L-2017-013
10 CFR 50.90
January 27, 2017

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

RE: Turkey Point Nuclear Plant, Units 3 and 4
Docket Nos. 50-250 and 50-251
Renewed Facility Operating Licenses DPR-31 and DPR-41

Response to Request for Additional Information Regarding License Amendment Request 246, Changes to Technical Specifications 3/4.7.5, Control Room Emergency Ventilation System (CREVS)

References:

1. Florida Power & Light Company letter L-2016-246, License Amendment Request 246, Changes to Technical Specifications 3/4.7.5, Control Room Emergency Ventilation System (CREVS), August 3, 2016 (ADAMS Accession No. ML 16230A003)

2. NRR E-Mail Capture, Turkey Point LAR 246, CREVS TSs, Request for Additional Information (MF8221 and MF8222), December 5, 2016 (ADAMS Accession No. ML16340A037)

In Reference 1, Florida Power & Light Company (FPL) submitted license amendment request (LAR) 246 for Turkey Point Units 3 and 4, which modifies Technical Specification (TS) 3.7.5, Control Room Emergency Ventilation System, by revising the Limiting Conditions for Operation, Required Actions, and Surveillance Requirements to reflect the current system design and to align the Turkey Point TS more closely with NUREG 1431, Standard Technical Specifications - Westinghouse Plants, Revision 4.0, (ADAMS Accession No. ML12100A222).

In Reference 2, the NRC determined that additional information is required to complete its review. The enclosure to this letter provides FPL's response to the request for additional information (RAI). In addition, as discussed in the enclosure, FPL is modifying several proposed changes that were included in Reference 1. The supplements included in this response provide additional information that clarifies the application, do not expand the scope of the application as originally noticed, and should not change the NRC staff's original proposed no significant hazards consideration determination as published in the *Federal Register*.

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Attachment 1 to the enclosure provides the existing TS pages marked up to show the proposed changes. Attachment 2 provides the retyped (clean copy) TS pages with revision bars to identify the proposed changes. Attachment 3 provides the existing TS Bases pages marked up to show the proposed changes. The TS marked up pages, retyped (clean copy) TS pages and TS Bases marked up pages supersede the corresponding pages provided in Reference 1. The TS Bases changes are provided for information only and will be incorporated in accordance with the TS Bases Control Program upon implementation of the approved amendment.

This letter contains no new or revised regulatory commitments.

Should you have any questions regarding this submission, please contact Mr. Mitch Guth, Turkey Point Licensing Manager, at 305-246-6698.

I declare under penalty of perjury that the foregoing is true and correct.
Executed on the 27th day of January 2017.

Sincerely,

Thomas Summers
Regional Vice President - South
Florida Power & Light Company

Enclosure: Response to Request for Additional Information

cc: USNRC Regional Administrator, Region II
USNRC Project Manager, Turkey Point Nuclear Plant
USNRC Senior Resident Inspector, Turkey Point Nuclear Plant
Ms. Cindy Becker, Florida Department of Health

Enclosure

FPL Response to NRC Request for Additional Information (RAI) Regarding
LAR 246 - Changes to Technical Specifications 3/4.7.5
Control Room Emergency Ventilation System

In an e-mail memorandum dated December 5, 2016 (ADAMS Accession No. ML16340A037), the Radiation Protection and Consequence Branch (ARCB) and the Balance of Plant Branch (SBPB) of the NRC Office of Nuclear Reactor Regulation, requested the additional information listed below regarding LAR 246, Changes to Technical Specifications 3/4.7.5, Control Room Emergency Ventilation System. FPL's response follows:

ARCB RAI-1

In the LAR, the licensee proposes to extend the allowed outage time (AOT) for TS 3/4.7.5, ACTION a.2 from seven days to thirty days and proposes to relocate the requirement to immediately suspend all irradiated fuel movement in the event of two inoperable condensing units from immediately upon the finding the inoperable condensing units to upon expiration of the seven day AOT. In addition, the licensee stated that:

> ...relocating the requirement to immediately suspend irradiated fuel movement from the determination of inoperability to expiration of the AOT and extending the AOT for two inoperable condensing units from seven to thirty days maintains a commensurate level of safety when judged against the current regulatory standards established in the Westinghouse STS [Standard Technical Specifications] for an inoperable filter train and is thereby reasonable.

Westinghouse STS 3.7.11, "Control Room Emergency Air Temperature Control System (CREATCS)," provides temperature control for the control room following isolation of the control room and consists of two independent and redundant trains that provide cooling and heating of recirculated control room air. STS 3.7.11 ACTION A is entered when one CREATCS train is inoperable, and it allows thirty days to restore the inoperable CREATCS train to operable status. While in this ACTION, the remaining operable CREATCS train is adequate to maintain the control room temperature within limits.

Turkey Point's TS 3/4.7.5 requires the control room emergency ventilation system (CREVS) to be operable with two of three condensing units. TS 3/4.7.5 ACTION a.2 is entered when two condensing units are inoperable, and it requires immediately suspending all movement of irradiated fuel and, within 7 days, restoring at least one of the inoperable condensing units to operable status or to be in at least hot standby within the next six hours and in cold shutdown within the following thirty hours. TS 3/4.7.5 ACTION a.2 is entered when the required two condensing units become inoperable. TS 3/4.7.5 ACTION a.2 allows a loss of safety function for 7 days and, therefore, is not equivalent to STS 3.7.11 ACTION A. It is equivalent to STS 3.7.11 ACTION E, which is entered when both CREATCS trains are inoperable while in modes 1 through 4, and it requires immediately entering limiting condition for operation (LCO) 3.0.3.

Considering Turkey Point's CREVS design, consistency with STS 3.7.11 could be met, for example, by requesting one of the following changes:

- Change the LCO to require three condensing units, and revise ACTION a.2 to state:

With one or two condensing units inoperable, restore the inoperable air handling units to operable status within 30 days, or immediately suspend all movement of irradiated fuel and be in at least hot standby within the next 6 hours for one unit or 12 hours for both units and in cold shutdown within the following 30 hours.

- With the LCO unchanged, revise ACTION a.2 to state:

  With one required condensing unit inoperable, restore the inoperable air handling unit to operable status within 30 days, or immediately suspend all movement of irradiated fuel and be in at least hot standby within the next 6 hours for one unit or 12 hours for both units and in cold shutdown within the following 30 hours.

The staff requests the licensee to either (1) explain how a loss of CREVS function for 30 days while continuing to move irradiated fuel is consistent with Turkey Point's current design basis radiological dose consequence analyses, and provide the technical basis for allowing the loss of CREVS function for 30 days while continuing to move irradiated fuel, or (2) propose a TS change that is consistent with both STS 3.7.11 and Turkey Point's current design basis radiological dose consequence analyses.

FPL Response to ARCB-RAI-1

The Turkey Point Nuclear Units 3 and 4 (Turkey Point) CREVS includes three condensing units, used for Control Room air temperature control, and three separate air handlers used for circulating Control Room air. Hence the suggestion in ARCB RAI-1 to restore inoperable air handling units in response to inoperable condensing units is not practical. As stated in the proposed license amendment, each condensing unit is fully capable of performing its specified safety function such that with two inoperable condensing units, one condensing unit remains available for maintaining the Control Room temperature and humidity within limits.

FPL acknowledges that the proposed wording for TS 3/4.7.5 ACTION a.2 can be clarified given that LCO 3.7.5 requires two of three OPERABLE condensing units whereas ACTION a.2 allows two inoperable condensing units. FPL proposes to reword ACTION a.2 to state that entry is required when only one condensing unit is OPERABLE. Revising ACTION a.2 to apply when only one condensing unit is OPERABLE, rather than when two are inoperable, ensures that the Control Room temperature will be maintained within limits in the unlikely event of a design basis accident during the 30-day completion time and hence remains consistent with STS 3.7.11, ACTION A, for an inoperable CREATCS train.

FPL additionally proposes to modify LCO 3.7.5.b to specify that two condensing units, rather than two of the three condensing units, are required to be OPERABLE. This is a new request not previously addressed in LAR 246 (Reference 1 of ARCB RAI-1). FPL initially proposed in May 2010, that LCO 3.7.5.b specify that two condensing units are required to be OPERABLE (Reference 2 of ARCB RAI-1). FPL subsequently revised LCO 3.7.5.b to its present format following discussion with the NRC staff in May 2011 (Reference 3 of ARCB RAI-1). However,

with the newly proposed TS 3/4.7.5 ACTION a.2, as discussed above, clarification in LCO 3.7.5.b that three condensing units are available is no longer necessary. Revising LCO 3.7.5.b to state that two condensing units, rather than two of the three condensing units, are required to be OPERABLE does not alter the conclusion in Reference 1 of ARCB RAI-1 that the proposed changes do not involve a significant hazards consideration pursuant to 10 CFR 50.92, and that there are no significant environmental impacts associated with the proposed changes.

