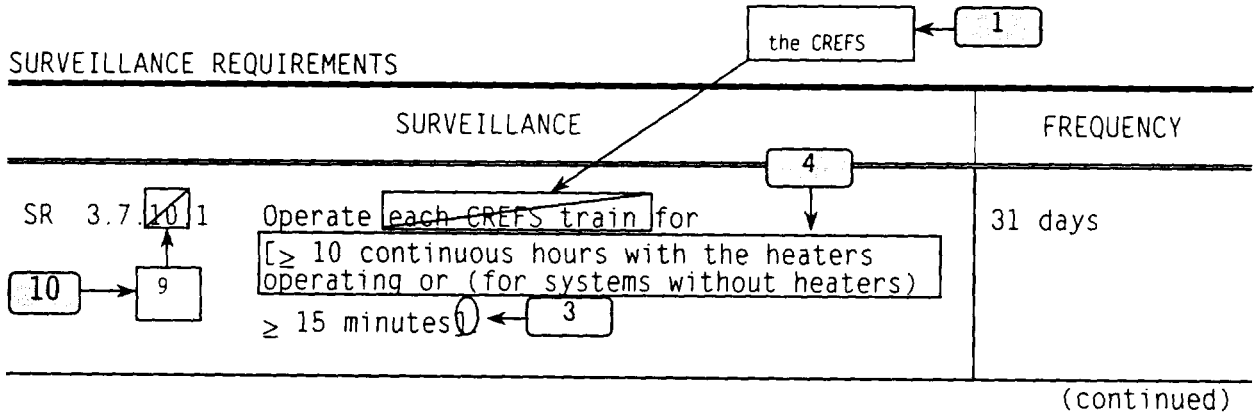
ACTIONS

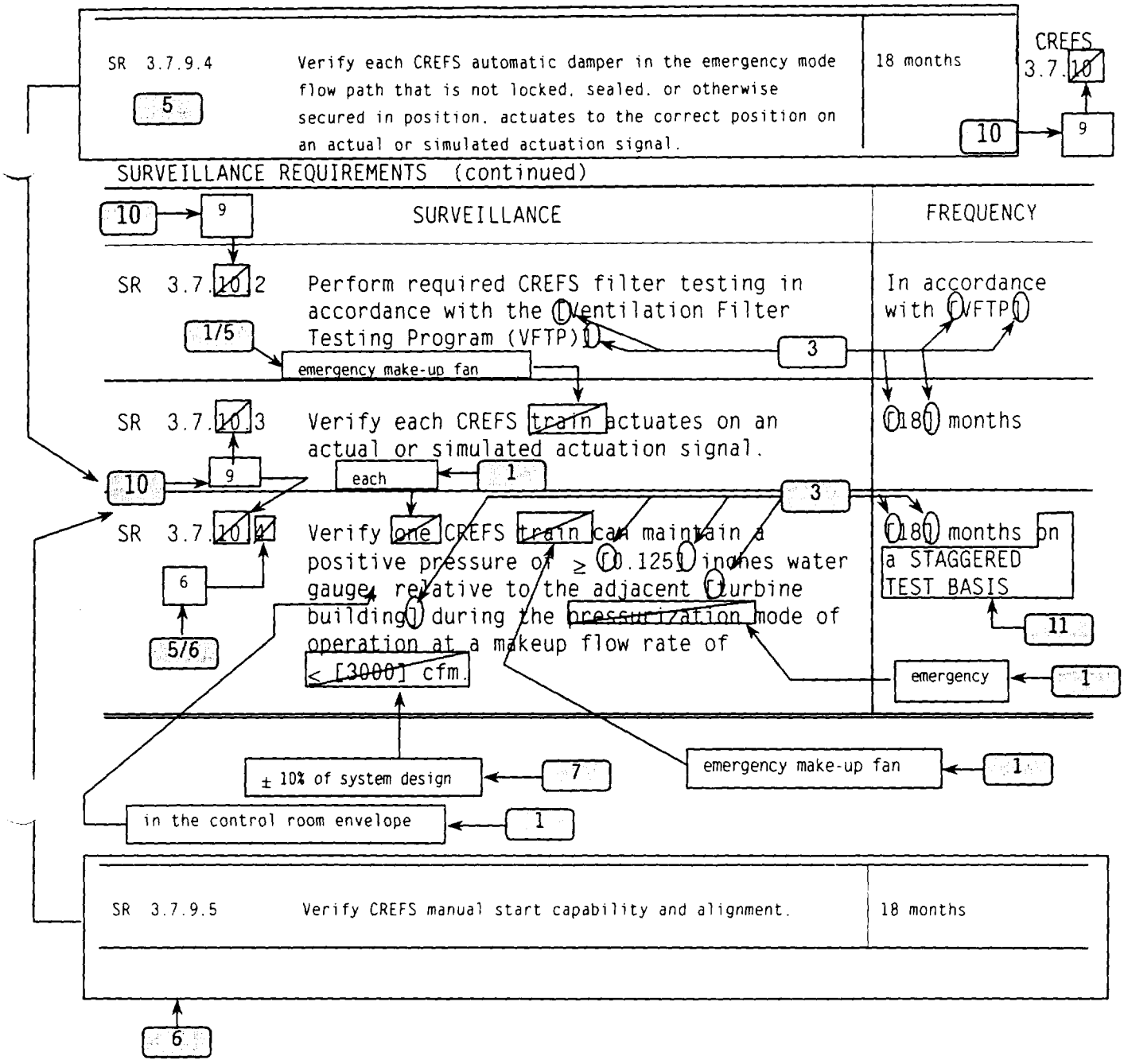
1

CONDITION	REQUIRED ACTION	COMPLETION TIME
CREFS inoperable.		
A. One CREFS train inoperable.	A.1 Restore CREFS train to OPERABLE status	7 days
	Moved RA C.2.1 and C.2.2 here as RA B.1 and B.2	
B. Required Action and associated Completion Time of Condition A not met in MODE 1, 2, 3, or 4. ← 12	B.1 Be in MODE 3. (3 ← 12)	6 hours
	AND (4)	
	B.2 Be in MODE 5.	36 hours
C. Required Action and associated Completion Time of Condition A not met [in MODE 5 or 6, or] during movement of irradiated fuel assemblies [, or during CORE ALTERATIONS]. ← 12	C.1 -------NOTE-------- Place in toxic gas protection mode if automatic transfer to toxic gas protection mode is inoperable. ---------- ← 2	
	Place OPERABLE CREFS train in emergency mode.	Immediately
	OR	

(continued)


Moved RA C.2.1 and C.2.2 to Cond B; added AND connector
12
CREFS
3.7.10
10
9
ACTIONS (continued)
CONDITION
REQUIRED ACTION
COMPLETION TIME
C. (continued)
C.2.1 Suspend CORE ALTERATIONS.
AND
Immediately
C.2.[2] Suspend movement of irradiated fuel assemblies.
Immediately
1
D. Two CREFS trains inoperable [in MODE 5 or 6, or] during movement of irradiated fuel assemblies [, or during CORE ALTERATIONS].
D.1 Suspend CORE ALTERATIONS.
AND
Immediately
D.[2] Suspend movement of irradiated fuel assemblies.
Immediately
E. Two CREFS trains inoperable in MODE 1, 2, 3, or 4.
E.1 Enter LCO 3.0.3.
Immediately


the CREFS
1
SURVEILLANCE REQUIREMENTS
SURVEILLANCE
FREQUENCY
4
SR 3.7.10.1
Operate each CREFS train for
[≥ 10 continuous hours with the heaters operating or (for systems without heaters)
≥ 15 minutes]
3
31 days
10
9
(continued)


SR 3.7.9.4
Verify each CREFS automatic damper in the emergency mode flow path that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.
18 months
CREFS 3.7.10
SURVEILLANCE REQUIREMENTS (continued)
SURVEILLANCE
FREQUENCY
SR 3.7.10.2
Perform required CREFS filter testing in accordance with the [Ventilation Filter Testing Program (VFTP)]
In accordance with [VFTP]
emergency make-up fan
SR 3.7.10.3
Verify each CREFS train actuates on an actual or simulated actuation signal.
[18] months
each
SR 3.7.10.4
Verify one CREFS train can maintain a positive pressure of ≥ [0.125] inches water gauge, relative to the adjacent [turbine building] during the pressurization mode of operation at a makeup flow rate of ≤ [3000] cfm.
[18] months on a STAGGERED TEST BASIS
emergency
± 10% of system design
emergency make-up fan
in the control room envelope
SR 3.7.9.5
Verify CREFS manual start capability and alignment.
18 months

B 3.7 PLANT SYSTEMS

B 3.7.10 Control Room Emergency Filtration System (CREFS)

BASES

BACKGROUND

The CREFS provides a protected environment fro m which operators can control the unit following an uncontrolled release of radioactivity[, chemicals, or toxic gas].

2

1

Replace with Insert B 3.7.10-01

The CREFS consists of two independent, redundant trains that recirculate and filter the control room air. Each train consists of a prefilter or demister, a high efficiency particulate air (HEPA) filter, an activated charcoal adsorber section for removal of gaseous activity (principally iodines), and a fan. Ductwork, valves or dampers, and instrumentation also form part of the system, as well as demisters to remove water droplets from the air stream. A second bank of HEPA filters follows the adsorber section to collect carbon fines and provide backup in case of failure of the main HEPA filter bank.

The CREFS is an emergency system , parts of which may also operate during normal unit operations in the standby mode of operation. Upon receipt of the actuating signal(s), normal air supply to the control room is isolated, and the stream of ventilation air is recirculated through the system filter trains. The prefilters or demisters remove any large particles in the air, and any entrained water droplets present, to prevent excessive loading of the HEPA filters and charcoal adsorbers. Continuous operation of each train for at least 10 hours per month, with the heaters on, reduces moisture buildup on the HEPA filters and adsorbers. Both the demister and heater are important to the effectiveness of the charcoal adsorbers.

Actuation of the CREFS places the system in either of two separate states (emergency radiation state or toxic gas isolation state) of the emergency mode of operation, depending on the initiation signal. Actuation of the system to the emergency radiation state of the emergency mode of operation, closes the unfiltered outside air intake and unfiltered exhaust dampers, and aligns the system for recirculation of the control room air through the redundant trains of HEPA and the charcoal filters. The emergency

BACKGROUND (Continued)

1 → Replace with Insert B 3.7.10-01

radiation state also initiates pressurization and filtered ventilation of the air supply to the control room.

Outside air is filtered, diluted with building air from the electrical equipment and cable spreading rooms, and added to the air being recirculated from the control room. Pressurization of the control room prevents infiltration of unfiltered air from the surrounding areas of the building. The actions taken in the toxic gas isolation state are the same, except that the signal switches control room ventilation to an isolation alignment to prevent outside air from entering the control room.

The air entering the control room is continuously monitored by radiation and toxic gas detectors. One detector output above the setpoint will cause actuation of the emergency radiation state or toxic gas isolation state, as required. The actions of the toxic gas isolation state are more restrictive, and will override the actions of the emergency radiation state.

A single train will pressurize the control room to about [0.125] inches water gauge. The CREFS operation in maintaining the control room habitable is discussed in the FSAR, Section [6.4] (Ref. 1).

Redundant supply and recirculation trains provide the required filtration should an excessive pressure drop develop across the other filter train. Normally open isolation dampers are arranged in series pairs so that the failure of one damper to shut will not result in a breach of isolation. The CREFS is designed in accordance with Seismic Category I requirements.

1 → Replace with Insert B 3.7.10-02

The CREFS is designed to maintai n the control room environment for 30 days of continuous occupancy after a Design Basis Accident (DBA) without exceeding a 5 rem whole body dose or its equivalent to any part of the body.

APPLICABLE SAFETY ANALYSES

The CREFS components are arranged in redundant, safety related ventilation trains. The location of components and ducting within the control room envelope ensures an adequate supply of filtered air to all areas requiring access. The

APPLICABLE SAFETY ANALYSIS (Continued)

1

Replace with Insert B 3.7.10-02

CREFS provides airborne radiological protection for the control room operators, as demonstrated by the control room accident dose analyses for the most limiting design basis loss of coolant accident, fission product release presented in the FSAR, Chapter [15] (Ref. 2).

