NEXTera ENERGY POINT BEACH

April 6, 2011

NRC 2011-0038
10 CFR 50.90

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

Point Beach Nuclear Plant, Units 1 and 2
Dockets 50-266 and 50-301
Renewed License Nos. DPR-24 and DPR-27

Supplement to License Amendment Request 241
Alternative Source Term
Technical Specification for Control Room Emergency Filtration System (CREFS)

References:
(1) FPL Energy Point Beach, LLC letter to NRC, dated December 8, 2008, License Amendment Request 241, Alternative Source Term (ML083450683)
(2) FPL Energy Point Beach, LLC letter to NRC, dated January 27, 2009, Supplement to License Amendment Request 241, Alternative Source Term, Transmittal of Proposed License Conditions (ML090280348)
(3) NextEra Energy Point Beach, LLC letter to NRC, dated April 20, 2010, License Amendment Request 241, Alternative Source Term, Proposed Technical Specifications for Control Room Emergency Filtration System (CREFS) (ML101100605)
(4) NextEra Energy Point Beach, LLC letter to NRC, dated July 8, 2010, Supplement to License Amendment Request 241, Alternative Source Term, Revised Proposed Technical Specifications for Control Room Envelope Habitability Program (ML101890783)
(5) NextEra Energy Point Beach, LLC letter to NRC, dated November 16, 2010, Supplement to License Amendment Request 241, Alternative Source Term, Modified License Condition and Technical Specification for Control Room Emergency Filtration System (ML103210186)

In Reference (1), FPL Energy Point Beach, LLC (FPLE Point Beach) submitted a License Amendment Request (LAR) for Point Beach Nuclear Plant (PBNP) Units 1 and 2. The proposed amendment would revise the current licensing basis to implement the alternative source term (AST) through reanalysis of the radiological consequences of the PBNP Final Safety Analysis Report Chapter 14 accidents. The submittal included several changes to the PBNP Technical Specifications (TS). In Reference (2), FPLE Point Beach submitted proposed license conditions that replaced regulatory commitments in Reference (1).

In Reference (3), NextEra Energy Point Beach, LLC (NextEra) proposed additional license conditions and changes to TS 3.7.9, "Control Room Emergency Filtration System (CREFS)," to address Technical Specification Task Force (TSTF) Traveler TSTF-448, "Control Room Habitability," Revision 3, and joint NRC and industry guidance regarding control room habitability. The submittal also included new TS 5.5.18, "Control Room Envelope Habitability Program." In Reference (4), NextEra provided new proposed license conditions and a revision to the Bases for TS 3.7.9.

During a teleconference on March 31, 2011, NextEra determined that administrative changes to proposed TS 3.7.9, CREFS, and TS 5.5.18, Control Room Habitability Program, were necessary based on the guidance contained in TSTF-448, Revision 3. Enclosure 1 provides a revised markup of TS 3.7.9 and TS 5.5.18 that addresses these changes. Enclosure 2 provides a revised markup of the Bases for TS 3.7.9 that reflects the proposed changes. The Bases changes are provided for information only.

In References (2) and (3), NextEra provided no significant hazards consideration (NSHC) evaluations for proposed license conditions and TS changes for AST. The NSHC evaluations provided previously are not altered by the proposed changes to TS 3.7.9 and TS 5.5.18. The proposed changes continue to satisfy the criteria of 10 CFR 51.22 for categorical exclusion from the requirements for an environmental assessment.

This letter contains no new regulatory commitments.

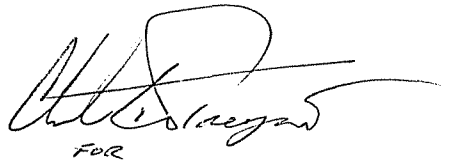
The proposed changes have been reviewed by the Plant Operations Review Committee.

In accordance with 10 CFR 50.91, a copy of this letter is being provided to the designated Wisconsin Official.

I declare under penalty of perjury that the foregoing is true and correct.
Executed on April 6, 2011.