Attachment 1 to this enclosure provides the existing TS 3/4.7.5 ACTION a.2 pages marked up to show the above proposed changes. Attachment 2 provides the retyped (clean copy) TS pages with revision bars to identify the proposed changes. These TS marked up and retyped pages supersede the corresponding marked up pages provided in Reference 3 of ARCB RAI-1.

ARCB RAI-1 References:

1. Florida Power & Light Company letter L-2016-246, License Amendment Request 246, Changes to Technical Specifications 3/4.7.5, Control Room Emergency Ventilation System (CREVS), August 3, 2016 (ADAMS Accession No. ML 16230A003)

2. Florida Power & Light Company letter L-2010-083, License Amendment Request 196, Supplement to LAR 196 & 3/24/2010 RAI on AST, May 21, 2010 (ADAMS Accession No. ML 101450028)

3. Florida Power & Light Company letter L-2011-185, Supplemental Response for Alternative Source Term License Amendment Request No. 196 and Proposed Changes to Technical Specification 3.7.5 on Control Room Emergency Ventilation System, May 11, 2010 (ADAMS Accession No. ML 11154A035)

ARCB-RAI-2

In the LAR, the licensee proposes to: (1) delete TS 3/4.7.5 ACTION c, including its footnote ++ and its applicability in modes 5 and 6; (2) revise the current LCO applicability from all modes to modes 1 through 6 and during movement of irradiated fuel assemblies; and (3) apply the revised LCO applicability to ACTIONs a.1 through a.7 and b. Currently, TS 3/4.7.5 ACTION c applies in modes 5 and 6 (i.e., cold shut down and refueling, respectively) and requires immediate suspension of all operations involving core alterations, movement of irradiated fuel in the spent fuel pool, or positive reactivity changes.

The following technical basis was provided in the technical evaluation section for this change:

> Furthermore, TS ACTION 3.7.5.c requires the immediate suspension of irradiated fuel movement, core alterations and positive reactivity changes for an inoperable CREVS. However, in keeping with the format of the Westinghouse STS, the immediate suspension of core alterations and positive reactivity changes are not STS specified ACTION(s) and thereby should be removed from TS 3.7.5...

> ...and expanding their applicability to all plant MODES during which irradiated fuel movement might occur, maintains a commensurate level of safety when judged against the current regulatory standards established in the Westinghouse STS for an inoperable CREVS train in Modes 5 and 6 and is thereby reasonable.

The technical evaluation provided does not explain how the proposed change is consistent with the accident analyses provided in Turkey Point's updated final safety analysis report. Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Section 50.36 requires that the technical specifications will be derived from the analyses and evaluation included in the safety analysis report, and amendments thereto, submitted pursuant to § 50.34. Therefore, in accordance with 10 CFR 50.36, the staff is reviewing this change to determine if it is consistent with Turkey Point's NRC approved DBAs' radiological consequences - specifically, how core alterations are accounted for in the fuel handling accident. Turkey Point TSs define core alterations as the movement of any fuel, sources, reactivity control components, or other components affecting reactivity within the reactor vessel with the vessel head removed and fuel in the vessel.

The NRC staff is concerned that a dropped source, new fuel assembly, or reactivity control component (or any other item allowed to be moved by core alterations) could damage fuel, thus creating a radioactive source term larger than what is currently analyzed. Please provide a comparison of the number of fuel rods damaged from dropping any items allowed to be moved by core alterations to that assumed in the current fuel handling accident (i.e., that the source term created by dropping any item allowed to be moved by core alterations is equal to or less than that assumed in the fuel handling accident analysis, which is a failure of one complete fuel assembly).

FPL Response to ARCB-RAI-2

At Turkey Point, the likelihood of dropping any item allowed to be moved over irradiated fuel during CORE ALTERATIONS is remote because of the administrative controls and physical limitations imposed on core alterations. All CORE ALTERATIONS are conducted in accordance with prescribed procedures.

The most severe radiological consequences during CORE ALTERATIONS would result from a fuel handling accident (FHA) involving dropping a single irradiated fuel assembly and its associated handling tool, or some other object affecting reactivity, onto another irradiated fuel assembly. At Turkey Point, the inside Containment fuel handling accident (FHA) analysis of record assumes the failure of one complete fuel assembly whereby all fuel rods are damaged, and as such, the FHA source term of record is based on a single bounding fuel assembly. Hence, the dose consequences from dropping any item allowed to be moved during CORE ALTERATIONS, including neutron sources, control rods, new fuel assembly, etc., are bounded by the FHA analysis as discussed in Section 14.2.1 of the Turkey Point Updated Final Safety Analysis Report.

Additionally, FPL stated in Reference 1 of ARCB-RAI-2 that the immediate suspension of core alterations is not a Westinghouse STS specified ACTION with regard to CREVS operability and that in keeping with the format of the Westinghouse STS, the reference to the immediate suspension of core alterations should be removed from TS 3/4.7.5. FPL notes that in the NRC's Final Policy Statement on TS Improvements for Nuclear Power Reactors (Reference 2 of ARCB-RAI-2), the NRC encourages licensees to update their TS to be consistent with their vendor-specific STS. Hence, the request to remove the TS 3/4.7.5 requirement to suspend core alterations is consistent with the Westinghouse STS and is thereby reasonable.

ACRB RAI-2 References:

1. Florida Power & Light Company letter L-2016-246, License Amendment Request 246, Changes to Technical Specifications 3/4.7.5, Control Room Emergency Ventilation System (CREVS), August 3, 2016 (ADAMS Accession No. ML 16230A003)

2. NRC Final Policy Statement on Technical Specification Improvements for Nuclear Power Reactors, July 22, 1993 (58 FR 39132)

ARCB/SBPB-RAI-3

In the LAR, the licensee proposes to revise TS 3/4.7.5 ACTION a.5 to: (1) allow movement of irradiated fuel upon verification that mitigating actions ensure Control Room Envelope (CRE) occupant radiological and chemical hazards will not exceed limits when the CREVS recirculation filter train is inoperable, (2) delete the required action to immediately initiate use of the compensatory filtration unit upon the CREVS recirculation filter train becoming inoperable, and (3) add a required action to immediately suspend all movement of irradiated fuel if the requirements of TS 3/4.7.5 ACTION a.5 are not met.

In the case of an inoperable CREVS filter train (discussed in the LAR under section 3.2), the licensee states that it would like to make the requirement to immediately initiate use of the compensatory filtration unit in TS 3/4.7.5 ACTION a.5, a recommendation instead of a requirement, so that it may use alternative mitigating actions. However the alternative mitigating actions are not explicitly stated in the LAR; rather, all that is stated is that alternative mitigating actions may be necessary in the event the compensatory filtration unit cannot be manually aligned within the 24 hours allotted before the Unit(s) must commence shutdown and that station procedures would specify alternative process or engineering controls that manage the radioactivity in the air. The licensee then stated that consistent with 10 CFR 20.1701 and 10 CFR 20.1702, these alternative controls would not include the use of potassium-iodide pills and self-contained breathing apparatus respirators except as a last resort in accordance with emergency operating procedures. In addition, the licensee stated that the compensatory filtration unit is a fully-qualified backup to the emergency filtration unit and will remain the preferred mitigating action in the event of an inoperable CREVS filter train.

The NRC staff does not agree with the licensee's statement that the compensatory filtration unit is a fully qualified backup. In Inspection Manual Chapter 0326, "Operability Determinations & Functionality Assessments for Condition Adverse to Quality or Safety," the NRC defines "fully qualified" as:

> 03.04 Fully Qualified: An SSC [Structure, System, and Component] is fully qualified when it conforms to all aspects of its CLB [current licensing basis], including all applicable codes and standards, design criteria, safety analyses assumptions and specifications, and licensing commitments. An SSC is considered "not fully qualified," i.e., degraded or nonconforming, when it does not conform to all aspects of its CLB, including all applicable codes and standards, design criteria, safety analyses assumptions and specification, and licensing commitments.