The analysis of toxic gas releases demonstrates that the toxicity limits are not exceeded in the control room following a toxic chemical release, as presented in Reference 1.

The worst case single active failure of a component of the CREFS, assuming a loss of offsite power, does not impair the ability of the system to perform its design function.

The CREFS satisfies Criterion 3 of the NRC Policy Statement.

LCO 1

Replace with Insert B 3.7.10-03

Two independent and redundant CREFS trains are required to be OPERABLE to ensure that at least one is available assuming a single failure disables the other train. Total system failure could result in exceeding a dose of 5 rem to the control room operator in the event of a large radioactive release.

The CREFS is considered OPERABLE when the individual components necessary to limit operator exposure are OPERABLE in both trains. A CREFS train is OPERABLE when the associated:

a. Fan is OPERABLE;

b. HEPA filters and charcoal adsorbers are not excessively restricting flow, and are capable of performing their filtration functions; and

c. Heater, demister, ductwork, valves, and dampers are OPERABLE, and air circulation can be maintained.

In addition, the control room boundary must be maintained, including the integrity of the walls, floors, ceilings, ductwork, and access doors.

BASES

2

APPLICABILITY In MODES 1, 2, 3, 4, ~~5, and 6.1~~ and during movement of irradiated fuel assemblies [and during CORE ALTERATIONS] CREFS must be OPERABLE to control operator exposure during and following a DBA.

3

1

This LCO does not apply to irradiated fuel assemblies placed in the Independent Spent Fuel Storage Installation.

In [MODE 5 or 6], the CREFS ~~is required to cope with the release from the rupture of an outside waste gas tank.~~

8

3 During movement of irradiated fuel assemblies [and CORE ALTERATIONS], the CREFS must be OPERABLE to cope with the release from a fuel handling accident.

ACTIONS A.1

1

Replace with Insert B 3.7.10-04

When one CREFS train is inoperable, action must be taken to restore OPERABLE status within 7 days. In this Condition, the remaining OPERABLE CREFS train is adequate to perform the control room protection function. However, the overall reliability is reduced because a single failure in the OPERABLE CREFS train could result in loss of CREFS function. The 7 day Completion Time is based on the low probability of a DBA occurring during this time period, and ability of the remaining train to provide the required capability.

Insert B 3.7.10-06

~~B.1 and B.2~~ ← B.1, B.2, B.3 and B.4

11 1

In MODE 1, 2, 3, or 4, if ~~the inoperable~~ CREFS ~~train~~ cannot be restored to OPERABLE status within the required Completion Time, the unit must be placed in a MODE that minimizes accident risk. To achieve this status, the unit must be placed in at least MODE 3 within 6 hours, and in MODE 5 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

11

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

[In MODE 5 or 6, or] during ~~movement~~ of irradiated fuel assemblies [, or during ~~CORE~~ ALTERATIONS], if the inoperable CREFS train ~~cannot~~ be restored to OPERABLE status within the ~~required~~ Completion Time, action must be taken to

ACTIONS (Continued)

immediately place the OPERABLE CREFS train in the emergency mode. This action ensures that the remaining train is OPERABLE, that no failures preventing automatic actuation will occur, and that any active failure would be readily detected.

An alternative to Required Action C.1 is to immediately suspend activities that could result in a release of radioactivity that might require isolation of the control room. This places the unit in a condition that minimizes risk. This does not preclude the movement of fuel to a safe position.

Required Action C.1 is modified by a Note indicating to place the system in the toxic gas protection mode if automatic transfer to toxic gas protection mode is inoperable.

D.1 and D.2

[In MODE 5 or 6, or] during movement of irradiated fuel assemblies [, or during CORE ALTERATIONS], with two CREFS trains inoperable, action must be taken immediately to suspend activities that could result in a release of radioactivity that might enter the control room. This places the unit in a condition that minimizes accident risk. This does not preclude the movement of fuel to a safe position.

E.1

If both CREFS trains are inoperable in MODE 1, 2, 3, or 4, the CREFS may not be capable of performing the intended function and the unit is in a condition outside the accident analyses. Therefore, LCO 3.0.3 must be entered immediately.

SURVEILLANCE REQUIREMENTS

SR 3.7.10.1

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 fan subsystem once every month provides an adequate check of this system. Monthly heater operations dry out any

SURVEILLANCE REQUIREMENTS (Continued)

moisture accumulated in the charcoal from humidity in the ambient air. [Systems with heaters must be operated for ≥ 10 continuous hours with the heaters energized. Systems without heaters need only be operated for ≥ 15 minutes to demonstrate the function of the system.] The 31 day Frequency is based on the reliability of the equipment and the two train redundancy availability.

SR 3.7.10.2

This SR verifies that the required CREFS testing is performed in accordance with the [Ventilation Filter Testing Program (VFTP)]. The CREFS filter tests are in accordance with Regulatory Guide 1.52 (Ref. 3). The [VFTP] includes testing the performance of the HEPA filter, charcoal adsorber efficiency, minimum flow rate, and the physical properties of the activated charcoal. Specific test Frequencies and additional information are discussed in detail in the [VFTP].

SR 3.7.10.3

Replace with Insert B 3.7.10-05

This SR verifies that each CREFS train starts and operates on an actual or simulated actuation signal. The Frequency of [18] months is specified in Regulatory Guide 1.52 (Ref. 3).

SR 3.7.10.4

This SR verifies the integrity of the control room enclosure, and the assumed inleakage rates of the potentially contaminated air. The control room positive pressure, with respect to potentially contaminated adjacent areas, is periodically tested to verify proper functioning of the CREFS. During the emergency mode of operation, the CREFS is designed to pressurize the control room ≥ [0.125] inches water gauge positive pressure with respect to adjacent areas in order to prevent unfiltered inleakage. The CREFS is designed to maintain this positive pressure with one train at a makeup flow rate of [3000] cfm. The Frequency of [18] months on a STAGGERED TEST BASIS is consistent with the guidance provided in NUREG-0800 (Ref. 4).

minimize

emergency make-up fan in operation

± 10% of system design (approximately 4550 cfm)

REFERENCES

1. FSAR, Section [6.4] ← 9.8 ← 3
2. FSAR, Chapter [15] ← Section 14.3.5 ← 3
3. Regulatory Guide 1.52, Rev. 2.
4. NUREG-0800, Section 6.4, Rev. 2, July 1981.

LCO 3.7.10 Bases Inserts

Insert B 3.7.10-01:

The CREFS consists of; one emergency make-up air filtration unit, two emergency make-up fans, two recirculation fans, and the required ducts and dampers necessary to establish the required flow paths and isolation boundaries. The CREFS is an emergency system, parts of which operate during normal unit operations. The CREFS has four modes of operation.

- Mode 1 (normal operation) - One of the two recirculation fans (W-13B1 or W-13B2) are in operation. Outside air is supplied from an intake penthouse located on the roof of the auxiliary building at a rate of approximately 1000 cfm (5% of system design flow) via damper VNCR-4849C which is throttled to a predetermined position. The make-up air combines with return air from the control room and computer room then passing through a HEPA filter (F-43) and cooling units (HX-100 A&B) before entering the recirculation fan. Filtered and cooled air is supplied to the mechanical equipment room and through separate heating coils (HX-92 and HX-91 A&B), and humidifiers (Z-78 and Z-77) to the computer and control rooms respectively. Room thermostats and humidistats control the operation of the heating coils, chilled water system, and humidifiers. The control room heating, cooling, and humidification systems are not required to demonstrate compliance with the control room habitability limits of 10 CFR 50 Appendix A, GDC-19 as required by NUREG-0737, Item III.D.3.4. The computer room is supplied with supplementary cooling during normal operation via supplementary air conditioning units (W-107A/HX-190A/HX-191A or W-107B/HX-190B/HX-191B). Nominally, the control room washroom exhaust fan (W-15) is also in operation. Operation of the Control Room Ventilation System in Mode 1 (normal operation) is not assumed for control room habitability, and is therefore not a Technical Specification required mode of operation.

- Mode 2 (recirculation operation) - 100% of the control room and computer room air is recirculated. In this mode, the outside air damper (VNCR-4849C) is closed and the control room washroom exhaust fan is de-energized. Recirculation can be automatically initiated by a Containment Isolation or Safety Injection signal, or can be manually initiated from the control room. Operation of the Control Room Ventilation System in Mode 2 (recirculation) is not assumed for control room habitability, and is therefore not a Technical Specification required mode of operation.

- Mode 3 (recirculation/charcoal adsorber operation) - One of two control room emergency make-up fans (W-14A or W-14B) is in operation and air is supplied to the emergency make-up charcoal filter unit (F-16) via the computer and control room

return air duct (damper VNCR-4851B). The normal outside air supply is secured (damper VNCR-4849C closed) and the control room washroom exhaust fan is de-energized. In this mode approximately 25% of the return air is being recirculated by the emergency make-up charcoal filter unit back to the suction of the control room recirculation fans. Recirculation/charcoal adsorber mode is manually initiated from the control room. Operation of the Control Room Ventilation System in Mode 3 (recirculation/charcoal adsorber mode) is not assumed for control room habitability, and is therefore not a Technical Specification required mode of operation.

- Mode 4 (emergency make-up) - Operation in this mode is similar to Mode 3 except return air inlet damper VNCR-4851B to the emergency fans remains closed and outside air supply to the emergency make-up charcoal filter unit opens (damper VNCR-4851A). This allows approximately 4950 cfm (25% of system design flow) of make-up air to pass through the emergency make-up charcoal filter unit to the suction of the control room recirculation fan. This make-up flow rate is sufficient to assure a positive pressure of $\geq$ 1/8 in. water gage is maintained in the control and computer rooms to prevent excessive unfiltered in-leakage into the control room ventilation boundary. Mode 4 (emergency make-up) is automatically initiated by a high radiation signal from the control room area monitor RE-101, or a high radiation signal from noble gas monitor RE-235 located in the supply duct to the control room. This mode of operation can also be manually initiated from the control room. Operation of the Control Room Ventilation System in Mode 4 (emergency make-up) is the assumed mode of operation for the control room habitability analysis, and is therefore the only mode of operation addressed by this LCO.

The air entering the control room is continuously monitored by noble gas radiation monitors and the control room itself is continuously monitored by an area radiation monitor. One detector output above its setpoint will actuate the emergency make-up mode of operation (Mode 4) for the CREFS.

The limiting design basis accident for the control room dose analysis is the large break LOCA. CREFS does not automatically restart after being load shed following a loss of offsite power; manual action is required to restart CREFS. The control room emergency make-up and recirculation fans have been included in the emergency diesel generator loading profile during the recirculation phase of a loss of coolant accident.

The CREFS will pressurize the control and computer rooms to at least 0.125 inches water gauge in the emergency make-up

mode of operation. The CREFS role in maintaining the control room habitable is discussed in the FSAR, Section 9.8 (Ref. 1).

Insert B 3.7.10-02:

The CREFS provides airborne radiological protection for control room personnel, as demonstrated by the limiting control room dose analyses for the design basis large break loss of coolant accident. Control room dose analysis assumptions are presented in the FSAR, Section 14.3.5 (Ref. 2).

The analyses for radiological consequences in the control room are based on operation of CREFS in the emergency make-up mode (Mode 4). The radiological effects in the control room, of the stopping and subsequent restart of CREFS after a loss of offsite power would not be significantly greater than the doses associated with continuous operation of CREFS post-accident, based on the following:

(1) The control room would start from positive pressurization because the system normally runs in a positive pressurization mode (Mode 1).

(2) During the loss of ventilation, the air inside the control room would heat up and expand, which would continue to enhance outflow, minimizing in-leakage.

(3) The control room would normally be closed which reduces in-leakage.

(4) The control room ventilation system damper positions would automatically reposition to the emergency make-up configuration (Mode 4). Therefore, if any in-leakage through the control room intake occurred, it would be filtered at the same or higher efficiency assumed in the analysis.

(5) Noble gases would not be drawn into the control room by the control room charcoal filter fan.