Very truly yours,

NextEra Energy Point Beach, LLC



Larry Meyer
Site Vice President

Enclosures

cc: Administrator, Region III, USNRC
Project Manager, Point Beach Nuclear Plant, USNRC
Resident Inspector, Point Beach Nuclear Plant, USNRC
PSCW

ENCLOSURE 1

NEXTERA ENERGY POINT BEACH, LLC
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

SUPPLEMENT TO LICENSE AMENDMENT REQUEST 241
ALTERNATIVE SOURCE TERM
MODIFIED LICENSE CONDITION AND TECHNICAL SPECIFICATION FOR
CONTROL ROOM EMERGENCY FILTRATION SYSTEM (CREFS)

TECHNICAL SPECIFICATION MARKUPS

5 pages follow

3.7 PLANT SYSTEMS

3.7.9 Control Room Emergency Filtration System (CREFS)

LCO 3.7.9 CREFS shall be OPERABLE with:

a. Two control room recirculation fans,

b. Two control room emergency fans,

c. One filter train,

d. Two control room emergency fan control dampers, and

e. Two isolation dampers in the kitchen area exhaust duct.

----------NOTE----------
The control room envelope (CRE) may be opened intermittently under administrative controls
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APPLICABILITY: MODES 1, 2, 3, 4,
During movement of irradiated fuel assemblies

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. -------- NOTE -------- Separate Condition entry is allowed for each component. ---------- ~~CREFS~~ One control room recirculation fan inoperable. OR One control room emergency fan inoperable. OR One control room emergency fan control damper inoperable.	A.1 Restore inoperable fan or damper to OPERABLE status.	7 days

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. One isolation damper in the kitchen area exhaust duct inoperable.	B.1 Restore isolation damper to OPERABLE status. OR B.2 Place and maintain the other isolation damper in the same duct in the closed position.	7 days 7 days
C. ----------NOTE---------- Separate Condition entry is allowed for each component. ---------- Two control room recirculation fans inoperable. OR Two control room emergency fans inoperable. OR Two control room emergency fan control dampers inoperable. OR Filter train inoperable for reasons other than Condition D.	C.1 Initiate actions to implement mitigating actions. AND C.2 Suspend movement of irradiated fuel assemblies. AND C.3 Verify mitigating actions ensure CRE occupant radiological exposures will not exceed limits. AND C.4 Restore inoperable fans, dampers, or filter train to OPERABLE status.	Immediately Immediately 24 hours 7 days

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. ----------NOTE---------- Separate Condition entry is allowed for each component. ---------- Filter train inoperable due to an inoperable CRE boundary. OR Two isolation dampers in the kitchen exhaust duct inoperable.	D.1 Initiate actions to implement mitigating actions. AND	Immediately
	D.2 Suspend movement of irradiated fuel assemblies. AND	Immediately
	D.3 Verify mitigating actions ensure CRE occupant radiological and chemical exposures will not exceed limits, and CRE occupants are protected from smoke hazards. AND	24 hours
	D.4 Restore CRE boundary to OPERABLE status.	90 days
~~B~~E. Required Action and associated Completion Time of Condition A, B, C, or D not met in MODE 1, 2, 3, or 4, or not met during movement of irradiated fuel assemblies.	~~B~~E.1 Suspend movement of irradiated fuel assemblies. AND	Immediately
	~~B~~E.2 Be in MODE 3. AND	6 hours
	~~B~~E.3 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.9.1	Operate the CREFS for ≥ 15 minutes.	31 days
SR 3.7.9.2	Perform required CREFS filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP
SR 3.7.9.3	Verify each CREFS emergency ~~makeup~~ and recirculation 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 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 ≥ 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 4950 cfm ± 10%.~~ Perform required CRE unfiltered air inleakage testing in accordance with the Control Room Envelope Habitability Program.	~~18 months~~ In accordance with the Control Room Envelope Habitability Program.