In 10 CFR Part 54, "Requirements for Renewal of Operating Licenses for Nuclear Power Plants," Section 54.3, the NRC defines the CLB as:

> Current licensing basis (CLB) is the set of NRC requirements applicable to a specific plant and a licensee's written commitments for ensuring compliance with and operation within applicable NRC requirements and the plant-specific design basis (including all modifications and additions to such commitments over the life of the license) that are docketed and in effect. The CLB includes the NRC regulations contained in 10 CFR parts 2, 19, 20, 21, 26, 30, 40, 50, 51, 52, 54, 55, 70, 72, 73, 100 and appendices thereto; orders; license conditions; exemptions; and technical specifications. It also includes the plant-specific design-basis information defined in 10 CFR 50.2 as documented in the most recent final safety analysis report as required by 10 CFR 50.71 and the licensee's commitments remaining in effect that were made in docketed licensing correspondence such as licensee responses to NRC bulletins, generic letters, and enforcement actions, as well as licensee commitments documented in NRC safety evaluations or licensee event reports.

Turkey Point's updated final safety analysis report (UFSAR) states that the design basis of the CREVS with respect to radiological emergencies is to be capable of ***automatically starting under accident conditions to initiate emergency control room pressurization and filtration***, assuming the occurrence of a single failure. Turkey Point's UFSAR Chapter 14 states the automatic initiation signals and timing for automatically initiating CREVS emergency mode operation for the Loss of Coolant Accident (LOCA), Fuel Handling Accident in containment, Main Steam Line Break Accident, Steam Generator Tube Rupture Accident (SGTR), Reactor Coolant Pump Shaft Seizure Accident, and Rod Cluster Control Assembly ejection Accident. The automatic initiation signal response time ranges from 30 seconds for LOCA to 321 seconds for SGTR. This information is consistent with the NRC staff's safety evaluation dated June 23, 2011 (ADAMS Accession number ML110800666), which approved the alternative source term (AST) in amendments numbers 244 and 240. In the NRC staff's safety evaluation for the AST, the NRC staff found the compensatory backup filtration unit to be acceptable because it met the structural design requirements, and upon the CREVS filter train becoming inoperable, the compensatory filtration unit is immediately initiated thereby meeting the radiological design requirements assumed in the radiological consequence analysis. The TS requirement places the

compensatory filtration unit in use and therefore meets the automatic starting criteria because it's in use prior to occurrence of an accident.

The NRC staff does not consider Turkey Point's compensatory filtration unit to be fully qualified unless it can, in conjunction with the CREVS, meet all the automatic initiating requirements assumed in the Turkey Point radiological consequences analyses.

Westinghouse STS 3.7.10, "Control Room Emergency Filtration System (CREFS)," design has two independent, redundant, trains that recirculate and filter the air in the control room envelope. Therefore, when one CREFS filter train is inoperable, seven days are allowed to restore the CREFS filter train to operable status, because the remaining CREFS train meets the requirements in the accident analysis and is adequate to perform the CRE occupant protection function. If two CREFS filter trains are inoperable in modes 1 through 4 then STS requires immediate entry into LCO 3.0.3 because the CREFS may not be capable of performing the intended function and the unit is in a condition outside the accident analysis.

Please explain:

A. Has the design of the compensatory filtration unit changed from manual initiation to automatic initiation? Can CREVS emergency mode be automatically initiated to use the compensatory filtration unit, allowing it to meet all the requirements assumed in the radiological consequences analyses? If so, explain the design changes to the CREVS which would support a 7-day AOT.

B. Provide the alternative mitigating actions and explain how they meet all the requirements assumed in the Turkey Point radiological consequences analyses such that they support a 7-day AOT.

C. Given the differences between the STS and Turkey Point designs, the LAR did not address the acceptability of the proposed changes. Please explain why alternative mitigating actions would be necessary?

FPL Response to ARCB/SBPB-RAI-3

A. Has the design of the compensatory filtration unit changed from manual initiation to automatic initiation? Can CREVS emergency mode be automatically initiated to use the compensatory filtration unit, allowing it to meet all the requirements assumed in the radiological consequences analyses? If so, explain the design changes to the CREVS which would support a 7-day AOT.

FPL Response:

FPL acknowledges the unintentional implication in LAR 246 (Reference 1 of ARCB/SBPB-RAI-3) that the CREVS compensatory filtration unit is a fully qualified backup to the CREVS normal emergency filtration. The compensatory filtration unit does not have

automatic-start capability and hence is not fully qualified with regard to the design basis requirement to be capable of automatically starting under accident conditions to initiate emergency control room pressurization and filtration assuming the occurrence of a single failure. The compensatory filtration unit is designed as a manual, safety-related, Seismic Class I backup to the installed emergency filtration train. Once placed in service, the compensatory filtration unit is fully capable of performing its specified safety function of limiting CRE occupant radiological exposures to below the allowable limits. It was in this context that FPL inadvertently referred to the compensatory filtration unit as fully qualified. The capability of the compensatory filtration unit to limit CRE occupant radiological exposures to below the allowable limits is periodically verified through TS required filtration surveillance testing that meets the same criteria as the CREVS normal emergency filtration train. In this regard, the compensatory unit is a fully capable backup to the normal emergency filtration system train, once in service, because the compensatory filtration unit meets the radiological design requirements assumed in the radiological consequence analysis for the applicable design basis accidents. In addition and as the NRC staff acknowledges in ARCB/SBPB-RAI-3, the requirement to immediately begin placing the compensatory filtration unit inservice upon loss of the normal emergency filtration train satisfies the design basis automatic-starting criteria because the compensatory filtration unit would be in use prior to the occurrence of an accident. Moreover, relocating the TS ACTION 3.7.5.a.5 requirement to immediately suspend irradiated fuel movement from the discovery of an inoperable emergency filter train to the expiration of the seven-day allowable outage time (AOT) would not affect the capability of the compensatory filtration unit to perform its specified safety function once placed inservice and this function would be maintained throughout the duration of the seven-day AOT.

B. Provide the alternative mitigating actions and explain how they meet all the requirements assumed in the Turkey Point radiological consequences analyses such that they support a 7-day AOT.

FPL Response:

FPL proposed the use of alternative mitigating actions in the event the manually operated compensatory filtration unit could not be placed inservice within 24 hours of discovery of an inoperable CREVS emergency filtration train. The alternative mitigation actions were purposely omitted from the license amendment request because it was believed their inclusion was unnecessary as long as FPL provided assurance that CRE occupational exposures would not exceed allowable limits in the event of their use. One such alternative could be, for example, isolating the Control Room normal and emergency air intakes for up to a predetermined, acceptable period. However, during a RAI clarification teleconference with FPL and NRC staff on December 1, 2016, the staff provided further explanation of their bases for requesting the nature of the proposed alternative mitigating actions. Based upon this discussion, FPL hereby withdraws its request for the allowance of alternative mitigating actions and agrees that the requirement to immediately initiate action to place the compensatory filtration unit in service in the event of an inoperable CREVS filter train is appropriate. Should it be determined that the compensatory filtration unit is incapable of

operating within 24 hours, the Units would initiate shutdowns in accordance with TS 3/4.7.5 ACTION a.5. Accordingly, FPL has further modified the proposed ACTION a.5 to remove any uncertainty regarding the requirement to place the compensatory filtration unit in service in the event of an inoperable CREVS filter train. However, FPL continues to assert that the requirement to immediately suspend irradiated fuel movement should apply only during the 24-hour period allotted to place the compensatory unit in service and verify proper operation, or otherwise upon expiration of the 7-day AOT. Once the compensatory unit is placed in service, irradiated fuel movement should be allowed to resume since the CREVS specified safety function would be fulfilled for the duration of the 7-day AOT. With the compensatory filtration unit in service, the requirement to suspend irradiated fuel movement upon expiration of the AOT would be consistent with Westinghouse STS ACTION 3.7.10.A for an inoperable CREFS train.

C. Given the differences between the STS and Turkey Point designs, the LAR did not address the acceptability of the proposed changes. Please explain why alternative mitigating actions would be necessary?

FPL Response:

As discussed above, FPL withdraws the requested allowance for alternative mitigating actions and has modified the proposed TS 3/4.7.5 ACTION a.5 to clarify that the immediate initiation of action to place the compensatory filtration unit in service within 24 hours is required. Accordingly, the requirement in ACTION a.5 to verify that mitigating actions ensure CRE occupant radiological exposure will not exceed limits was removed to eliminate redundancy with the compensatory unit surveillance requirements specified by notation on TS page 3/4 7-20.