Insert B 3.7.10-03:

The CREFS (Mode 4) is required to be OPERABLE to ensure that the control room habitability limits are met following a limiting design basis LOCA. Total system failure could result in exceeding the control room operator thyroid dose limit of 30 Rem in the event of a large radioactive release.

LCO 3.7.10 Bases Inserts

The CREFS is considered OPERABLE when the individual components necessary to filter and limit control room in-leakage are OPERABLE. CREFS is considered OPERABLE when:

a. Both emergency make-up Fans (W-14A and W-14B) are OPERABLE;

b. Both recirculation fans (W-13B1 and W-13B2) are OPERABLE;

c. Emergency make-up filter unit (F-16), HEPA filters and charcoal adsorbers are not excessively restricting flow, and are capable of performing their filtration functions;

d. Control room ventilation envelope is capable of achieving and maintaining a positive pressure of at least 0.125 inches water gauge in the emergency make-up mode of operation;

e. Ductwork and dampers are OPERABLE, and air circulation can be maintained; and

f. CREFS is capable of being manually initiated in the emergency make-up mode of operation (Mode 4).

Insert B 3.7.10-04:

When CREFS is inoperable, action must be taken to restore the system to OPERABLE status within 7 days. In this Condition, the remaining OPERABLE CREFS components may be adequate to perform the control room protection function; however, overall reliability may be reduced because a single active failure could result in loss of CREFS function. The 7 day Completion Time is based on the low probability of a DBA challenging control room habitability occurring during this time period.

LCO 3.7.10 Bases Inserts

Insert B 3.7.10-05:

SR 3.7.9.3

This SR verifies that each CREFS emergency make-up fan starts and operates on an actual or simulated actuation signal. The Frequency of 18 months is specified in Regulatory Guide 1.52 (Ref. 3).

SR 3.7.9.4

This SR verifies that each CREFS aut omatic damper in the emergency make-up mode flow path will actuate to its required position on a actuation signal. This surveillance is not required for dampers that are locked, sealed, or otherwise secured in their required position under administrative controls. The Frequency of 18 months is specified in Regulatory Guide 1.52 (Ref. 3).

SR 3.7.9.5

This test verifies manual actuation capability for CREFS. Manual actuation capability is a required for OPERABILITY of the CREFS because CREFS does not automatically restart after being load shed following a loss of offsite power. Manual action is required to restart and align the CREFS after a loss of offsite power, which is verified through performance of this SR. The 18 month Frequency is acceptable based on the inherent reliability of manual actuation circuits.

Insert B 3.7.10-06:

If CREFS cannot be restored to OPERABLE status within the required Completion Time with CORE ALTERATIONS or movement of irradiated fuel in progress, these activities must be suspended immediately. Immediately suspending these activities places the unit in a condition that minimizes risk from these activities. This does not preclude the movement of fuel to a safe position.

No Significant Hazards Considerations - NUREG-1431 Section 3.07.10

13-Nov-99

NSHC Number	NSHC Text
A	In accordance with the criteria set forth in 10 CFR 50.92, PBNP has evaluated this proposed Technical Specifications change and determined it does not represent a significant hazards consideration. The following is provided in support of this conclusion. 1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated? The proposed change involves reformatting and rewording of the current Technical Specifications. The reformatting and rewording process involves no technical changes to existing requirements. As such, this change is administrative in nature and does not impact initiators of analyzed events or assumed mitigation of accident or transient events. Therefore, this change does not increase the probability or consequences of an accident previously evaluated. 2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated? The proposed change does not require a physical alteration of the plant (no new or different type of equipment will be installed) or changes in parameters governing normal plant operation. The proposed change will not impose any new or eliminate any old requirements. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated. 3. Does this change involve a significant reduction in a margin of safety? The proposed change will not significantly reduce the margin of safety because it has no impact on any safety analysis assumptions. This change is administrative. As such, there is no technical change to the requirements and, therefore, there is no reduction in the margin of safety.

No Significant Hazards Considerations - NUREG-1431 Section 3.07.10

13-Nov-99

NSHC Number	NSHC Text
L.01	In accordance with the criteria set forth in 10 CFR 50.92, PBNP has evaluated this proposed Technical Specifications change and determined it does not represent a significant hazards consideration. The following is provided in support of this conclusion. 1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated? Relaxing the frequency of performance for a surveillance does not result in any hardware changes, nor does it significantly increase the probability of occurrence for analyzed events since the function of the equipment has remained unchanged. The proposed frequency has been determined to be adequate based on industry operating data and is acceptable based on the inherent reliability of the control room boundary and make-up fans. Surveillance tests are intended to provide assurance of continued component operability. The frequency of performance of a surveillance does not significantly increase the consequences of an accident as a change in frequency does not change the response of the equipment in performing its specified function. 2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated? The proposed change does not require a physical alteration of the plant (no new or different type of equipment will be installed) or changes in parameters governing normal plant operation. The proposed change will still ensure compliance with the limiting condition for operation is maintained. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated. 3. Does this change involve a significant reduction in a margin of safety? The increased surveillance interval is acceptable based on the industry data that has concluded that the likelihood of boundary and equipment failures are relatively low. The likelihood for an undetectable failure is not significant. The control room boundary is routinely monitored for positive pressure. The current frequency of testing has not disclosed any significant fan/flow system degradation, and no undetectable degradation mechanisms have been disclosed. Based on the above, this change does not represent a significant reduction in a margin of safety.

No Significant Hazards Considerations - NUREG-1431 Section 3.07.10

13-Nov-99

NSHC Number	NSHC Text
L.02	In accordance with the criteria set forth in 10 CFR 50.92, PBNP has evaluated this proposed Technical Specifications change and determined it does not represent a significant hazards consideration. The following is provided in support of this conclusion. 1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated? Relaxing the frequency of performance for a surveillance does not result in any hardware changes, nor does it significantly increase the probability of occurrence for initiation of any analyzed events since the function of the equipment has remained unchanged. The proposed Technical Specification will eliminate the requirement to perform non-routine testing of the control room emergency filtration fan (every 720 hours or operation) based on the existence of a routine 18 month test. Surveillance tests are intended to provide assurance of continued component operability. The frequency of performance of a surveillance does not significantly increase the consequences of an accident as a change in frequency does not change the response of the equipment in performing its specified function. Further, based on data to date, there is no significant degradation mechanism present which would warrant an increased frequency of testing, solely based on operation of the fan. 2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated? The proposed change does not require a physical alteration of the plant (no new or different type of equipment will be installed) or changes in parameters governing normal plant operation. The proposed change will still ensure compliance with the limiting condition for operation is maintained. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated. 3. Does this change involve a significant reduction in a margin of safety? The increased surveillance interval is acceptable based on the industry data that has concluded that the likelihood of an equipment failure between performances of this surveillance are low. The likelihood for a failure between proposed performances is not significant based on the lack of creditable significant degradation mechanisms. Based on the above, it has been concluded that this change does not represent a significant reduction in a margin of safety.

No Significant Hazards Considerations - NUREG-1431 Section 3.07.10

13-Nov-99

NSHC Number	NSHC Text
L.03	In accordance with the criteria set forth in 10 CFR 50.92, PBNP has evaluated this proposed Technical Specifications change and determined it does not represent a significant hazards consideration. The following is provided in support of this conclusion. 1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated? Relaxing the frequency of performance for a surveillance does not result in any hardware changes, nor does it significantly increase the probability of occurrence for analyzed events since the function of the equipment has remained unchanged. The proposed frequency has been determined to be adequate based on industry operating data and is acceptable based on the reliability actuation instrumentation and circuitry. Surveillance tests are intended to provide assurance of component operability. The frequency of performance of a surveillance does not significantly increase the consequences of an accident as a change in frequency does not change the response of the equipment in performing its specified function. 2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated? The proposed change does not require a physical alteration of the plant (no new or different type of equipment will be installed) or changes in parameters governing normal plant operation. The proposed change will still ensure compliance with the limiting condition for operation is maintained. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated. 3. Does this change involve a significant reduction in a margin of safety? The increased surveillance interval is acceptable based on the industry data that has concluded that the likelihood of actuation instrumentation and circuitry failures are relatively low. The likelihood for an undetectable failure is not significant. The current frequency of testing has not disclosed a significant failure which would warrant retention of the current frequency. Based on the above, it has been concluded that this change does not represent a significant reduction in a margin of safety.

No Significant Hazards Considerations - NUREG-1431 Section 3.07.10

13-Nov-99

NSHC Number	NSHC Text
L.04	In accordance with the criteria set forth in 10 CFR 50.92, PBNP has evaluated this proposed Technical Specifications change and determined it does not represent a significant hazards consideration. The following is provided in support of this conclusion. 1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated? Excluding the requirement for equipment secured in their required positions to automatically actuate will not significantly change the probability or consequences of previously evaluated accidents since the required safety related function of the equipment has not been altered. 2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated? The proposed change does not require a physical alteration of the plant (no new or different type of equipment will be installed) or changes in parameters governing normal plant operation. The proposed change will still ensure compliance with the limiting condition for operation is maintained. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated. 3. Does this change involve a significant reduction in a margin of safety? To exclude the requirement for automatic actuation capability, the proposed ITS requires the affected equipment to be securing in its required position. By securing the equipment, the affected component is placed in a passive state, and is not required to reposition. Based on the above, it has been concluded that this change does not represent a significant reduction in a margin of safety.

No Significant Hazards Considerations - NUREG-1431 Section 3.07.10

13-Nov-99

NSHC Number	NSHC Text
L.05	In accordance with the criteria set forth in 10 CFR 50.92, PBNP has evaluated this proposed Technical Specifications change and determined it does not represent a significant hazards consideration. The following is provided in support of this conclusion. 1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated? The proposed change involves a reduction in the minimum run time requirement for the control room emergency charcoal filtration unit. Run time will be reduced from 10 hours to 15 minutes every 31 days based on the absence of charcoal filter unit heaters. Surveillance test duration is not a precursor to any analyzed accident; therefore, the probability for previously evaluated event is not significantly altered. Filtration unit heaters are installed in some designs to reduce the relative humidity of the incoming air, reducing the moisture levels which the charcoal is exposed to, as well as removing or reducing any moisture which may have accumulated in the charcoal between surveillance tests. The Point Beach control room emergency charcoal filter unit does not have installed heaters. Therefore, reducing the run time will not significantly change charcoal moisture levels. Accordingly, the proposed change does not involve a significant increase in the consequences of any accident previously evaluated. 2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated? The proposed change does not require a physical alteration of the plant (no new or different type of equipment will be installed) or changes in parameters governing normal plant operation. The proposed change will not impose any different operational configurations. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated. 3. Does this change involve a significant reduction in a margin of safety? The proposed changes do not alter any assumed conditions or limitation in any previously evaluated accidents. Therefore, the margin of safety is unaffected by this change.

No Significant Hazards Considerations - NUREG-1431 Section 3.07.10

13-Nov-99

NSHC Number	NSHC Text
LA	In accordance with the criteria set forth in 10 CFR 50.92, PBNP has evaluated this proposed Technical Specifications change and determined it does not represent a significant hazards consideration. The following is provided in support of this conclusion. 1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated? The proposed change relocates requirements from the Technical Specifications to the Bases, FSAR, or other plant controlled documents. The Bases and FSAR will be maintained using the provisions of 10 CFR 50.59. In addition to 10 CFR 50.59 provisions, the Technical Specifications Bases are subject to the change process in the Administrative Controls Chapter of the ITS. Plant procedures and other plant controlled documents are subject to controls imposed by plant administrative procedures, which endorse applicable regulations and standards. Changes to the Bases, FSAR, or other plant controlled documents will be evaluated in accordance with the requirements of the Bases Control Program in Chapter 5.0 of the ITS, 10 CFR 50.59, or plant administrative processes. Therefore, no increase in the probability or consequences of an accident previously evaluated will be allowed. 2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated? The proposed change does not require a physical alteration of the plant (no new or different type of equipment will be installed) or changes in parameters governing normal plant operation. The proposed change will not impose any different requirements and adequate control of the information will be maintained. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated. 3. Does this change involve a significant reduction in a margin of safety? The proposed change will not reduce a margin of safety because it has no impact on any safety analysis assumptions. In addition, the requirements to be moved from the Technical Specifications to the Bases, FSAR, or other plant controlled documents are as they currently exist. Future changes to the requirements in the Bases, FSAR, or other plant controlled documents will be evaluated in accordance with the requirements of 10 CFR 50.59, the Bases Control Program in Chapter 5.0 of the ITS, or the applicable plant process and no reduction in a margin of safety will be allowed.