5.5.18 Control Room Envelope Habitability Program

A Control Room Envelope (CRE) Habitability Program shall be established and implemented to ensure that CRE habitability is maintained such that, with an OPERABLE Control Room Emergency Filtration System (CREFS), CRE occupants can control the reactor safely under normal conditions and maintain it in a safe condition following a radiological event. The program shall ensure that adequate radiation protection is provided to permit access and occupancy of the CRE under design basis accident (DBA) conditions without personnel receiving radiation exposures in excess of 5 rem total effective dose equivalent (TEDE) for the duration of the accident. Additionally, separate from the CREFS, the program shall ensure CRE occupants can maintain the reactor in a safe condition following a hazardous chemical release or smoke challenge. The program shall include the following elements:

a. The definition of the CRE and the CRE boundary.

b. Requirements for maintaining the CRE boundary in its design condition including configuration control and preventive maintenance.

c. Requirements for (i) determining the unfiltered air inleakage past the CRE boundary into the CRE in accordance with the testing methods and at the Frequencies specified in Sections C.1 and C.2 of Regulatory Guide 1.197, "Demonstrating Control Room Envelope Integrity at Nuclear Power Reactors," Revision 0, May 2003, and (ii) assessing CRE habitability at the Frequencies specified in Sections C.1 and C.2 of Regulatory Guide 1.197, Revision 0.

d. Measurement, at designated locations, of the CRE Pressure relative to all external areas adjacent to the CRE boundary during the technical specification emergency mode of operation by the CREFS, operating at the flow rate required by the VFTP, at a Frequency of 18 months. The results shall be trended at a frequency of 18 months and used as part of the periodic assessment of the CRE boundary.

e. The quantitative limits on unfiltered air inleakage into the CRE. These limits shall be stated in a manner to allow direct comparison to the unfiltered air inleakage measured by the testing described in Paragraph c. The unfiltered air inleakage limit for radiological challenges is the inleakage flow rate assumed in the licensing basis analyses of DBA consequences.

f. The provisions of SR 3.0.2 are applicable to the Frequencies for assessing CRE habitability, determining CRE unfiltered inleakage, and measuring CRE pressure and assessing the CRE boundary as required by Paragraphs c and d, respectively.

ENCLOSURE 2

NEXTERA ENERGY POINT BEACH, LLC
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

SUPPLEMENT TO LICENSE AMENDMENT REQUEST 241
ALTERNATIVE SOURCE TERM
MODIFIED LICENSE CONDITION AND TECHNICAL SPECIFICATION FOR
CONTROL ROOM EMERGENCY FILTRATION SYSTEM (CREFS)

PROPOSED TECHNICAL SPECIFICATION BASES MARKUPS
(FOR INFORMATION ONLY)

11 pages follow

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~~ occupants 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, valves, instrumentation, doors, barriers, and dampers necessary to establish the required flow paths and isolation boundaries that recirculate and filter the air in the control room envelope (CRE) and a CRE boundary that limits the inleakage of unfiltered air. Doors, walls, floor, roof, penetrations, and barriers also form part of the system. The CREFS is an emergency system, parts of which operate during normal unit operations.

The CRE is the area within the confines of the CRE boundary that contains the spaces that the control room occupants inhabit to control the unit during normal and accident conditions. This area encompasses the control room, and may encompass other non-critical areas to which frequent personnel access or continuous occupancy is not necessary in the event of an accident. The CRE is protected during normal operation, natural events and accident conditions. The CRE boundary is the combination of walls, floor, roof, ducting, doors, penetrations, and equipment that physically form the CRE. The OPERABILITY of the CRE boundary must be maintained to ensure that the inleakage of unfiltered air into the CRE will not exceed the inleakage assumed in the licensing basis analysis of design basis accident (DBA) consequences to CRE occupants. The CRE and its boundary are defined in the Control Room Envelope Habitability Program.

The CREFS has ~~four~~ five modes of operation, however only Mode 5 is credited in the FSAR Chapter 14 radiological analyses. FSAR 9.8 (Ref. 1) provides a system description for all five modes of CREFS operation.