Attachment 1 to this enclosure provides the existing TS 3/4.7.5 ACTION a.5 pages marked up to show the above proposed changes. Attachment 2 provides the retyped (clean copy) TS pages with revision bars to identify the proposed changes. These TS marked up and retyped pages supersede the corresponding marked up pages provided in Reference 1 of ARCB/SBPB-RAI-3.

ACRB/SBPB RAI-1 References:

1. Florida Power & Light Company letter L-2016-246, License Amendment Request 246, Changes to Technical Specifications 3/4.7.5, Control Room Emergency Ventilation System (CREVS), August 3, 2016 (ADAMS Accession No. ML 16230A003)

ARCB-RAI-4

Turkey Point's TS 3/4.7.5 ACTIONs a.1 through a.9, and b, contain the following sentence:

If this ACTION applies to both units simultaneously, be in HOT STANDBY within 12 hours and in COLD SHUTDOWN within the following 30 hours.

In the LAR, the licensee states that the changes are proposed in order to align TS 3/4.7.5 more closely with Westinghouse STS 3.7.10 of NUREG 1431, Revision 4. However, if the sentence above were in STS, it would mean there is a requirement anytime the ACTION applied to both units simultaneously, that both units be in hot standby within 12 hours and in cold shutdown within the following 30 hours. Because Turkey Point is a dual unit site with a single shared control room, the CREVS is common to both units and, therefore, the TS sentence above, if applied as it relates to STS, would require both units to be in hot standby within 12 hours and cold shutdown within the following 30 hours any time Turkey Point met the conditions to enter ACTIONs a.1 through a.9 and b while both units are in modes 1 through 4. It would essentially negate the actions to immediately suspend all movement of irradiated fuel and, restore the inoperable equipment to operable status within the AOT. As applied to Turkey Point, the staff would have written the STS as shown below for ACTION a.1:

> With one air handling unit inoperable, immediately suspend all movement of irradiated fuel and, within 7 days, restore the inoperable air handling unit to operable status or be in at least hot standby within the next 6 hours for one unit or 12 hours for both units and in cold shutdown within the following 30 hours.

The NRC staff would have written it this way because it takes into account that CREVS is a common system to both plants and it allows 7 days to restore the inoperable air handling unit to operable status while suspending all irradiated fuel movement before requiring the units to be shutdown. In addition, it allows more time for a dual unit shutdown.

Because the licensee stated that the purpose of this LAR is to more closely align with STS 3.7.10, please consider revising TS 3/4.7.5 ACTIONs a.1 through a.9, and b to be consistent with STS 3.7.10, which would avoid any misinterpretations of these ACTIONs.

FPL Response to ARCB-RAI-4

FPL agrees with the staff's recommendation to revise the TS 3/4.7.5 ACTION(s) in order to clarify that a dual Unit shutdown is not required whenever a required ACTION applies to both Units, until expiration of the associated AOT. As such, FPL proposes revising TS 3/4.7.5 ACTION(s) a.1 through a.7 [ACTION a.8 and a.9 being deleted] and b, to require that upon expiration of the AOT, the immediate suspension of irradiated fuel movement is required as well as entry into HOT STANDBY within the next 6 hours for one Unit, or 12 hours for both Units, and COLD SHUTDOWN within the following 30 hours. This new proposed change eliminates any ambiguity regarding when a dual Unit shutdown is required and thereby aligns TS 3/4.7.5 ACTION(s) a.1 through a.7, and b, more closely with the STS 3.7.10 ACTION(s). The bases for relocating the requirement to immediately suspend irradiated fuel movement from the time of inoperability to the completion of the AOT, as discussed in Reference 1 of ACRB RAI-4, remains unchanged.

Attachment 1 to this enclosure provides the existing TS 3/4.7.5 ACTION(s) a.1 through a.7 pages marked up to show the above proposed changes. Attachment 2 provides the retyped

(clean copy) TS pages with revision bars to identify the proposed changes. These TS marked up and retyped pages supersede the corresponding marked up pages provided in Reference 1 of ACRB RAI-4.

ACRB RAI-4 References

1. Florida Power & Light Company letter L-2016-246, License Amendment Request 246, Changes to Technical Specifications 3/4.7.5, Control Room Emergency Ventilation System (CREVS), August 3, 2016 (ADAMS Accession No. ML 16230A003)

SBPB-RAI-1:

The LAR states the following:

The changes are proposed in order to align Technical Specification (TS) 3/4.7.5 more closely with Westinghouse Standard Technical Specifications (STS) 3.7.10, Revision 4. Consequently, the requirements to immediately suspend irradiated fuel movement are relocated, in most cases, to coincide with the commencement of Unit(s) shutdown in the event the allowable outage time (AOT) cannot be met for an inoperable CREVS component or CRE boundary. As such, the proposed license amendment aligns the current TS 3.7.5 ACTION(s) with STS 3.7.10 ACTION(s) for an inoperable CREVS train.

The staff's review indicates the following:

Turkey Point TS 3/4.7.5 is currently not in the improved STS format. However, it covers the aspects of two STSs in Westinghouse STS: TS 3.7.10 for CREFS and TS 3.7.11 for CREATCS. The current ACTIONs a.1 to a.8 in Turkey Point's TS 3/4.7.5 all have 7 days to restore the inoperable equipment. The proposed changes in the LAR will retain the 7-day restoration time for the inoperable equipment for all the ACTIONs, except a.2. The LAR proposes to change the restoration time for the inoperable equipment (condensers) to 30 days. Based on staff's review, it appears that the proposed changes to ACTIONs a.1 to a.8 (except a.2) and ACTIONs b.1 and b.2 are analogous to STS 3.7.10, ACTION A, and the proposed change to ACTION a.2 is analogous to STS 3.7.11, ACTION A. Therefore, the staff believes that the inoperable equipment in all the ACTIONs, except ACTION a.2, will impact the CREFS (and possibly the CREATCS) part of the Turkey Point CREVS, whereas the inoperable equipment in ACTION a.2 will only impact the CREATCS portion of Turkey Point CREVS.

Please confirm the staff's understanding of the proposed changes, or provide clarification as necessary.

FPL Response to SBPB-RAI-1

FPL agrees with staff's interpretation that the proposed changes to TS 3/4.7.5 ACTION(s) a.1 through a.7 (except a.2), and b.1 and b.2, are analogous to STS 3.7.10, ACTION A, for an

inoperable CREFS train. Each of the equipment identified in ACTION(s) a.1 through a.7 (except a.2), and b, are required for Control Room emergency filtration and for maintaining CRE boundary integrity. However, FPL proposed eliminating ACTION a.8 (and a.9) in order to update the Turkey Point licensing basis with the current Control Room kitchen and lavatory exhaust design.

FPL also agrees that the proposed change to ACTION a.2, addressing the CREVS condensing units, is analogous to STS 3.7.11, ACTION A, for an inoperable CREATCS train. The design basis for the three fully functional CREVS condensing units is to maintain Control Room equipment within the environmental limits for temperature and humidity. The condensing units provide no specified safety function with regard to Control Room normal or emergency filtration or CRE boundary integrity. Moreover, STS 3.7.10 solely addresses Control Room emergency filtration and provides no required ACTION for a loss of the Control Room temperature and humidity control function. As such, a 30-day completion time for a single OPERABLE condensing unit, as newly proposed in FPL's ARCB-RAI-1 response, is consistent STS 3.7.11, ACTION A, for an inoperable CREATCS train.

SBPB-RAI-2

STS 3.7.10 ACTION C is applicable in MODES 1, 2, 3, and 4, and it requires entry into Mode 3 within 6 hours and entry into Mode 5 within 36 hours. STS 3.7.10 ACTION D is applicable in MODES 5 or 6, or during movement of irradiated fuel assemblies, and it requires to place OPERABLE CREFS train in emergency mode or to suspend movement of irradiated fuel assemblies. In the proposed TS 3/4.7.5, ACTIONs a.1 through a.7 and ACTION b, entry into hot standby (Mode 3) is required within 12 hours if ACTIONs are applied to both units simultaneously. This is inconsistent with similar conditions in STS 3.7.10, ACTIONs C and D.