No Significant Hazards Considerations - NUREG-1431 Section 3.07.10

13-Nov-99

NSHC Number	NSHC Text
M	In accordance with the criteria set forth in 10 CFR 50.92, PBNP has evaluated this proposed Technical Specifications change and determined it does not represent a significant hazards consideration. The following is provided in support of this conclusion. 1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated? The proposed change provides more restrictive requirements for operation of the facility. These more stringent requirements do not result in operation that will increase the probability of initiating an analyzed event and do not alter the assumptions relative to the mitigation of an accident or transient event. These more restrictive requirements continue to ensure process variables, structures, systems and components are maintained consistent with the safety analyses. Therefore, this change does not increase the probability or consequences of an accident previously evaluated. 2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated? The proposed change does not require a physical alteration of the plant (no new or different type of equipment will be installed) or changes in parameters governing normal plant operation. The proposed change does impose different requirements. However, these changes are consistent with assumptions made in the safety analysis. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated. 3. Does this change involve a significant reduction in a margin of safety? The imposition of more restrictive requirements either has no affect on or increases the margin of safety. Each change is providing additional restrictions to enhance plant safety. These changes are consistent with the safety analysis. Therefore, this change does not involve a reduction in a margin of safety.

3.7 PLANT SYSTEMS

3.7.9 Control Room Emergency Filtration System (CREFS)

LCO 3.7.9 CREFS shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, 4,
During movement of irradiated fuel assemblies,
During CORE ALTERATIONS.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. CREFS inoperable.	A.1	Restore CREFS to OPERABLE status.	7 days
B. Required Action and associated Completion Time not met.	B.1	Suspend CORE ALTERATIONS.	Immediately
	AND		
	B.2	Suspend movement of irradiated fuel assemblies.	Immediately
	AND		
	B.3	Be in MODE 3.	6 hours
	AND		
	B.4	Be in MODE 5.	36 hours

SUREVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.9.1	Operate the CREFS for $\geq$ 15 minutes.	31 days

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.7.9.2	Perform required CREFS filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with VFTP
SR 3.7.9.3	Verify each CREFS emergency make-up fan actuates on an actual or simulated actuation signal.	18 months
SR 3.7.9.4	Verify each CREFS automatic damper in the emergency mode flow path that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.	18 months
SR 3.7.9.5	Verify CREFS manual start capability and alignment.	18 months
SR 3.7.9.6	Verify each CREFS emergency make-up fan can maintain a positive pressure of $\geq$ 0.125 inches water gauge in the control room envelope, relative to the adjacent turbine building during the emergency mode of operation at a makeup flow rate of $\pm$ 10% of system design.	18 months

B 3.7 PLANT SYSTEMS

B 3.7.9 Control Room Emergency Filtration System (CREFS)

BASES

BACKGROUND

The CREFS provides a protected environment from which operators can control the unit following an uncontrolled release of radioactivity.

The CREFS consists of: one emergency make-up air filtration unit, two emergency make-up fans, two recirculation fans, and the required ducts and dampers necessary to establish the required flow paths and isolation boundaries. The CREFS is an emergency system, parts of which operate during normal unit operations. The CREFS has four modes of operation.

- Mode 1 (normal operation) - One of the two recirculation fans (W-13B1 or W-13B2) are in operation. Outside air is supplied from an intake penthouse located on the roof of the auxiliary building at a rate of approximately 1000 cfm (5% of system design flow) via damper VNCR-4849C which is throttled to a predetermined position. The make-up air combines with return air from the control room and computer room then passing through a HEPA filter (F-43) and cooling units (HX-100 A&B) before entering the recirculation fan. Filtered and cooled air is supplied to the mechanical equipment room and through separate heating coils (HX-92 and HX-91 A&B), and humidifiers (Z-78 and Z-77) to the computer and control rooms respectively. Room thermostats and humidistats control the operation of the heating coils, chilled water system, and humidifiers. The control room heating, cooling, and humidification systems are not required to demonstrate compliance with the control room habitability limits of 10 CFR 50 Appendix A, GDC-19 as required by NUREG-0737, Item III.D.3.4. The computer room is supplied with supplementary cooling during normal operation via supplementary air conditioning units (W-107A/HX-190A/HX-191A or W-107B/HX-190B/HX-191B). Nominally, the control room washroom exhaust fan (W-15) is also in operation. Operation of the Control Room Ventilation System in Mode 1 (normal operation) is not assumed for control room habitability, and is therefore not a Technical Specification required mode of operation.

- Mode 2 (recirculation operation) - 100% of the control room and computer room air is recirculated. In this mode, the outside air damper (VNCR-4849C) is closed and the control

BACKGROUND (continued)

room washroom exhaust fan is de-energized. Recirculation can be automatically initiated by a Containment Isolation or Safety Injection signal, or can be manually initiated from the control room. Operation of the Control Room Ventilation System in Mode 2 (recirculation) is not assumed for control room habitability, and is therefore not a Technical Specification required mode of operation.

- Mode 3 (recirculation/charcoal adsorber operation) - One of two control room emergency make-up fans (W-14A or W-14B) is in operation and air is supplied to the emergency make-up charcoal filter unit (F-16) via the computer and control room return air duct (damper VNCR-4851B). The normal outside air supply is secured (damper VNCR-4849C closed) and the control room washroom exhaust fan is de-energized. In this mode approximately 25% of the return air is being recirculated by the emergency make-up charcoal filter unit back to the suction of the control room recirculation fans. Recirculation/charcoal adsorber mode is manually initiated from the control room. Operation of the Control Room Ventilation System in Mode 3 (recirculation/charcoal adsorber mode) is not assumed for control room habitability, and is therefore not a Technical Specification required mode of operation.

- Mode 4 (emergency make-up) - Operation in this mode is similar to Mode 3 except return air inlet damper VNCR-4851B to the emergency fans remains closed and outside air supply to the emergency make-up charcoal filter unit opens (damper VNCR-4851A). This allows approximately 4950 cfm (25% of system design flow) of make-up air to pass through the emergency make-up charcoal filter unit to the suction of the control room recirculation fan. This make-up flow rate is sufficient to assure a positive pressure of $\geq$ 1/8 in. water gage is maintained in the control and computer rooms to prevent excessive unfiltered in-leakage into the control room ventilation boundary. Mode 4 (emergency make-up) is automatically initiated by a high radiation signal from the control room area monitor RE-101, or a high radiation signal from noble gas monitor RE-235 located in the supply duct to the control room. This mode of operation can also be manually initiated from the control room. Operation of the Control Room Ventilation System in Mode 4 (emergency make-up) is the assumed mode of operation for the control room

BASES

BACKGROUND (continued)

habitability analysis, and is therefore the only mode of operation addressed by this LCO.

The air entering the control room is continuously monitored by noble gas radiation monitors and the control room itself is continuously monitored by an area radiation monitor. One detector output above its setpoint will actuate the emergency make-up mode of operation (Mode 4) for the CREFS.

The limiting design basis accident for the control room dose analysis is the large break LOCA. CREFS does not automatically restart after being load shed following a loss of offsite power; manual action is required to restart CREFS. The control room emergency make-up and recirculation fans have been included in the emergency diesel generator loading profile during the recirculation phase of a loss of coolant accident.

The CREFS will pressurize the control and computer rooms to at least 0.125 inches water gauge in the emergency make-up mode of operation. The CREFS role in maintaining the control room habitable is discussed in the FSAR, Section 9.8 (Ref. 1).

APPLICABLE SAFETY ANALYSIS

The CREFS provides airborne radiological protection for control room personnel, as demonstra ted by the limiting control room dose analyses for the design basis large break loss of coolant accident. Control room dose analysis assumptions are presented in the FSAR, Section 14.3.5 (Ref. 2).

The analyses for radiological consequences in the control room are based on operation of CREFS in the emergency make-up mode (Mode 4). The radiological effects in the control room, of the stopping and subsequent restart of CREFS after a loss of offsite power would not be significantly greater than the doses associated with continuous operation of CREFS post-accident, based on the following:

(1) The control room would start from positive pressurization because the system normally runs in a positive pressurization mode (Mode 1).

BASES

APPLICABLE SAFETY ANALYSIS (continued)

(2) During the loss of ventilation, the air inside the control room would heat up and expand, which would continue to enhance outflow, minimizing in-leakage.

(3) The control room would normally be closed which reduces in-leakage.

(4) The control room ventilation system damper positions would automatically reposition to the emergency make-up configuration (Mode 4). Therefore, if any in-leakage through the control room intake occurred, it would be filtered at the same or higher efficiency assumed in the analysis.

(5) Noble gases would not be drawn into the control room by the control room charcoal filter fan.

The CREFS satisfies Criterion 3 of the NRC Policy Statement.

LCO

The CREFS (Mode 4) is required to be OPERABLE to ensure that the control room habitability limits are met following a limiting design basis LOCA. Total system failure could result in exceeding the control room operator thyroid dose limit of 30 rem in the event of a large radioactive release. The CREFS is considered OPERABLE when the individual components necessary to filter and limit control room in-leakage are OPERABLE. CREFS is considered OPERABLE when:

a. Both emergency make-up fans (W-14A and W-14B) are OPERABLE;

b. Both recirculation fans (W-13B1 and W-13B2) are OPERABLE;

c. Emergency make-up filter unit (F -16), HEPA filters and charcoal adsorbers are not excessively restricting flow, and are capable of performing their filtration functions;

d. Control room ventilation envelope is capable of achieving and maintaining a positive pressure of at least 0.125 inches water gauge in the emergency make-up mode of operation;

BASES

LCO (continued)

e. Ductwork and dampers are OPERABLE, and air circulation can be maintained; and

f. CREFS is capable of being manually initiated in the emergency make-up mode of operation (Mode 4).

In addition, the control room boundary must be maintained, including the integrity of the walls, floors, ceilings, ductwork, and access doors.

APPLICABILITY

In MODES 1, 2, 3, 4, and during movement of irradiated fuel assemblies and during CORE ALTERATIONS, CREFS must be OPERABLE to control operator exposure during and following a DBA.

During movement of irradiated fuel assemblies and CORE ALTERATIONS, the CREFS must be OPERABLE to cope with the release from a fuel handling accident.

This LCO does not apply to irradiated fuel assemblies placed in the Independent Spent Fuel Storage Installation.

ACTIONS

A.1

When CREFS is inoperable, action must be taken to restore the system to OPERABLE status within 7 days. In this Condition, the remaining OPERABLE CREFS components may be adequate to perform the control room protection function; however, overall reliability may be reduced because a single active failure could result in loss of CREFS function. The 7 day Completion Time is based on the low probability of a DBA challenging control room habitability occurring during this time period.

B.1, B.2, B.3, and B.4

If CREFS cannot be restored to OPERABLE status within the required Completion Time with CORE ALTERATIONS or movement of irradiated fuel in progress, these activities must be suspended immediately. Immediately suspending these

BASES

ACTIONS (continued)

activities places the unit in a condition that minimizes risk from these activities. This does not preclude the movement of fuel to a safe position.
In MODE 1, 2, 3, or 4, if CREFS cannot be restored to OPERABLE status within the required Completion Time, the unit must be placed in a MODE that minimizes accident risk. To achieve this status, the unit must be placed in at least MODE 3 within 6 hours, and in MODE 5 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

SURVEILLANCE REQUIREMENTS

SR 3.7.9.1

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 fan subsystem once every month provides an adequate check of this system. Systems without heaters need only be operated for $\geq$ 15 minutes to demonstrate the function of the system. The 31 day Frequency is based on the reliability of the equipment.