BASES

BACKGROUND (continued)

- 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 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

BASES

BACKGROUND (continued)

~~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 ≥ 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.~~

Mode 5 (emergency HEPA/charcoal filtered outside air and HEPA/charcoal filtered return air) allows a combination of outside air and return air ≥1955 cfm to pass through the emergency HEPA/charcoal filter unit to the suction of the control room recirculation fan for a total flow rate of 4950 cfm ±10%. This makeup flow rate is sufficient to assure a positive pressure that will prevent excessive unfiltered in-leakage into the CRE. Mode 5 is automatically initiated by a containment isolation signal, or by a high radiation signal from the control room monitor RE-101, or by a high radiation signal from the 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 CREFS in Mode 5 is the assumed mode of operation for the control room habitability analyses, and is therefore, the only mode of operation addressed by the Technical Specification LCO.

BASES

BACKGROUND (continued)

The limiting design basis accident for the ~~control room~~ CRE dose analysis is the large break LOCA. CREFS ~~does not~~ automatically restarts after being load shed following a loss of offsite power. ~~manual action is required to restart CREFS. Although it has been demonstrated that a loss of offsite power does not need to be assumed coincident with a LOCA with respect to CREFS system analysis and control room habitability, t~~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 ANALYSES

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

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

LCO

The CREFS (~~m~~Mode 4 5) is required to be OPERABLE to ensure that the ~~control room~~ CRE habitability limits are met following a limiting design basis LOCA accidents. Total system failure could result in exceeding the control room operator ~~thyroid dose limit of 30~~ total effective dose equivalent (TEDE) limit of 5 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~~ CRE in-leakage are OPERABLE. CREFS is considered OPERABLE when:

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

b. ~~One~~ Both recirculation fans (W-13B1 ~~or~~ and W-13B2) ~~is~~ 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;

BASES

LCO (continued)

d. Both emergency fan control dampers (VNCR-4851C and VNCR-4851D) are OPERABLE;

e. Both isolation dampers in the kitchen area exhaust duct (CV-6748 and CV-6748A) are OPERABLE;

~~f. 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;~~

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

g. CREFS is capable of being automatically and manually initiated in the emergency ~~make-up~~ mode of operation (~~m~~Mode 4 5).

~~In addition, the control room boundary must be maintained, including the integrity of the walls, floors, ceilings, ductwork, and access doors.~~ In order for CREFS to be considered OPERABLE, the CRE boundary must be maintained such that the CRE occupant dose from a large radioactive release does not exceed the calculated dose in the licensing basis consequence analyses for DBAs.

The LCO is modified by a Note allowing the CRE boundary to be opened intermittently under administrative controls. This Note only applies to openings in the CRE boundary that can be rapidly restored to the design condition, such as doors, hatches, floor plugs, and access panels. For entry and exit through doors, the administrative control of the opening is performed by the person(s) entering or exiting the area. For other openings, these controls should be proceduralized and consist of stationing an individual at the opening who is in continuous communication with the operators in the CRE. This individual will have a method to rapidly close the opening and to restore the CRE boundary to a condition equivalent to the design condition when a need for CRE isolation is indicated.

APPLICABILITY

In MODES 1, 2, 3, 4, and during movement of irradiated fuel assemblies, CREFS must be OPERABLE to ~~control operator exposure~~ ensure that the CRE will remain habitable during and following a DBA.

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

BASES

ACTIONS

A.1

~~When CREFS is inoperable, action must be taken to restore the system to OPERABLE status within 7 days. The 7 day Completion Time is based on the low probability of a DBA challenging control room habitability occurring during this time period.~~ Condition A is modified by a Note indicating that separate Condition entry is allowed for each component.

Two recirculation fans are required since in the event of a single failure, only one recirculation fan would be available. Each recirculation fan is considered a 100% capacity fan. In the case of an inoperable recirculation fan, the fan is required to be restored to OPERABLE status within 7 days based on the low probability of a DBA occurring during this time period, and continued capability of its redundant recirculation fan to perform its safety function.