Please propose changes to align TS 3/4.7.5 with STS 3.7.10, or justify the acceptability of the deviations from STS 3.7.10.

FPL Response to SBPB-RAI-2

FPL believes the proposed changes to TS 3/4.7.5, ACTION(s) a.1 through a.7, and b, are consistent with STS 3.7.10, ACTION(s) C and D with regard to requiring Unit(s) shutdown upon expiration of the associated AOT and additionally requiring the suspension of irradiated fuel movement. FPL agrees however, that the proposed changes to TS 3/4.7.5, ACTION(s) a.1 through a.7, and b, are inconsistent with STS 3.7.10, ACTION(s) C and D in the context of allowing 12 hours for both Units to reach HOT STANDBY in the event one of the required ACTION(s) apply to both Units simultaneously. Though the requirement to be in HOT STANDBY within 6 hours and in COLD SHUTDOWN within 36 hours is consistent with STS 3.7.10, ACTION(s) C and D for single Unit applicability, for dual Unit applicability, STS 3.7.10 has no shutdown ACTION requirement which addresses the uniqueness of Turkey Point's shared Control Room design. However in Reference 1 of SBPB-RAI-2, the NRC acknowledged in an unrelated Turkey Point No Significant Hazards Consideration determination that 6 hours

is required for one Unit to reach HOT STANDBY from full power in an orderly process, and that 12 hours is thereby needed for two Units to safely reach HOT STANDBY. The NRC concluded that the added orderliness of Control Room activities and the reduced transient demand on plant equipment is safer by shutting down both Units sequentially rather than simultaneously. FPL seeks to retain the 12 hours currently allowed for entering HOT STANDBY when a dual Unit shutdown is required because attempting a simultaneous Unit shutdown within 6 hours compromises safety. As such, FPL proposes no additional changes which serve to further align TS 3/4.7.5, ACTION(s) a.1 through a.7, and b, with STS 3.7.10, ACTION(s) C and D.

SBPB-RAI-2 References:

1. NRC Letter to J. H Goldberg, Florida Power and Light Company, from G.E. Edison, Office of Nuclear Reactor Regulation, Turkey Point Units 3 and 4 - Revised Technical Specifications (TAC NOS. 63038 AND 63039), dated May 9, 1990 (ADAMS Accession No. ML 013370532)

SBPB-RAI-3

TS 3/4.7.5 ACTIONs a.1 to a.7, and b contain the following:

...restore the inoperable to OPERABLE status or, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. If this ACTION applies to both units simultaneously, be in HOT STANDBY within 12 hours and in COLD SHUTDOWN within the following 30 hours.

Because Turkey Point 3 and 4 have a common Control Room, the presumption would be that most, if not all, of these ACTIONs will apply to both units simultaneously.

Please explain, for each ACTION, how it is determined whether the statement applies to a single unit or to both units simultaneously? If an ACTION always applies to both units simultaneously, propose revised ACTIONs.

FPL Response to SBPB-RAI-3

FPL reviewed the proposed changes to TS 3/4.7.5, ACTION(s) a.1 to a.7, and b, in the context of single versus dual Unit applicability and acknowledges that scenarios in which the required ACTIONS would not apply to both Units would be infrequent. This is because the proposed changes to TS 3/4.7.5, ACTION(s) a.1 to a.7, and b, broaden the Units' applicability to all plant MODE(s) and during the movement of irradiated fuel (i.e. core off-loaded). However, dual Unit applicability would not apply when a Unit's core is fully off-loaded and there is no ongoing movement of irradiated fuel. For this short duration scenario, the required ACTION(s)

associated with an inoperable CREVS component or filtration train, or loss of CRE boundary integrity, would not apply to the off-loaded Unit until irradiated fuel movement resumed. As such, FPL proposes no additional changes which accommodate scenarios in which TS 3/4.7.5, ACTION(s) a.1 to a.7, and b, apply to both Units simultaneously.

ATTACHMENT 1

PROPOSED TECHNICAL SPECIFICATION PAGES (MARKUP)

(4 pages follow)

PLANT SYSTEMS

3/4.7.5 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.5 The Control Room Emergency Ventilation System shall be OPERABLE* with:

a. Three air handling units,

b. Two ~~of three~~ condensing units,

c. Two control room recirculation fans,

d. Two recirculation dampers,

e. One filter train,

f. Two isolation dampers in the normal outside air intake duct,

g. Two isolation dampers in the emergency outside air intake duct,

~~h. Two isolation dampers in the kitchen area exhaust duct, and~~

~~i. Two isolation dampers in the toilet area exhaust duct.~~

h. Control Room Envelope.

APPLICABILITY: ~~All MODES~~ MODES 1, 2, 3, 4, 5 and 6 or during movement of irradiated fuel assemblies

ACTION:

~~MODES 1, 2, 3 and 4:~~

immediately suspend all movement of irradiated fuel and be in at least HOT STANDBY within the next 6 hours for one Unit, or 12 hours for both Units, and in COLD SHUTDOWN with the following 30 hours.

only one OPERABLE condensing unit,

a.1 With one air handling unit inoperable, ~~immediately suspend all movement of irradiated fuel and~~ within 7 days, restore the inoperable air handling unit to OPERABLE status or ~~be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. If this ACTION applies to both units simultaneously, be in HOT STANDBY within 12 hours and in COLD SHUTDOWN within the following 30 hours.~~

a.2 With ~~two condensing units inoperable, immediately suspend all movement of irradiated fuel and~~ within ~~7~~ 30 days, restore at least one of the inoperable condensing units to OPERABLE status or ~~be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. If this ACTION applies to both units simultaneously, be in HOT STANDBY within 12 hours and in COLD SHUTDOWN within the following 30 hours.~~

a.3 With one recirculation fan inoperable, ~~immediately suspend all movement of irradiated fuel and~~ within 7 days, restore the inoperable fan to OPERABLE status or ~~be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. If this ACTION applies to both units simultaneously, be in HOT STANDBY within 12 hours and in COLD SHUTDOWN within the following 30 hours.~~

*The Control Room Envelope (CRE) boundary may be opened intermittently under administrative control.

PLANT SYSTEMS

3/4.7.5 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION (continued)

immediately suspend all movement of irradiated fuel and be in at least HOT STANDBY within the next 6 hours for one Unit, or 12 hours for both Units, and in COLD SHUTDOWN with the following 30 hours.

a.4 With one recirculation damper inoperable, ~~immediately suspend all movement of irradiated fuel and,~~ within 7 days, restore the inoperable damper to OPERABLE status or, place and maintain at least one of the recirculation dampers in the open position and place the system in recirculation mode** or, ~~be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. If this ACTION applies to both units simultaneously, be in HOT STANDBY within 12 hours and in COLD SHUTDOWN within the following 30 hours.~~

place

in service and verify proper operation

a.5 With the filter train inoperable, e.g., an inoperable filter, and/or two inoperable recirculation fans, and/or two inoperable recirculation dampers, immediately suspend all movement of irradiated fuel~~,~~ and immediately~~,~~ initiate action to ~~implement mitigating actions, [e.g., use of~~ the compensatory filtration unit ~~is required to be immediately initiated], and,~~ within 24 hours, ~~verify mitigating actions ensure CRE occupant radiological exposures will not exceed limits~~ and~~,~~ within 7 days, restore the filter train to OPERABLE status.

, following which movement of irradiated fuel may resume,

With the above requirements not met, ~~be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. If this ACTION applies to both units simultaneously, be in HOT STANDBY within 12 hours and in COLD SHUTDOWN within the following 30 hours.~~

a.6 With an inoperable damper in the normal outside air intake~~, immediately suspend all movement of irradiated fuel and~~, within 7 days, restore the inoperable damper to OPERABLE status or, place and maintain at least one of the normal outside air intake isolation dampers in the closed position and place the system in recirculation mode** or, ~~be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. If this ACTION applies to both units simultaneously, be in HOT STANDBY within 12 hours and in COLD SHUTDOWN within the following 30 hours.~~

a.7 With an inoperable damper in the emergency outside air intake~~, immediately suspend all movement of irradiated fuel and~~, within 7 days, restore the inoperable damper to OPERABLE status or, place and maintain at least one of the emergency outside air intake isolation dampers in the open position** or, ~~be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. If this ACTION applies to both units simultaneously, be in HOT STANDBY within 12 hours and in COLD SHUTDOWN within the following 30 hours.~~

~~a.8 With an isolation damper inoperable in the kitchen area exhaust duct, immediately suspend all movement of irradiated fuel and, within 7 days, restore the inoperable damper to OPERABLE status or isolate the flow path** or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. If this ACTION applies to both units simultaneously, be in HOT STANDBY within 12 hours and in COLD SHUTDOWN within the following 30 hours.~~

~~a.9 With an isolation damper inoperable in the toilet area exhaust duct, immediately suspend all movement of irradiated fuel and, within 7 days, restore the inoperable damper to OPERABLE status or isolate the flow path** or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. If this ACTION applies to both units simultaneously, be in HOT STANDBY within 12 hours and in COLD SHUTDOWN within the following 30 hours.~~

~~**If action is taken such that indefinite operation is permitted and the system is placed in recirculation mode, then movement of irradiated fuel may resume.~~

With the above requirements not met, immediately suspend all movement of irradiated fuel and be in at least HOT STANDBY within the next 6 hours for one Unit, or 12 hours for both Units, and in COLD SHUTDOWN with the following 30 hours.