SR 3.7.9.2

This SR verifies that the required CREFS testing is performed in accordance with the Ventilation Filter Testing Program (VFTP). The CREFS filter tests are in accordance with Regulatory Guide 1.52 (Ref. 3). The VFTP includes testing the performance of the HEPA filter, charcoal adsorber efficiency, minimum flow rate, and the physical properties of the activated charcoal. Specific test Frequencies and additional information are discussed in detail in the VFTP.

SR 3.7.9.3

This SR verifies that each CREFS emergency make-up fan starts and operates on an actual or simulated actuation

SURVEILLANCE REQUIREMENTS (continued)

signal. The Frequency of 18 months is specified in Regulatory Guide 1.52 (Ref. 3).

SR 3.7.9.4

This SR verifies that each CREFS automatic damper in the emergency make-up mode flow path will actuate to its required position on a actuation signal. This surveillance is not required for dampers that are locked, sealed, or otherwise secured in their required position under administrative controls. The Frequency of 18 months is specified in Regulatory Guide 1.52 (Ref. 3).

SR 3.7.9.5

This test verifies manual actuation capability for CREFS. Manual actuation capability is a required for OPERABILITY of the CREFS because CREFS does not automatically restart after being load shed following a loss of offsite power. Manual action is required to restart and align the CREFS after a loss of offsite power, which is verified through performance of this SR. The 18 month Frequency is acceptable based on the inherent reliability of manual actuation circuits.

SR 3.7.9.6

This SR verifies the integrity of the control room enclosure. The control room positive pressure, with respect to potentially contaminated adjacent areas, is periodically tested to verify proper functioning of the CREFS. During the emergency mode of operation, the CREFS is designed to pressurize the control room $\geq$ 0.125 inches water gauge positive pressure with respect to adjacent areas in order to minimize unfiltered inleakage. The CREFS is designed to maintain this positive pressure with one emergency make-up fan in operation at a makeup flow rate of $\pm$ 10% of system design (approximately 4950 cfm). The Frequency of 18 months is consistent with the guidance provided in NUREG-0800 (Ref. 4).

REFERENCES

1. FSAR, Section 9.8.

2. FSAR, Section 14.3.5.

3. Regulatory Guide 1.52, Rev. 2.
4. NUREG-0800, Section 6.4, Rev. 2, July 1981.

Justification For Deviations - NUREG-1431 Section 3.07.11

13-Nov-99

JFD Number	JFD Text	
01	NUREG 1431, LCO 3.7.11, Control Room Emergency Air Temperature Control System (CREATCS) has not been adopted as part of the Point Beach conversion to the ITS. The Point Beach CTS does not contain any requirements for CREATC. The Point Beach control room ventilation system is equipped with chiller units; however, these units are not required to maintain control room temperature in the emergency make-up mode of operation. As such, the CREATCS is not part of a primary success path in the mitigation of a DBA or transient.	
	ITS:	**NUREG:**
	N/A	B 3.07.11
		B 3.07.11
		LCO 3.07.11
		LCO 3.07.11
		LCO 3.07.11 COND A
		LCO 3.07.11 COND A
		LCO 3.07.11 COND A RA A.1
		LCO 3.07.11 COND A RA A.1
		LCO 3.07.11 COND B
		LCO 3.07.11 COND B
		LCO 3.07.11 COND B RA B.1
		LCO 3.07.11 COND B RA B.1
		LCO 3.07.11 COND B RA B.2
		LCO 3.07.11 COND B RA B.2
		LCO 3.07.11 COND C
		LCO 3.07.11 COND C
		LCO 3.07.11 COND C RA C.1
		LCO 3.07.11 COND C RA C.1
		LCO 3.07.11 COND C RA C.2.1
		LCO 3.07.11 COND C RA C.2.1
		LCO 3.07.11 COND C RA C.2.2
		LCO 3.07.11 COND C RA C.2.2
		LCO 3.07.11 COND D
		LCO 3.07.11 COND D
		LCO 3.07.11 COND D RA D.1
		LCO 3.07.11 COND D RA D.1
		LCO 3.07.11 COND D RA D.2

Justification For Deviations - NUREG-1431 Section 3.07.11

13-Nov-99

JFD Number	JFD Text
N/A	LCO 3.07.11 COND D RA D.2
	LCO 3.07.11 COND E
	LCO 3.07.11 COND E
	LCO 3.07.11 COND E RA E.1
	LCO 3.07.11 COND E RA E.1
	SR 3.07.11.01
	SR 3.07.11.01

[1]

3.7 PLANT SYSTEMS

3.7.11 Control Room Emergency Air Temperature Control System (CREATCS)

LCO 3.7.11 Two CREATCS trains shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, 4, [5, and 6,]
During movement of irradiated fuel assemblies,
[During CORE ALTERATIONS].

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One CREATCS train inoperable.	A.1	Restore CREATCS train to OPERABLE status.	30 days
B. Required Action and associated Completion Time of Condition A not met in MODE 1, 2, 3, or 4.	B.1 AND	Be in MODE 3.	6 hours
	B.2	Be in MODE 5.	36 hours
C. Required Action and associated Completion Time of Condition A not met [in MODE 5 or 6, or] during movement of irradiated fuel assemblies [, or during CORE ALTERATIONS]	C.1 OR	Place OPERABLE CREATCS train in operation.	Immediately
	[C.2.1 AND	Suspend CORE ALTERATIONS.	Immediately]
	C.2.[2]	Suspend movement of irradiated fuel assemblies.	Immediately

(continued)

Justification For Deviations - NUREG-1431 Section 3.07.12

13-Nov-99

JFD Number	JFD Text
01	The Point Beach CTS does not contain any Specifications which require operability of the auxiliary building ventilation system or it's associated charcoal filter subsystem. Operation of auxiliary building ventilation systems is not assumed in the mitigation of any Point Beach Design Basis Accident (DBA) or transient. The Point Beach auxiliary building ventilation system consists of two major subsystems; a charcoal filter exhaust subsystem which services areas of the building subject to possible radioactive contamination, and a general area subsystem which services all other areas. During normal operation, the charcoal filter subsystem exhaust air bypasses the charcoal filter banks through a high efficiency filter unit to the auxiliary building filter fans, which exhaust to the auxiliary building exhaust stack via the exhaust stack fans. Upon receipt of an auxiliary building exhaust high radiation signal, exhaust air will be diverted around the high efficiency filter unit through the charcoal filter banks. However, as previously stated, operation of auxiliary building ventilation system inclusive of the charcoal filter subsystem is not assumed in the mitigation of any DBA or transient. Accordingly, NUREG 1431, LCO 3.7.12, Emergency Core Cooling System (ECCS) Pump Room Exhaust Air Cleanup System (PREACS), has not been adopted as part of the Point Beach conversion to the ITS. **ITS:** N/A **NUREG:** B 3.07.12 LCO 3.07.12 LCO 3.07.12 COND A LCO 3.07.12 COND A RA A.1 LCO 3.07.12 COND B LCO 3.07.12 COND B RA B.1 LCO 3.07.12 COND B RA B.2 SR 3.07.12.01 SR 3.07.12.02 SR 3.07.12.03 SR 3.07.12.04 SR 3.07.12.05

1

3.7 PLANT SYSTEMS

3.7.12 Emergency Core Cooling System (ECCS) Pump Room Exhaust Air Cleanup System (PREACS)

LCO 3.7.12 Two ECCS PREACS trains shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One ECCS PREACS train inoperable.	A.1 Restore ECCS PREACS train to OPERABLE status.	7 days
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. AND	6 hours
	B.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.7.12.1 Operate each ECCS PREACS train for [≥ 10 continuous hours with the heaters operating or (for systems without heaters) ≥ 15 minutes].	31 days

(continued)

Justification For Deviations - NUREG-1431 Section 3.07.13

13-Nov-99

JFD Number	JFD Text

01

The Point Beach CTS does not contain any Specifications which require operability of the drumming station area ventilation system or it's associated spent fuel pit ventilation system. Operation of these ventilation systems is not assumed in the mitigation of any Point Beach Design Basis Accident (DBA) or transient.

The Point Beach spent fuel pit general area is supplied with air from the drumming station area ventilation supply fans. The spent fuel pit supply fans then take suction on the general area, discharging air across the fuel pit surface. Air from above the spent fuel pit is drawn through a high efficiency filter unit by the spent fuel pit exhaust fans, which then exhausts to the auxiliary building exhaust stack. There are no charcoal filter banks installed in the exhaust air flowpath.

Accordingly, NUREG 1431, LCO 3.7.13, Fuel Building Air Cleanup System (FBACS), has not been adopted as part of the Point Beach conversion to the ITS.

ITS:	NUREG:
N/A	B 3.07.13
	LCO 3.07.13
	LCO 3.07.13 COND A
	LCO 3.07.13 COND A RA A.1
	LCO 3.07.13 COND B
	LCO 3.07.13 COND B RA B.1
	LCO 3.07.13 COND B RA B.2
	LCO 3.07.13 COND C
	LCO 3.07.13 COND C RA C.1
	LCO 3.07.13 COND C RA C.2
	LCO 3.07.13 COND D
	LCO 3.07.13 COND D RA D.1
	SR 3.07.13.01
	SR 3.07.13.02
	SR 3.07.13.03
	SR 3.07.13.04
	SR 3.07.13.05

1

3.7 PLANT SYSTEMS

3.7.13 Fuel Building Air Cleanup System (FBACS)

LCO 3.7.13 Two FBACS trains shall be OPERABLE.

APPLICABILITY: [MODES 1, 2, 3, and 4,]
During movement of irradiated fuel assemblies in the fuel building.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One FBACS train inoperable.	A.1	Restore FBACS train to OPERABLE status.	7 days
B. Required Action and associated Completion Time of Condition A not met in MODE 1, 2, 3, or 4. OR Two FBACS trains inoperable in MODE 1, 2, 3, or 4.	B.1 AND B.2	Be in MODE 3. Be in MODE 5.	6 hours 36 hours
C. Required Action and associated Completion Time [of Condition A] not met during movement of irradiated fuel assemblies in the fuel building.	C.1 OR C.2	Place OPERABLE FBACS train in operation. Suspend movement of irradiated fuel assemblies in the fuel building.	Immediately Immediately

(continued)

Justification For Deviations - NUREG-1431 Section 3.07.14

13-Nov-99

JFD Number	JFD Text

01

The Point Beach CTS does not contain any Specifications which require operability of the auxiliary building ventilation system or it's associated charcoal filter subsystem. Operation of auxiliary building ventilation systems is not assumed in the mitigation of any Point Beach Design Basis Accident (DBA) or transient.

The Point Beach auxiliary building ventilation system consists of two major subsystems; a charcoal filter exhaust subsystem which services areas of the building subject to possible radioactive contamination, and a general area subsystem which services all other areas. During normal operation, the charcoal filter subsystem exhaust air bypasses the charcoal filter banks through a high efficiency filter unit to the auxiliary building filter fans, which exhaust to the auxiliary building exhaust stack via the exhaust stack fans. Upon receipt of an auxiliary building exhaust high radiation signal, exhaust air will be diverted around the high efficiency filter unit through the charcoal filter banks. However, as previously stated, operation of auxiliary building ventilation system inclusive of the charcoal filter subsystem is not assumed in the mitigation of any DBA or transient.

Accordingly, NUREG 1431, LCO 3.7.14, Penetration Room Exhaust Air Cleanup System (PREACS), has not been adopted as part of the Point Beach conversion to the ITS.