Two emergency fans are required since in the event of a single failure, only one emergency fan would be available. Each emergency fan is considered a 100% capacity fan. In the case of an inoperable emergency fan, the fan is required to be restored to OPERABLE status within 7 days based on the low probability of a DBA occurring during this time period, and the continued capability of its redundant emergency fan to perform its safety function.

Each emergency fan control damper is sufficient to support emergency operation. In the case of an inoperable emergency fan control damper, the damper is required to be restored to OPERABLE status within 7 days based on the low probability of a DBA occurring during this time period, and continued capability of its redundant damper to perform its safety function.

B.1~~,~~ or B.2 ~~and B.3~~

The kitchen area exhaust isolation dampers consist of two dampers in series. In case one of the dampers is inoperable, the damper can either be restored within 7 days, or the affected flow path isolated by closing and maintaining the other damper in a closed position. When one isolation damper in the kitchen area exhaust duct is inoperable, action must be taken to restore the damper to OPERABLE status within 7 days or the other isolation damper in the same duct must be placed and maintained in the closed position within 7 days. The 7 day Completion Time is based on the low probability of a DBA challenging control room habitability occurring during this time period.

BASES

ACTIONS (continued) C.1, C.2, and C.3

Condition C is modified by a Note indicating that separate Condition entry is allowed for each component. When two control room recirculation fans are inoperable, or two control room emergency fans are inoperable, or two control room emergency fan control dampers are inoperable, or the filter train is inoperable for reasons other than an inoperable CRE boundary: immediately initiate actions to implement mitigating actions to lessen the effect on CRE occupants from the potential hazards of a radiological event; immediately suspend movement of irradiated fuel assemblies; verify within 24 hours that the mitigating actions taken ensure CRE occupant radiological exposures will not exceed limits; and restore the inoperable fans, dampers, or filter train to OPERABLE status within 7 days.

The mitigating actions (i.e., actions that are taken to offset the consequences of the inoperable fans, dampers, or filter train) should be preplanned for implementation upon entry into the condition, regardless of whether entry is intentional or unintentional. The 24 hour Completion Time is reasonable based on the low probability of a DBA occurring during this time period, and the use of mitigating actions such as filtration unit(s) and administration of KI, as appropriate. The 7 day Completion Time is reasonable based on the determination that the mitigating actions will ensure protection of CRE occupants within analyzed limits, while limiting the probability that CRE occupants will have to implement protective measures that may adversely affect their ability to control the reactor and maintain it in a safe shutdown condition in the event of a DBA. In addition, the 7 day Completion Time is a reasonable time to diagnose, plan and possibly repair, and test most problems with the inoperable fans, dampers, and/or filter train.

D.1, D.2, and D.3

Condition D is modified by a Note indicating that separate Condition entry is allowed for each component. If the unfiltered inleakage of potentially contaminated air past the CRE boundary and into the CRE can result in CRE occupant radiological dose greater than the dose limit of the licensing basis analyses of DBA consequences (allowed to be up to 5 rem TEDE), or inadequate protection of CRE occupants from hazardous chemicals or smoke, the CRE boundary is inoperable. When the filter train is inoperable due to an inoperable CRE boundary: immediately initiate actions to implement mitigating actions to lessen the effect on CRE occupants from the potential hazards of a radiological or chemical event or a challenge from smoke.~~,~~ ~~I~~Immediately suspend

BASES

ACTIONS (continued)

movement of irradiated fuel assemblies; verify within 24 hours that the mitigating actions taken ensure CRE occupant radiological and chemical exposures will not exceed limits and CRE occupants are protected from smoke hazards; and restore the CRE boundary to OPERABLE status within 90 days.