PLANT SYSTEMS

3/4.7.5 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION (continued)

. Within

b. With the Control Room Emergency Ventilation System inoperable due to an inoperable CRE boundary, immediately suspend all movement of irradiated fuel ~~in the spent fuel pool,~~ and immediately initiate action to implement mitigating actions~~, and within~~ 24 hours, verify mitigating actions ensure CRE occupant radiological and chemical hazards will not exceed limits~~,~~ and CRE occupants are protected from smoke hazards, and restore CRE boundary to OPERABLE status within 90 days~~, or:~~

following which movement of irradiated fuel may resume,

~~1) With the requirements not met, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.~~

~~2) If this ACTION applies to both units simultaneously, be in HOT STANDBY within 12 hours and in COLD SHUTDOWN within the following 30 hours.~~

~~MODES 5 and 6:~~

~~c. With the Control Room Emergency Ventilation System inoperable*+*, immediately suspend all operations involving CORE ALTERATIONS, movement of irradiated fuel in the spent fuel pool, or positive reactivity changes. This ACTION shall apply to both units simultaneously.~~

SURVEILLANCE REQUIREMENTS

4.7.5 The Control Room Emergency Ventilation System shall be demonstrated OPERABLE:

a. In accordance with the Surveillance Frequency Control Program by verifying that the control room air temperature is less than or equal to 120°F;

b. In accordance with the Surveillance Frequency Control Program by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that the system operates for at least 15 minutes**~~*~~;

c. In accordance with the Surveillance Frequency Control Program or (1) after 720 hours of system operation, or (2) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (3) following exposure of the filters to effluents from painting, fire, or chemical release in any ventilation zone communicating with the system that may have an adverse effect on the functional capability of the system, or (4) after complete or partial replacement of a filter bank by:

~~*+* If action per ACTIONS a.4, a.6, a.7, a.8, or a.9 is taken that permits indefinite operation and the system is placed in recirculation mode, then CORE ALTERATIONS, movement of irradiated fuel in the spent fuel pool, and positive reactivity changes may resume.~~

**~~*~~As the mitigation actions of TS 3.7.5 Action a.5 include the use of the compensatory filtration unit, the unit shall meet the surveillance requirements of TS 4.7.5.b, by manual initiation from outside the control room and TS 4.7.5.c, d and ~~f~~ g.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

1) Verifying that the air cleanup system satisfies the in-place penetration and bypass leakage testing acceptance criteria of greater than or equal to 99.95% DOP and 99% halogenated hydrocarbon removal at a system flow rate of 1000 cfm ±10%**±.

2) Verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, and analyzed per ASTM D3803 - 1989 at 30°C and 95% relative humidity, meets the methyl iodide penetration criteria of less than 2.5% or the charcoal be replaced with charcoal that meets or exceeds the stated performance requirement**±, and

3) Verifying by a visual inspection the absence of foreign materials and gasket deterioration**±.

d.1 In accordance with the Surveillance Frequency Control Program by verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6 inches Water Gauge while operating the system at a flow rate of 1000 cfm ±10%**±;

d.2 In accordance with the Surveillance Frequency Control Program, test the supply fans (trains A and B) and measure CRE pressure relative to external areas adjacent to the CRE boundary.**±

e. In accordance with the Surveillance Frequency Control Program by verifying that on a Containment Phase "A" Isolation test signal the system automatically switches into the recirculation mode of operation,

~~f. In accordance with the Surveillance Frequency Control Program by verifying operability of the kitchen and toilet area exhaust dampers, and~~

f. By performing required CRE unfiltered air inleakage testing in accordance with the Control Room Envelope Habitability Program.**±

**±As the mitigation actions of TS 3.7.5 Action a.5 include the use of the compensatory filtration unit, the unit shall meet the surveillance requirements of TS 4.7.5.b, by manual initiation from outside the control room and TS 4.7.5.c, d and f~~g~~.

ATTACHMENT 2

PROPOSED TECHNICAL SPECIFICATION PAGES (CLEAN COPY)

(4 pages follow)

PLANT SYSTEMS

3/4.7.5 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.5 The Control Room Emergency Ventilation System shall be OPERABLE* with:

a. Three air handling units,

b. Two condensing units,

c. Two control room recirculation fans,

d. Two recirculation dampers,

e. One filter train,

f. Two isolation dampers in the normal outside air intake duct,

g. Two isolation dampers in the emergency outside air intake duct,

h. Control Room Envelope.

APPLICABILITY: MODES 1, 2, 3, 4, 5 and 6 or during movement of irradiated fuel assemblies

ACTION:

a.1 With one air handling unit inoperable, within 7 days, restore the inoperable air handling unit to OPERABLE status or, immediately suspend all movement of irradiated fuel and be in at least HOT STANDBY within the next 6 hours for one Unit, or 12 hours for both Units, and in COLD SHUTDOWN within the following 30 hours.

a.2 With only one OPERABLE condensing unit, within 30 days, restore at least one of the inoperable condensing units to OPERABLE status or, immediately suspend all movement of irradiated fuel and be in at least HOT STANDBY within the next 6 hours for one Unit, or 12 hours for both Units, and in COLD SHUTDOWN within the following 30 hours.

a.3 With one recirculation fan inoperable, within 7 days, restore the inoperable fan to OPERABLE status or, immediately suspend all movement of irradiated fuel and be in at least HOT STANDBY within the next 6 hours for one Unit, or 12 hours for both Units, and in COLD SHUTDOWN within the following 30 hours.

* The Control Room Envelope (CRE) boundary may be opened intermittently under administrative control.

PLANT SYSTEMS

3/4.7.5 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION (continued)

a.4 With one recirculation damper inoperable, within 7 days, restore the inoperable damper to OPERABLE status or, place and maintain at least one of the recirculation dampers in the open position and place the system in recirculation mode or, immediately suspend all movement of irradiated fuel and be in at least HOT STANDBY within the next 6 hours for one Unit, or 12 hours for both Units, and in COLD SHUTDOWN within the following 30 hours.

a.5 With the filter train inoperable, e.g., an inoperable filter, and/or two inoperable recirculation fans, and/or two inoperable recirculation dampers, immediately suspend all movement of irradiated fuel and immediately initiate action to place the compensatory filtration unit in service and verify proper operation within 24 hours, following which movement of irradiated fuel may resume, and within 7 days, restore the filter train to OPERABLE status.

With the above requirements not met, immediately suspend all movement of irradiated fuel and be in at least HOT STANDBY within the next 6 hours for one Unit, or 12 hours for both Units, and in COLD SHUTDOWN within the following 30 hours.

a.6 With an inoperable damper in the normal outside air intake, within 7 days, restore the inoperable damper to OPERABLE status or, place and maintain at least one of the normal outside air intake isolation dampers in the closed position and place the system in recirculation mode or, immediately suspend all movement of irradiated fuel and be in at least HOT STANDBY within the next 6 hours for one Unit, or 12 hours for both Units, and in COLD SHUTDOWN within the following 30 hours.

a.7 With an inoperable damper in the emergency outside air intake, within 7 days, restore the inoperable damper to OPERABLE status or, place and maintain at least one of the emergency outside air intake isolation dampers in the open position or, immediately suspend all movement of irradiated fuel and be in at least HOT STANDBY within the next 6 hours for one Unit, or 12 hours for both Units, and in COLD SHUTDOWN within the following 30 hours.