ITS:	NUREG:
N/A	B 3.07.14
	LCO 3.07.14
	LCO 3.07.14 COND A
	LCO 3.07.14 COND A RA A.1
	LCO 3.07.14 COND B
	LCO 3.07.14 COND B RA B.1
	LCO 3.07.14 COND B RA B.2
	SR 3.07.14.01
	SR 3.07.14.02
	SR 3.07.14.03
	SR 3.07.14.04
	SR 3.07.14.05

[1]

3.7 PLANT SYSTEMS

3.7.14 Penetration Room Exhaust Air Cleanup System (PREACS)

LCO 3.7.14 Two PREACS trains shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One PREACS train inoperable.	A.1 Restore PREACS train to OPERABLE status.	7 days
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. AND	6 hours
	B.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.14.1	Operate each PREACS train for [≥ 10 continuous hours with heaters operating or (for systems without heaters) ≥ 15 minutes].	31 days
SR 3.7.14.2	Perform required PREACS filter testing in accordance with the [Ventilation Filter Testing Program (VFTP)].	In accordance with the [VFTP]

(continued)

Cross-Reference Report - NUREG-1431 Section 3.07.15

ITS to CTS

13-Nov-99

ITS	CTS	DOC
B 3.07.10	NEW	M.01
	NEW	A.02
LCO 3.07.10	NEW	M.01
LCO 3.07.10 COND A	NEW	M.01
LCO 3.07.10 COND A RA A.1	NEW	M.01
LCO 3.07.10 COND A RA A.1 NOTE	NEW	M.01
SR 3.07.10.01	15.04.01 T 15.04.01-02 07 (B)	M.01
	15.04.01 T 15.04.01-02 07 (B)	A.01

Cross-Reference Report - NUREG-1431 Section 3.07.15

CTS to ITS

13-Nov-99

CTS	ITS	DOC
15.04.01 T 15.04.01-02 07 (B)	SR 3.07.10.01	M.01
	SR 3.07.10.01	A.01

Description of Changes - NUREG-1431 Section 3.07.15

13-Nov-99

DOC Number	DOC Text	
A.01	In the conversion of Point Beach current Technical Specifications (CTS) to the proposed plant specific Improved Technical Specifications (ITS), certain wording preferences or conventions are adopted which do not result in technical changes (either actual or interpretational). Editorial changes, reformatting, and revised numbering are adopted to make the ITS consistent with the Standard Technical Specifications, Westinghouse Plants, NUREG-1431, Revision 1 (i.e., Improved Standard Technical Specifications (ISTS)).	
	CTS:	**ITS:**
	15.04.01 T 15.04.01-02 07 (B)	SR 3.07.10.01
A.02	The current Technical Specifications do not contain any Bases for this section. As such, proposed Bases have been provided consistent with the Point Beach design and licensing basis. The proposed Bases are consistent with the format and content of the Standard Technical Specifications for Westinghouse Plants, NUREG-1431, as well as the proposed Point Beach ITS. The revised Bases are as shown in the PBNP ITS Bases.	
	CTS:	**ITS:**
	NEW	B 3.07.10

Description of Changes - NUREG-1431 Section 3.07.15

13-Nov-99

DOC Number	DOC Text

M.01 CTS Table 15.4.1-2, line item 7b, requires spent fuel pit water level to be verified once per week, but does not contain an LCO, Applicability, Required Actions, or an acceptance criteria for the test.

Spent fuel pool water level is assumed in the dose calculations associated with a fuel handling accident (specifically dropping of an irradiated assembly). Water level is assumed for iodine retention in the fuel pool water, thereby reducing the amount of iodine released to the environs. As such, ITS LCO 3.7.10 is being proposed for incorporation, consistent with the Point Beach accident analysis assumptions and with NUREG 1431, LCO 3.7.15, Fuel Storage Pool Water Level.

The proposed Applicability, during movement of irradiated fuel in the fuel storage pool, and the Required Actions which suspend movement immediately, are consistent with the bounding conditions and accident analysis assumptions for the fuel handling accident. Completion of fuel movement to place the assembly in a safe location after entry into this Condition is permitted, as addressed in the Bases. Similarly, verifying spent fuel pool water level to be greater than or equal to 23 feet above the top of irradiated fuel assemblies seated in the storage racks once per seven days, provides assurance that fuel pool water level will be sufficient to provide the assumed iodine retention.

CTS:	ITS:
15.04.01 T 15.04.01-02 07 (B)	SR 3.07.10.01
NEW	B 3.07.10
	B 3.07.10
	B 3.07.10
	LCO 3.07.10
	LCO 3.07.10 COND A
	LCO 3.07.10 COND A RA A.1
	LCO 3.07.10 COND A RA A.1 NOTE

Add LCO and Required Actions for spent fuel pool water level

TABLE 15.4.1-2 (Continued)

Spec 3.7.15
Page 1 of 2

A.1

Bases added consistent with NUREG 1431, LCO 3.7.15 — A.2

SR 3.7.10.1 — M.1

	Test	Frequency
7. Spent Fuel Pit	a) Boron Concentration	Monthly
	b) Water Level Verification	Weekly

< See LCO 3.7.16 >

8. Secondary Coolant < See LCO 3.7.18 >	Gross Beta-gamma Activity or gamma isotopic analysis		Weekly[6]
	Iodine concentration		Weekly when gross Beta-gamma activity equals or exceeds 1.0 mCi/g [6]
9. Control Rods < See Section 3.1 >	a) Rod drop times of all full length rods [3]		Each refueling or after maintenance that could affect proper functioning [4]
	b) Rodworth measurement shutdown prior to		Following each refueling commencing power operation
10. Control Rod	Partial movement of all rods		Every 2 weeks [18]
11. Pressurizer Safety Valves	Set point	< See Section 3.4 >	Every five years [11]
12. Main Steam Safety Valves	Set Point	< See Section 3.7 >	Every five years [11]
13. Containment Isolation Trip	F	< See Section 3.6/LCO 3.7.2 >	Each refueling shutdown
14. Refueling System Interlocks	Functioning	< See Section 3.9 >	Each refueling shutdown
15. Service Water System	Functioning	< See LCO 3.7.8 >	Each refueling shutdown
16. Primary System Leakage	Evaluate	< See Section 3.4 >	Monthly [6]
17. Diesel Fuel Supply	Fuel inventory	< See Section 3.8 >	Daily
18. Deleted			
19. Deleted			
20. Boric Acid System < See Section 3.5 >	Storage Tank and piping temperatures [3] temperature required by Table 15.3.2-1		Daily[19]

LCO 3.7.15 CTS INSERTS

Insert 3.7.15-1:

3.7.10 Fuel Storage Pool Water Level

M.1

LCO 3.7.10 The fuel storage pool water level shall be ≥ 23 ft over the top of irradiated fuel assemblies seated in the storage racks.

APPLICABILITY: During movement of irradiated fuel assemblies in the fuel storage pool.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Fuel storage pool water level not within limit.	A.1 --------NOTE-------- LCO 3.0.3 is not applicable. ---------- Suspend movement of irradiated fuel assemblies in the fuel storage pool.	Immediately

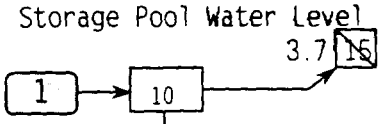
SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.10.1	Verify the fuel storage pool water level is ≥ 23 ft above the top of the irradiated fuel assemblies seated in the storage racks.	7 days

Justification For Deviations - NUREG-1431 Section 3.07.15

13-Nov-99

JFD Number	JFD Text	
01	NUREG 1431 LCO 3.7.9 and LCOs 3.7.11 through 3.7.14 have not been adopted as part of the Point Beach conversion to the ITS. As such, NUREG 1431 LCO 3.7.15 has been renumbered to maintain sequential order in the Plant Systems Chapter.	
	ITS:	**NUREG:**
	B 3.07.10	B 3.07.15
	LCO 3.07.10	LCO 3.07.15
	SR 3.07.10.01	SR 3.07.15.01
		SR 3.07.15.01
02	The brackets have been removed and the proper plant specific information has been provided.	
	ITS:	**NUREG:**
	B 3.07.10	B 3.07.15
		B 3.07.15
03	The Bases for NUREG 1431 SR 3.7.15.1 states that "Refueling Canal" water level is verified daily in accordance with SR 3.9.6.1, when in actuality, SR 3.9.6.1 requires verification of "Refueling Cavity" water level. Bases terminology has been changed to eliminate this discrepancy.	
	ITS:	**NUREG:**
	B 3.07.10	B 3.07.15



3.7 PLANT SYSTEMS

3.7.15 Fuel Storage Pool Water Level

LCO 3.7.15 The fuel storage pool water level shall be $\geq$ 23 ft over the top of irradiated fuel assemblies seated in the storage racks.

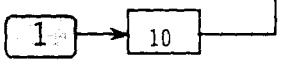
APPLICABILITY: During movement of irradiated fuel assemblies in the fuel storage pool.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Fuel storage pool water level not within limit.	A.1 --------NOTE--------- LCO 3.0.3 is not applicable. ---------- Suspend movement of irradiated fuel assemblies in the fuel storage pool.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.7.15.1 Verify the fuel storage pool water level is $\geq$ 23 ft above the top of the irradiated fuel assemblies seated in the storage racks.	7 days



1

B 3.7 PLANT SYSTEMS

10

B 3.7.15 Fuel Storage Pool Water Level

BASES

BACKGROUND

The minimum water level in the fuel storage pool meets the assumptions of iodine decontamination factors following a fuel handling accident. The specified water level shields and minimizes the general area dose when the storage racks are filled to their maximum capacity. The water also provides shielding during the movement of spent fuel.

9.4

2

9.9

14.2.1

A general description of the fuel storage p ool design is given in the FSAR, Section [9.1.2] (Ref. 1). A description of the Spent Fuel Pool Cooling and Cleanup System is given in the FSAR, Section [9.1.3] (Ref. 2). The assumptions of the fuel handling accident are given in the FSAR, Section [15.7.4] (Ref. 3).

APPLICABLE SAFETY ANALYSES

The minimum water level in the fuel st orage pool meets the assumptions of the fuel handling accident described in Regulatory Guide 1.25 (Ref. 4). The resultant 2 hour thyroid dose per person at the exclusion area boundary is a small fraction of the 10 CFR 100 (Ref. 5) limits.

According to Reference 4, there is 23 ft of water between the top of the damaged fuel bundle and the fuel pool surface during a fuel handling accident. With 23 ft of water, the assumptions of Reference 4 can be used directly. In practice, this LCO preserves this assumption for the bulk of the fuel in the storage racks. In the case of a single bundle dropped and lying horizontally on top of the spent fuel racks, however, there may be < 23 ft of water above the top of the fuel bundle and the surface, indicated by the width of the bundle. To offset this small nonconservatism, the analysis assumes that all fuel rods fail, although analysis shows that only the first few rows fail from a hypothetical maximum drop.

Approved TSTF 139, R.1

Criteria 2 and 3

The fuel storage pool water level satisfies ~~Criterion 2~~ of the NRC Policy Statement.

BASES

LCO

The fuel storage pool water level is required to be $\geq$ 23 ft over the top of irradiated fuel assemblies seated in the storage racks. The specified water level preserves the assumptions of the fuel handling accident analysis (Ref. 3). As such, it is the minimum required for fuel storage and movement within the fuel storage pool.

APPLICABILITY

This LCO applies during movement of irradiated fuel assemblies in the fuel storage pool, since the potential for a release of fission products exists.

ACTIONS

A.1

Required Action A.1 is modified by a Note indicating that LCO 3.0.3 does not apply.

When the initial conditions for prevention of an accident cannot be met, steps should be taken to preclude the accident from occurring. When the fuel storage pool water level is lower than the required level, the movement of irradiated fuel assemblies in the fuel storage pool is immediately suspended to a safe position. This action effectively precludes the occurrence of a fuel handling accident. This does not preclude movement of a fuel assembly to a safe position.

If moving irradiated fuel assemblies while in MODE 5 or 6, LCO 3.0.3 would not specify any action. If moving irradiated fuel assemblies while in MODES 1, 2, 3, and 4, the fuel movement is independent of reactor operations. Therefore, inability to suspend movement of irradiated fuel assemblies is not sufficient reason to require a reactor shutdown.