The mitigating actions (i.e., actions that are taken to offset the consequences of the inoperable filter train due to an inoperable CRE boundary, including two kitchen area exhaust duct isolation dampers inoperable) should be preplanned for implementation upon entry into the condition, regardless of whether entry is intentional or unintentional. The 24 hour Completion Time is reasonable based on the low probability of a DBA occurring during this time period, and the use of mitigating actions to include temporary patches, plates, and/or plugs. The 90 day Completion Time is reasonable based on the determination that the mitigating actions will ensure protection of CRE occupants within analyzed limits, while limiting the probability that CRE occupants will have to implement protective measures that may adversely affect their ability to control the reactor and maintain it in a safe shutdown condition in the event of a DBA. In addition, the 90 day Completion Time is a reasonable time to diagnose, plan and possibly repair, and test most problems with the CRE boundary.

~~B.1, B.2 and B.3~~E.1, E.2 and E.3

If CREFS cannot be restored to OPERABLE status within the required Completion Time of Condition A, B, C, or D with movement of irradiated fuel in progress, ~~this activity must be suspended immediately~~ action must be taken to immediately suspend activities that could result in a release of radioactivity that might require isolation of the CRE. This ~~Immediately suspending this activity~~ places the units in a condition that minimizes the accident risk ~~from this activity~~. 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 of Condition A, B, C, or D, the units must be placed in a MODE that minimizes accident risk. To achieve this status, the units 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.

BASES

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 ≥ 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 Frequency of 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 and recirculation 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)~~ based on industry operating experience and is consistent with the typical refueling cycle.

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 an actuation signal. The Frequency of 18 months ~~specified in regulatory Guide 1.52 (Ref. 3)~~ is based on industry operating experience and is consistent with the typical refueling cycle.

SR 3.7.9.5

This test verifies manual actuation capability for CREFS. Manual actuation capability is a required for OPERABILITY of the CREFS. The 18 month Frequency is acceptable based on the inherent reliability of manual actuation circuits.

BASES

SURVEILLANCE REQUIREMENTS (continued)

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 ≥ 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 ± 10% of the nominal make-up pressurization flow rate of approximately 4950 cfm. The Frequency of 18 months is consistent with the guidance provided in NUREG-0800 (Ref. 4).~~

This SR verifies the OPERABILITY of the CRE boundary by testing for unfiltered air inleakage past the CRE boundary and into the CRE. The details of the testing are specified in the Control Room Envelope Habitability Program.

The CRE is considered habitable when the radiological dose to CRE occupants calculated in the licensing basis analyses of DBA consequences is no more than 5 rem TEDE. This SR verifies that the unfiltered air inleakage into the CRE is no greater than the flow rate assumed in the licensing basis analyses of DBA consequences. When unfiltered air inleakage is greater than the assumed flow rate, Condition D must be entered. Required Action D.4 allows time to restore the CRE boundary to OPERABLE status provided mitigating actions can ensure that the CRE remains within the licensing basis habitability limits for the occupants following an accident. Compensatory measures are discussed in Regulatory Guide 1.196, Section C.2.7.3, (Ref. 3) which endorses with exceptions, NEI 99-03, Section 8.4 and Appendix F (Ref. 4). These compensatory measures may also be used as mitigating actions as required by Required Action D.3. Temporary analytical methods may also be used as compensatory measures to restore OPERABILITY (Ref. 5). Options for restoring the CRE boundary to OPERABLE status include changing the licensing basis DBA consequence analysis, repairing the CRE boundary, or a combination of these actions. Depending upon the nature of the problem and the corrective action, a full scope inleakage test may not be necessary to establish that the CRE boundary has been restored to OPERABLE status.

BASES

REFERENCES

1. FSAR. Section 9.8.
2. FSAR. Section 14.3.5.
3. ~~Regulatory Guide 1.52, Rev. 2.~~ Regulatory Guide 1.196.
4. ~~NUREG-0800, Section 6.4, Rev. 2, July 1981.~~ NEI 99-03, "Control Room Habitability Assessment," June 2001.
5. Letter from Eric J. Leeds (NRC) to James W. Davis (NEI) dated January 30, 2004, "NEI Draft White Paper, Use of Generic Letter 91-18 Process and Alternative Source Terms in the Context of Control Room Habitability." (ADAMS Accession No. ML040160868).