PLANT SYSTEMS

3/4.7.5 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION (continued)

b. With the Control Room Emergency Ventilation System inoperable due to an inoperable CRE boundary, immediately suspend all movement of irradiated fuel and immediately initiate action to implement mitigating actions. Within 24 hours, verify mitigating actions ensure CRE occupant radiological and chemical hazards will not exceed limits and CRE occupants are protected from smoke hazards, following which movement of irradiated fuel may resume, and restore CRE boundary to OPERABLE status within 90 days.

With the above requirements not met, immediately suspend all movement of irradiated fuel and be in at least HOT STANDBY within the next 6 hours for one Unit, or 12 hours for both Units, and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.5 The Control Room Emergency Ventilation System shall be demonstrated OPERABLE:

a. In accordance with the Surveillance Frequency Control Program by verifying that the control room air temperature is less than or equal to 120°F;

b. In accordance with the Surveillance Frequency Control Program by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that the system operates for at least 15 minutes**;

c. In accordance with the Surveillance Frequency Control Program or (1) after 720 hours of system operation, or (2) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (3) following exposure of the filters to effluents from painting, fire, or chemical release in any ventilation zone communicating with the system that may have an adverse effect on the functional capability of the system, or (4) after complete or partial replacement of a filter bank by:

** As the mitigation actions of TS 3.7.5 Action a.5 include the use of the compensatory filtration unit, the unit shall meet the surveillance requirements of TS 4.7.5.b, by manual initiation from outside the control room and TS 4.7.5.c, d and f.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

1) Verifying that the air cleanup system satisfies the in-place penetration and bypass leakage testing acceptance criteria of greater than or equal to 99.95% DOP and 99% halogenated hydrocarbon removal at a system flow rate of 1000 cfm ±10%**.

2) Verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, and analyzed per ASTM D3803 - 1989 at 30°C and 95% relative humidity, meets the methyl iodide penetration criteria of less than 2.5% or the charcoal be replaced with charcoal that meets or exceeds the stated performance requirement**, and

3) Verifying by a visual inspection the absence of foreign materials and gasket deterioration**.

d.1 In accordance with the Surveillance Frequency Control Program by verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6 inches Water Gauge while operating the system at a flow rate of 1000 cfm ±10%**;

d.2 In accordance with the Surveillance Frequency Control Program, test the supply fans (trains A and B) and measure CRE pressure relative to external areas adjacent to the CRE boundary.**

e. In accordance with the Surveillance Frequency Control Program by verifying that on a Containment Phase "A" Isolation test signal the system automatically switches into the recirculation mode of operation,

f. By performing required CRE unfiltered air inleakage testing in accordance with the Control Room Envelope Habitability Program.**

** As the mitigation actions of TS 3.7.5 Action a.5 include the use of the compensatory filtration unit, the unit shall meet the surveillance requirements of TS 4.7.5.b, by manual initiation from outside the control room and TS 4.7.5.c, d and f.

ATTACHMENT 3

PROPOSED TECHNICAL SPECIFICATION BASES PAGES (MARKUP)

(7 pages follow)

REVISION NO.:	PROCEDURE TITLE:	PAGE:
19	TECHNICAL SPECIFICATION BASES CONTROL PROGRAM	166 of 211
PROCEDURE NO.: 0-ADM-536	TURKEY POINT PLANT	

ATTACHMENT 2
Technical Specification Bases
(Page 149 of 194)

3/4.7.4 (Continued)

For the verification of UHS average supply water temperature, an appropriate instrument uncertainty will be subtracted from the Acceptance Criteria to ensure the Technical Specification limit is **NOT** exceeded.

3/4.7.5 Control Room Emergency Ventilation System

The OPERABILITY of the Control Room Emergency Ventilation System (CREVS) ensures that: (1) The ambient air temperature does **NOT** exceed the allowable temperature for continuous duty rating for the equipment and instrumentation cooled by this system, and (2) The Control Room envelope (CRE) will remain habitable for occupants during and following an uncontrolled release of radioactivity, hazardous chemicals, or smoke. The OPERABILITY of this system in conjunction with Control Room design provisions is based on limiting the radiation exposure to personnel occupying the CRE to 5 rem Total Effective Dose Equivalent (TEDE) for the duration of the accident. The radiological limits are consistent with the requirements of 10 CFR Part 50.67. CRE occupants are protected from chemical hazards in accordance with the limits of Regulatory Guide 1.78.

The Control Room Emergency Ventilation System (CREVS) is considered to be OPERABLE (Ref: JPN_PTN_SENP-92-017) when:

1) Three Air Handling Units (AHUs) (three out of three) are OPERABLE,
2) Two Condensing (air conditioning (A/C)) Units (two out of three) are OPERABLE,
3) Two Recirculation Fans are OPERABLE,
4) Two Recirculation Dampers are OPERABLE,
5) One Recirculation Filter unit is OPERABLE,
6) Two Normal Outside Air Intake Dampers are OPERABLE,
7) Two Emergency Outside Air Intake Dampers are OPERABLE,
~~8) Two isolation dampers (one motor operated damper and one gravity backdraft damper) in the kitchen area exhaust duct are OPERABLE, and~~
~~9) Two isolation dampers (one motor operated damper and one gravity backdraft damper) in the toilet area exhaust duct are OPERABLE.~~

REVISION NO.:	PROCEDURE TITLE:	PAGE:
19	TECHNICAL SPECIFICATION BASES CONTROL PROGRAM	167 of 211
PROCEDURE NO.: 0-ADM-536	TURKEY POINT PLANT	

ATTACHMENT 2
Technical Specification Bases
(Page 150 of 194)

3/4.7.5 (Continued)

The reason three AHUs are required is that in the event of a single failure, only two AHUs would be available to supply air to the suction of the recirculation filter and fan. This is the configuration tested to support Technical Specification operability for flow through the Emergency Charcoal Filter Unit. Taking one AHU out of service renders the system incapable of operating in accordance with the tested configuration assuming an accident and a single failure, i.e., only one air handling unit available instead of the two assumed in the analysis. Any one of the three condensing (A/C) units is capable of maintaining Control Room equipment within environmental limits for temperature and humidity. Thus, one condensing unit can be taken out of service without impacting the ability of CREVS to accomplish its intended function under single failure conditions.

The LCO actions allow inoperability of the redundant active CREVS components (one AHU, two Condensing Units, one Recirculation Fan, one Recirculation Damper, one Normal Outside Air Intake Damper, and/or one Emergency Outside Air Intake Damper) for a period of up to 7 days consistent with the approach provided in the Westinghouse Standard Technical Specifications and based on the low probability of occurrence of a Design Basis Accident (DBA) challenging the Control Room Habitability during this time period and the continued capability of the remaining operable system components to perform the required CREVS safety function. In effect, this temporarily suspends the single failure criterion for the affected components while assuring the continued functionality of the system. ~~When the motor operated isolation damper in a kitchen or toilet area exhaust duct becomes inoperable, the damper is required to be restored to OPERABILITY within 7 days or a damper in the flow path be CLOSED (either the motor operated damper or its associated manual isolation damper) until it can be restored to operability. This 7 day AOT is predicated on the continued operability of its associated gravity backdraft damper.~~

(30 days for two inoperable condensing units)

The kitchen and toilet area exhaust ventilation ducts have been permanently blocked off with seismic Class 1 solid plates coated in accordance with SPEC-C-004. The kitchen and toilet area motor operated and gravity backdraft dampers are no longer credited for CREVS operability.

REVISION NO.:	PROCEDURE TITLE:	PAGE:
19	TECHNICAL SPECIFICATION BASES CONTROL PROGRAM	168 of 211
PROCEDURE NO.: 0-ADM-536	TURKEY POINT PLANT	

ATTACHMENT 2
Technical Specification Bases
(Page 151 of 194)

3/4.7.5 (Continued)

Indefinite operation in the RECIRCULATION Mode is allowed since the CREVS safety function is being met.