SURVEILLANCE REQUIREMENTS

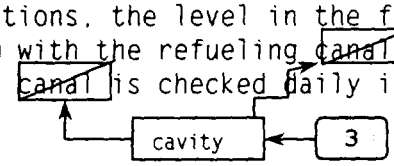
10 ← 1

SR 3.7.15.1

This SR verifies sufficient fuel storage pool water is available in the event of a fuel handling accident. The water level in the fuel storage pool must be checked

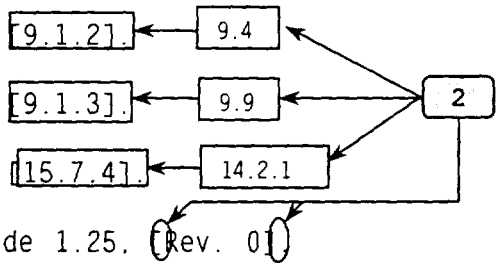
periodically. The 7 day Frequency is appropriate because the volume in the pool is normally stable. Water level changes are controlled by plant procedures and are acceptable based on operating experience.

During refueling operations, the level in the fuel storage pool is in equilibrium with the refueling canal and the level in the refueling canal is checked daily in accordance with SR 3.9.6.1.



REFERENCES

1. FSAR, Section [9.1.2].
2. FSAR, Section [9.1.3].
3. FSAR, Section [15.7.4].
4. Regulatory Guide 1.25, [Rev. 0]
5. 10 CFR 100.11.



No Significant Hazards Considerations - NUREG-1431 Section 3.07.15

13-Nov-99

NSHC Number	NSHC Text
A	In accordance with the criteria set forth in 10 CFR 50.92, PBNP has evaluated this proposed Technical Specifications change and determined it does not represent a significant hazards consideration. The following is provided in support of this conclusion. 1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated? The proposed change involves reformatting and rewording of the current Technical Specifications. The reformatting and rewording process involves no technical changes to existing requirements. As such, this change is administrative in nature and does not impact initiators of analyzed events or assumed mitigation of accident or transient events. Therefore, this change does not increase the probability or consequences of an accident previously evaluated. 2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated? The proposed change does not require a physical alteration of the plant (no new or different type of equipment will be installed) or changes in parameters governing normal plant operation. The proposed change will not impose any new or eliminate any old requirements. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated. 3. Does this change involve a significant reduction in a margin of safety? The proposed change will not significantly reduce the margin of safety because it has no impact on any safety analysis assumptions. This change is administrative. As such, there is no technical change to the requirements and, therefore, there is no reduction in the margin of safety.

No Significant Hazards Considerations - NUREG-1431 Section 3.07.15

13-Nov-99

NSHC Number	NSHC Text
M	In accordance with the criteria set forth in 10 CFR 50.92, PBNP has evaluated this proposed Technical Specifications change and determined it does not represent a significant hazards consideration. The following is provided in support of this conclusion. 1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated? The proposed change provides more restrictive requirements for operation of the facility. These more stringent requirements do not result in operation that will increase the probability of initiating an analyzed event and do not alter the assumptions relative to the mitigation of an accident or transient event. These more restrictive requirements continue to ensure process variables, structures, systems and components are maintained consistent with the safety analyses. Therefore, this change does not increase the probability or consequences of an accident previously evaluated. 2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated? The proposed change does not require a physical alteration of the plant (no new or different type of equipment will be installed) or changes in parameters governing normal plant operation. The proposed change does impose different requirements. However, these changes are consistent with assumptions made in the safety analysis. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated. 3. Does this change involve a significant reduction in a margin of safety? The imposition of more restrictive requirements either has no affect on or increases the margin of safety. Each change is providing additional restrictions to enhance plant safety. These changes are consistent with the safety analysis. Therefore, this change does not involve a reduction in a margin of safety.

3.7 PLANT SYSTEMS

3.7.10 Fuel Storage Pool Water Level

LCO 3.7.10 The fuel storage pool water level shall be $\geq$ 23 ft over the top of irradiated fuel assemblies seated in the storage racks.

APPLICABILITY: During movement of irradiated fuel assemblies in the fuel storage pool.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Fuel storage pool water level not within limit.	A.1 --------NOTE-------- LCO 3.0.3 is not applicable. ---------- Suspend movement of irradiated fuel assemblies in the fuel storage pool.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.10.1	Verify the fuel storage pool water level is $\geq$ 23 ft above the top of the irradiated fuel assemblies seated in the storage racks.	7 days

B 3.7 PLANT SYSTEMS

B 3.7.10 Fuel Storage Pool Water Level

BASES

BACKGROUND

The minimum water level in the fuel storage pool meets the assumptions of iodine decontamination factors following a fuel handling accident. The specified water level shields and minimizes the general area dose when the storage racks are filled to their maximum capacity. The water also provides shielding during the movement of spent fuel.

A general description of the fuel st orage pool design is given in the FSAR, Section 9.4 (Ref. 1). A description of the Spent Fuel Pool Cooling and Cleanup System is given in the FSAR, Section 9.9 (Ref. 2). The assumptions of the fuel handling accident are given in the FSAR, Section 14.2.1 (Ref. 3).

APPLICABLE SAFETY ANALYSES

The minimum water level in the fuel storage pool meets the assumptions of the fuel handling accident described in Regulatory Guide 1.25 (Ref. 4). The resultant 2 hour thyroid dose per person at the exclusion area boundary is a small fraction of the 10 CFR 100 (Ref. 5) limits.

According to Reference 4, there is 23 ft of water between the top of the damaged fuel bundle and the fuel pool surface during a fuel handling accident. With 23 ft of water, the assumptions of Reference 4 can be used directly. In practice, this LCO preserves this assumption for the bulk of the fuel in the storage racks. In the case of a single bundle dropped and lying horizontally on top of the spent fuel racks, however, there may be < 23 ft of water above the top of the fuel bundle and the surface, indicated by the width of the bundle. To offset this small nonconservatism, the analysis assumes that all fuel rods fail, although analysis shows that only the first few rows fail from a hypothetical maximum drop.

The fuel storage pool water level satisfies Criteria 2 and 3 of the NRC Policy

BASES

LCO

The fuel storage pool water level is required to be $\geq$ 23 ft over the top of irradiated fuel assemblies seated in the storage racks. The specified water level preserves the assumptions of the fuel handling accident analysis (Ref. 3). As such, it is the minimum required for fuel storage and movement within the fuel storage pool.

APPLICABILITY

This LCO applies during movement of irradiated fuel assemblies in the fuel storage pool, since the potential for a release of fission products exists.

ACTIONS

A.1

Required Action A.1 is modified by a Note indicating that LCO 3.0.3 does not apply.

When the initial conditions for prevention of an accident cannot be met, steps should be taken to preclude the accident from occurring. When the fuel storage pool water level is lower than the required level, the movement of irradiated fuel assemblies in the fuel storage pool is immediately suspended to a safe position. This action effectively precludes the occurrence of a fuel handling accident. This does not preclude movement of a fuel assembly to a safe position.

If moving irradiated fuel assemblies while in MODE 5 or 6, LCO 3.0.3 would not specify any action. If moving irradiated fuel assemblies while in MODES 1, 2, 3, and 4, the fuel movement is independent of reactor operations. Therefore, inability to suspend movement of irradiated fuel assemblies is not sufficient reason to require a reactor shutdown.

SURVEILLANCE REQUIREMENTS

SR 3.7.10.1

This SR verifies sufficient fuel storage pool water is available in the event of a fuel handling accident. The water level in the fuel storage pool must be checked

BASES

SURVEILLANCE REQUIREMENTS (continued)

periodically. The 7 day Frequency is appropriate because the volume in the pool is normally stable. Water level changes are controlled by plant procedures and are acceptable based on operating experience.

During refueling operations, the level in the fuel storage pool is in equilibrium with the refueling canal, and the level in the refueling cavity is checked daily in accordance with SR 3.9.6.1.

REFERENCES

1. FSAR, Section 9.4.

2. FSAR, Section 9.9.

3. FSAR, Section 14.2.1.

4. Regulatory Guide 1.25, Rev. 0.

5. 10 CFR 100.11.

Cross-Reference Report - NUREG-1431 Section 3.07.16

ITS to CTS

13-Nov-99

ITS	CTS	DOC
B 3.07.11	15.05.04 OBJ	A.03
	NEW	A.04
LCO 3.07.11	15.05.04	A.01
	15.05.04 APPL	A.02
	15.05.04.03	A.05
	NEW	A.05
LCO 3.07.11 COND A	NEW	M.01
LCO 3.07.11 COND A RA A.1	NEW	M.01
LCO 3.07.11 COND A RA A.1 NOTE	NEW	M.01
LCO 3.07.11 COND A RA A.2	NEW	M.01
SR 3.07.11.01	15.04.01 T 15.04.01-02 07 (A)	M.02
	15.05.04.03	A.05

Cross-Reference Report - NUREG-1431 Section 3.07.16
CTS to ITS

13-Nov-99

CTS	ITS	DOC
15.04.01 T 15.04.01-02 07 (A)	SR 3.07.11.01	M.02
15.05.04	LCO 3.07.11	A.01
15.05.04 APPL	LCO 3.07.11	A.02
15.05.04 OBJ	B 3.07.11	A.03
15.05.04.03	LCO 3.07.11	A.05
	SR 3.07.11.01	A.05

Description of Changes - NUREG-1431 Section 3.07.16

13-Nov-99

DOC Number	DOC Text	
A.01	In the conversion of Point Beach current Technical Specifications (CTS) to the proposed plant specific Improved Technical Specifications (ITS), certain wording preferences or conventions are adopted which do not result in technical changes (either actual or interpretational). Editorial changes, reformatting, and revised numbering are adopted to make the ITS consistent with the Standard Technical Specifications, Westinghouse Plants, NUREG-1431, Revision 1 (i.e., Improved Standard Technical Specifications (ISTS)).	
	CTS:	**ITS:**
	15.05.04	LCO 3.07.11
A.02	The CTS provides an introductory statement (Applicability) which simply states which systems/components are addressed within a given section. This same information, while worded differently, is contained within the title of each ITS LCO. Accordingly, this change is a change in format with no change in technical requirement.	
	CTS:	**ITS:**
	15.05.04 APPL	LCO 3.07.11
A.03	The CTS provides an introductory statement (Objective) at the beginning of this Section of the Technical Specifications which provides a brief summary of the purpose for this Section. This information is contained in the Bases Section of the ITS. This information does not establish any regulatory requirements for the systems and components addressed within this Section. Accordingly, deletion of this information does not alter any requirement set forth in the Technical Specifications. This change is administrative and consistent with the format and presentation for the ITS as provided in NUREG 1431.	
	CTS:	**ITS:**
	15.05.04 OBJ	B 3.07.11
A.04	The current Technical Specifications do not contain any Bases for this section. As such, proposed Bases have been provided consistent with the Point Beach design and licensing basis as modified by Discussion of Change M.3 of this Section. The proposed Bases are consistent with the format and content the Standard Technical Specifications for Westinghouse Plants, NUREG-1431, as well as the proposed Point Beach ITS. The revised Bases are as shown in the PBNP ITS Bases.	
	CTS:	**ITS:**
	NEW	B 3.07.11
		B 3.07.11
		B 3.07.11
		B 3.07.11
		B 3.07.11

Description of Changes - NUREG-1431 Section 3.07.16

13-Nov-99

DOC Number	DOC Text

A.05 CTS 15.5.4.3 specifies a minimum boron concentration of 1800 ppm boron whenever there are spent fuel assemblies in the storage pool. Proposed ITS LCO 3.7.11 will require a minimum fuel pool boron concentration of 1800 ppm whenever fuel assemblies are stored in the spent fuel pool. As such the CTS and the ITS are equivalent and appropriate for the Point Beach design and licensing basis as discussed below:

The Point Beach spent fuel storage racks are designed to allow storage of fuel with a maximum enrichment of 4.6 wt% U-235. Fuel with enrichments > 4.6 wt% may be stored as well, but must contain Integral Fuel Burnable Absorber (IFBA) to ensure a maximum keff of 0.95 based on the use of unborated water. However, the spent fuel pool keff storage limit of 0.95 can be exceeded as a result of an excessive pool cooldown or the inadvertent placement of a highly enriched fuel assembly between a storage rack module and the wall of the spent fuel pool. The spent fuel pool keff storage limit of 0.95 is maintained during these events by maintaining a minimum boron concentration of 700 ppm as addressed in NRC SER dated September 4, 1997, which approved increasing the fuel assembly enrichment storage capability for Point Beach. The specified concentration of 1800 ppm provides significant margin to the boron concentration used in the analyses of the potential critical accident scenarios as described above. The proposed Applicability for this LCO "whenever any fuel assembly is stored in the spent fuel storage pool" encompasses movement of fuel assemblies in the fuel storage pool, relative to inadvertent placement of a fuel assembly as well as excessive cooldown events. Accordingly, the proposed Applicability envelopes the initiating conditions for the accidents described above, while the limitations provide significant margin to the analysis limit.