When one damper in the Normal Outside Air Intake is inoperable, it can either be restored within 7 days or one of the two in-series dampers CLOSED and CREVS run in RECIRCULATION Mode. When one Recirculation Damper is inoperable, it can either be restored or one of the two paralleled dampers OPENED and the CREVS run in RECIRCULATION Mode. With one or both Emergency Outside Air Intake Dampers inoperable, they can either be restored or opened without adversely impacting the NORMAL or EMERGENCY Mode of operation. (See TSA 03-03-025-024 for evaluation). The placement of the dampers in their "fail-safe" position in lieu of restoration is allowed as the dampers fail "as-is" in the event of loss of offsite power (except for the emergency outside air intake dampers which go to their emergency OPEN position) and are in their EMERGENCY Mode position in the event of receipt of an emergency actuation signal.

within 7 days

~~As indicated in LCO footnote, if an action is taken such that indefinite operation is permitted (a.4, a.6, a.7, a.8, a.9) and the system is placed in RECIRCULATION Mode, then movement of irradiated fuel is allowed. Although still technically in the ACTION due to component inoperability, system configuration, as modified, satisfies the design requirement to support system emergency operation with ability to withstand a single active failure.~~

The 7 day allowable outage time for an inoperable Normal Outside Air Intake damper, Recirculation damper or Emergency Outside Air Intake damper is consistent with the approach provided in the Westinghouse Standard Technical Specifications for a single operable CREVS train.

Indefinite operation is allowed with an opened Emergency Outside Air Intake Damper since the CREVS is capable of performing its safety function.

REVISION NO.: 19	PROCEDURE TITLE:	PAGE:
PROCEDURE NO.: 0-ADM-536	TECHNICAL SPECIFICATION BASES CONTROL PROGRAM TURKEY POINT PLANT	169 of 211

ATTACHMENT 2
Technical Specification Bases
(Page 152 of 194)

3/4.7.5 (Continued)

When the filter train is inoperable for reasons other than an inoperable CRE boundary, e.g., the filter is inoperable, and/or two recirculation fans are inoperable, and/or two recirculation dampers are inoperable, all movement of fuel ~~in the Spent Fuel Pool~~ is required to be immediately suspended and ~~mitigating actions, i.e.,~~ use of the Compensatory Filtration Unit is required to be immediately initiated~~, and,~~ within 24 hours, ~~the mitigating actions are required to be verified to be in place to~~ ensure the Control Room occupant radiological exposures will **NOT** exceed limits~~, and,~~ within 7 days, the inoperable filter train is required to be restored to OPERABLE status. Consistent with 0-ADM-211 and NUREG-1431, "immediately" indicates that the required action should be pursued without delay and in a controlled manner, i.e., placing the compensatory filtration unit into service should be ~~completed~~ within approximately one hour. The 24 hour allowance is reasonable based on the low probability of a DBA occurring during this time period~~, and the use of mitigating actions, e.g., compensatory filtration unit. The mitigating actions to be verified should include the proper operation of the compensatory filtration unit, the integrity of the CRE and its capacity to perform its design function, and the associated mitigating actions specified in the Emergency Plan, e.g., SCBA, KI, etc., as applicable.~~ The 7 day AOT is reasonable based on the ~~determination~~ that the ~~mitigating actions, i.e., the~~ compensatory filtration unit~~,~~ will continue to provide ~~for the capability of the system to perform~~ the ~~required~~ CREVS safety function ~~and ensure protection of Control Room occupants within analyzed limits.~~ As with the active components, this has the effect of temporarily suspending the single failure criterion for the affected components while assuring the continued functionality of the system. The 7 day AOT is also a reasonable time to diagnose, plan, repair, and test most problems with the inoperable filter train.

proper operation verified

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CAPITALIZE

initiated

verification

to verify proper operation

REVISION NO.:	PROCEDURE TITLE:	PAGE:
19	TECHNICAL SPECIFICATION BASES CONTROL PROGRAM	173 of 211
PROCEDURE NO.: 0-ADM-536	TURKEY POINT PLANT	

ATTACHMENT 2
Technical Specification Bases
(Page 156 of 194)

Upon determination

3/4.7.5 (Continued)

immediately suspend the movement of irradiated fuel, and

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 that calculated in the dose analyses or in inadequate protection of CRE occupants from hazardous chemicals or smoke, the CRE boundary is inoperable. Actions must be taken to restore an OPERABLE CRE Boundary within 90 days ~~when in MODES 1, 2, 3, or 4~~. ~~During the period~~ that the CRE boundary is ~~considered~~ inoperable ~~in MODES 1, 2, 3, or 4~~, the operators are required to immediately initiate action to implement mitigating actions to lessen the effect on CRE occupants from the potential hazards of a radiological or chemical event or a challenge from smoke. Actions must be taken within 24 hours to verify that in the event of a DBA, the mitigating actions will ensure that CRE occupant radiological exposures will **NOT** exceed the calculated dose in the radiological dose consequence analyses, and that CRE occupants are protected from hazardous chemicals and smoke. Previous surveys of offsite and onsite chemicals identified that **NO** hazardous chemicals present a hazard to Control Room habitability. Thus, the mitigating action for chemical hazards may verify that the chemical hazards analyses are current and require **NO** toxic gas protection for the CRE occupants. These mitigating actions (i.e., actions that are taken to offset the consequences of the inoperable CRE boundary) should be preplanned for implementation upon entry into the condition, regardless of whether entry is intentional or unintentional. The 24 hour allowable outage time (AOT) is reasonable based on the low probability of a DBA occurring during this time period and the use of mitigating actions. The 90 day AOT 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 reactors and maintain them in a safe shutdown condition in the event of a DBA. The 90 day AOT is a reasonable time to diagnose, plan and possibly repair, and test most problems with the CRE boundary.

and is consistent with the approach provided in the Westinghouse Standard Technical Specifications for one or more inoperable CREVS trains due to an inoperable CRE boundary

, following which irradiated fuel movement may resume

REVISION NO.:	PROCEDURE TITLE:	PAGE:
19	TECHNICAL SPECIFICATION BASES CONTROL PROGRAM	174 of 211
PROCEDURE NO.: 0-ADM-536	TURKEY POINT PLANT	

ATTACHMENT 2
Technical Specification Bases

3/4.7.5 (Continued)

action must be taken immediately to suspend all operations that could result in a release of radioactivity that might require isolation of the CRE, such as movement of irradiated fuel, and

the following 30

~~In MODES 1, 2, 3, or 4,~~ if the inoperable CREVS or the CRE Boundary cannot be restored to OPERABLE status within the associated required AOT, the unit must be placed in a MODE that minimizes the accident risk. To achieve this status, the unit must be placed in at least MODE 3 (HOT STANDBY) within ~~6~~ hours, and in MODE 5 (COLD SHUTDOWN) within ~~36~~ hours. If the inoperability applies to both units simultaneously, be in MODE 3 within 12 hours, and in MODE 5 within ~~42~~ hours. The AOTs 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.

This does **NOT** preclude the movement of fuel to a safe position.

~~In MODE 5 or 6, with the CREVS inoperable for an inoperable CRE Boundary or for other reasons, action must be taken immediately to suspend all operations that could result in a release of radioactivity that might require isolation of the CRE, such as movement of irradiated fuel. This places the unit in a condition that minimizes the accident risk. This does **NOT** preclude the movement of fuel to a safe position. These ACTION requirements apply to both units simultaneously.~~

Operations that, in the absence of a compensation adjustment, add positive reactivity are acceptable when, combined with other concurrent actions that add negative reactivity, the overall net reactivity addition is zero or negative. For example, a positive reactivity addition caused by temperature increases or decreases is acceptable if it is concurrent with a negative reactivity addition (i.e., boration and/or rod movement, if authorized) such that the overall, net reactivity addition is zero or negative.

REVISION NO.:	PROCEDURE TITLE:	PAGE:
19	TECHNICAL SPECIFICATION BASES CONTROL PROGRAM	175 of 211
PROCEDURE NO.: 0-ADM-536	TURKEY POINT PLANT	

ATTACHMENT 2
Technical Specification Bases
(Page 158 of 194)

3/4.7.5 (Continued)

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Surveillance Requirement (SR) 4.7.5.~~g~~ verifies the OPERABILITY of the CRE Boundary by testing for unfiltered air inleakage past the CRE boundary and into the CRE. It verifies that the unfiltered air inleakage into the CRE is **NO** greater than the flow rate assumed in the dose analyses. When unfiltered air inleakage is greater than the assumed flow rate, ACTION b must be entered ~~when a unit is in MODES 1-4 and ACTION c must also be entered when a unit is in MODE 5 or 6~~). ACTION b allows time to restore the CRE boundary to OPERABLE status provided mitigating actions are taken ~~while in MODES 1-4~~, that ensures that the CRE remains within the licensing basis habitability limits for the occupants following an accident. The details of the testing are specified in the Control Room Envelope Habitability Program.