CTS:	ITS:
15.05.04.03	LCO 3.07.11
	SR 3.07.11.01
NEW	LCO 3.07.11
	LCO 3.07.11

Description of Changes - NUREG-1431 Section 3.07.16

13-Nov-99

DOC Number	DOC Text

M.01 Required Actions for spent fuel pool boron concentration not within limits is being added. Therefore Required Actions A.1 and A.2.1 contained in NUREG 1431 LCO 3.7.16, "Fuel Storage Boron Concentration" have been adopted. Adoption of these actions is appropriate for Point Beach as discussed below:

Required Action A.1 requires suspending movement of fuel assemblies if the concentration of boron in the fuel storage pool is less than 1800 ppm. By suspending movement of fuel, inadvertent placement of a fuel assembly between a fuel storage rack module and the wall of the spent fuel pool is precluded. This Action is not intended to preclude movement of a fuel assembly to a safe position.

Required Action A.2 requires immediate action to be taken to restore boron concentration in the fuel storage pool to > 1800 ppm to assure protection from excessive fuel pool cooldown reactivity insertion events. Restoration of boron concentration could take several hours or days depending on the magnitude of change required, which may involve feed and bleed operations. Immediate initiation of action is warranted based on the importance of maintaining keff of the spent fuel pool < 0.95. However, for minor deviations in boron concentration, significant margin exists to the analysis limit of 700 ppm.

CTS:	ITS:
NEW	LCO 3.07.11 COND A
	LCO 3.07.11 COND A RA A.1
	LCO 3.07.11 COND A RA A.1 NOTE
	LCO 3.07.11 COND A RA A.2

M.02 CTS Table 15.4.1-2 line item 7 requires spent fuel boron concentration to be verified once every month. Proposed SR 3.7.11.1 will require verification of boron concentration once every 7 days. The proposed frequency is more restrictive that the CTS consistent with the required frequency of performing NUREG 1431 SR 3.7.16.1.
The 7 day Frequency is conservative based on the pool volume and the potential for an uncontrolled or unmonitored dilution.

CTS:	ITS:
15.04.01 T 15.04.01-02 07 (A)	SR 3.07.11.01

Add Required Actions for spent fuel pool boron concentration

A.1

Spec 3.7.16
Page 1 of 2

SR 3.7.11.1

M.1

M.2

TABLE 15.4.1-2 (Continued)

		Test	Frequency
7.	Spent Fuel Pit	a) Boron Concentration	Monthly ← 7 days
		b) Water Level Verification	Weekly < See LCO 3.7.15 >
8.	Secondary Coolant < See LCO 3.7.18 >	Gross Beta-gamma Activity or gamma isotopic analysis	Weekly[6]
		Iodine concentration	Weekly when gross Beta-gamma activity equals or exceeds 1.0 mCi/g [6]
9.	Control Rods < See Section 3.1 >	a) Rod drop times of all full length rods [3]	Each refueling or after maintenance that could affect proper functioning [4]
		b) Rodworth measurement shutdown prior to	Following each refueling commencing power operation
10.	Control Rod	Partial movement of all rods	Every 2 weeks [18]
11.	Pressurizer Safety Valves	Set point < See Section 3.4 >	Every five years [11]
12.	Main Steam Safety Valves	Set Point < See Section 3.7 >	Every five years [11]
13.	Containment Isolation Trip	Functi < See Section 3.6/LCO 3.7.2 >	Each refueling shutdown
14.	Refueling System Interlocks	Functioning < See Section 3.9 >	Each refueling shutdown
15.	Service Water System	Functioning < See Section 3.7.8 >	Each refueling shutdown
16.	Primary System Leakage	Evaluate < See Section 3.4 >	Monthly [6]
17.	Diesel Fuel Supply	Fuel inventory	Daily < See Section 3.8 >
18.	Deleted		
19.	Deleted		
20.	Boric Acid System < See Section 3.5 >	Storage Tank and piping temperatures ³ temperature required by Table 15.3.2-1	Daily[19]

A.1

15.5.4 FUEL STORAGE

LCO 3.7.11 ← A.2

Applicability

Applies to the capacity and storage arrays of new and spent fuel.

A.3/A.4 → Bases added for LCO 3.7.11

Objective

To define ~~those aspects of~~ fuel storage relating to prevention of criticality in fuel storage areas.

Specification

< See 4.0 >

< See LCO 3.7.17 >

1. The new fuel storage and spent fuel pool structures are designed to withstand the anticipated earthquake loadings as Class I structures. The spent fuel pool has a stainless steel liner to ensure against loss of water.
2. The new and spent fuel storage racks are designed so that it is impossible to store assemblies in other than the prescribed storage locations. The fuel is stored vertically in an array with sufficient center-to-center distance between assemblies to assure K_{eff}<0.95 with the storage pool filled with unborated water and with the fuel loading in the assemblies limited to 5.0 w/o U-235,with or without axial blanket loadings. Each assembly with a fuel loading greater than 4.6 w/o U-235 must contain Integral Fuel Burnable Absorber (IFBA) rods in accordance with Figure 15.5.4-1 or have a reference infinite multiplication factor, K_∞ less than or equal to 1.49364, which includes a 1% ΔK reactivity bias. An inspection area shall allow rotation of fuel assemblies for visual inspection, but shall not be used for storage. < See 4.0 > LCO 3.7.11 / SR 3.7.11.1
3. The spent fuel storage pool shall be filled with borated water at a concentration of at least 1800 ppm boron whenever there are spent fuel assemblies in the storage pool. A.5
4. Except for the two storage locations adjacent to the designated slot for the spent fuel storage rack neutron absorbing material surveillance specimen irradiation, spent fuel assembly storage locations immediately adjacent to the spent fuel pool perimeter or divider walls shall not be occupied by fuel assemblies which have been subcritical for less than one year.

< See LCO 3.7.17 >

Justification For Deviations - NUREG-1431 Section 3.07.16

13-Nov-99

JFD Number	JFD Text
01	NUREG 1431 LCO 3.7.9 and LCOs 3.7.11 through 3.7.14 have not been adopted as part of the Point Beach conversion to the ITS. As such, NUREG 1431 LCO 3.7.16 has been renumbered to maintain sequential order in the Plant Systems Chapter.

ITS:	NUREG:
B 3.07.11	B 3.07.16
LCO 3.07.11	LCO 3.07.16
SR 3.07.11.01	SR 3.07.16.01
	SR 3.07.16.01

JFD Number	JFD Text
02	The Point Beach spent fuel storage racks are of a single design, which allow storage of fuel with a maximum enrichment of 4.6 wt% U-235. Fuel with enrichments > 4.6 wt% may be stored as well, but must contain Integral Fuel Burnable Absorber (IFBA) to ensure a maximum keff of 0.95 based on the use of unborated water. The spent fuel pool keff storage limit of 0.95 can be exceeded as a result of an excessive pool cooldown or the inadvertent placement of a highly enriched fuel assembly between a storage rack module and the wall of the spent fuel pool. The spent fuel pool keff storage limit of 0.95 is maintained during these events by maintaining a minimum boron concentration of 700 ppm as addressed in NRC SER dated September 4, 1997, which approved increasing the fuel assembly enrichment storage capability for Point Beach. The CTS concentration of 1800 ppm, which has been proposed for the ITS limits as well, provides significant margin to the boron concentration used in the analyses of the potential critical accident scenarios stated above. The proposed Applicability for this LCO "whenever any fuel assembly is stored in the spent fuel storage pool" encompasses movement of fuel assemblies in the fuel storage pool, relative to inadvertent placement of a fuel assembly as well as any time fuel is stored relative to excessive cooldown events. Accordingly, the proposed Applicability envelopes the initiating conditions for the accidents described above, while the limitation provide significant margin to the analysis limit. This Applicability is consistent with that specified for the CTS.

ITS:	NUREG:
B 3.07.11	B 3.07.16
LCO 3.07.11	LCO 3.07.16

JFD Number	JFD Text
03	The brackets have been removed and the proper plant specific information has been provided.

ITS:	NUREG:
B 3.07.11	B 3.07.16
LCO 3.07.11	LCO 3.07.16

Justification For Deviations - NUREG-1431 Section 3.07.16

13-Nov-99

JFD Number	JFD Text
04	Required Actions A.1 and A.2.1 contained in NUREG 1431 LCO 3.7.16, which require movement of fuel to be suspended and actions be initiated to restore boron concentration, have been adopted; however, Required Action A.2.2, which requires verification of fuel placed in Region 2 of the storage racks, has been omitted. As discussed in Justification for Deviation 02 of this Section, the Point Beach spent fuel storage racks are not regionalized, and all have the same storage limitations. Accordingly, Required Action A.2.2 is not necessary. TSTF 70, Rev.1 replaced A.2.2 with the phrase "Initiate action to perform a fuel storage pool verification". TSTF 70, Rev.1 was not adopted into the Point Beach ITS based on the previous discussion. Required Action A.1, suspension of fuel moves, has been adopted as this action is appropriate in that it precludes inadvertent placement of a fuel assembly between the storage racks and the fuel pool wall. Required Action A.2.2 (renumber to be A.2) requires immediate action to be taken to restore boron concentration to assure protection from excessive fuel pool cooldown reactivity insertion events. Immediate initiation of action is warranted based on the importance of maintaining keff of the spent fuel pool < 0.95. However, for minor deviations in boron concentration, significant margin exists to the analysis limit 700 ppm. Complementary Bases changes have been made to support the above changes. **ITS:** / **NUREG:** B 3.07.11 / B 3.07.16 LCO 3.07.11 COND A RA A.2 / LCO 3.07.16 COND A RA A.2.1 N/A / LCO 3.07.16 COND A RA A.2.2
05	The Bases for NUREG 1431 LCO 3.7.16 states that if the Required Actions cannot be met (i.e. suspension of fuel movement in the fuel pool and restoration of boron concentration), LCO 3.0.3 is not applicable. Fuel pool conditions are independent of reactor operations as the Bases describes; however, the Bases limits its discussion to conditions involving the inability to suspend movement of fuel, while inability to initiate actions to restore boron concentration is equally applicable. As such, the Bases has been revised to include the inability to initiate boration of the fuel pool. **ITS:** / **NUREG:** B 3.07.11 / B 3.07.16
06	The Bases has been modified to reflect storage of fuel with initial enrichments of greater than or equal to 4.6 wt%, as provided in proposed ITS LCO 3.7.12. This change is required to ensure a maximum keff of 0.95. The basis for this change is discussed in Discussion of Change M.02 of LCO 3.7.17. **ITS:** / **NUREG:** B 3.07.11 / B 3.07.16

Fuel Storage Pool Boron Concentration

3.7 [16]

1

11

3.7 PLANT SYSTEMS

3.7.[16] Fuel Storage Pool Boron Concentration

LCO 3.7.[16] The fuel storage pool boron concentration shall be ≥ [2300] ppm.

2/3 → 1800

APPLICABILITY: When fuel assemblies are stored in the fuel storage pool and a fuel storage pool verification has not been performed since the last movement of fuel assemblies in the fuel storage pool.

When fuel assemblies are stored in the spent fuel storage pool. ← 2

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Fuel storage pool boron concentration not within limit.	----------NOTE---------- LCO 3.0.3 is not applicable. ----------	
	A.1 Suspend movement of fuel assemblies in the fuel storage pool.	Immediately
	AND	
	A.2[.1] Initiate action to restore fuel storage pool boron concentration to within limit.	Immediately
	OR	
	A.2.2 Verify by administrative means [Region 2] fuel storage pool verification has been performed since the last movement of fuel assemblies in the fuel storage pool.	Immediately

4

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