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

Vogtle Electric Generating Plant, Units 1 & 2  
Response to Request for Additional Information  
Regarding Adoption of TSTF-432-A, Rev. 1  
"Change in Technical Specifications End States (WCAP-16294),  
Using the Consolidated Line Item Improvement Process"

Ladies and Gentlemen:

By letter dated May 6, 2015 (Agencywide Documents Access and Management System [ADAMS] Accession No. ML15128A239), Southern Nuclear Operating Company (SNC) submitted a license amendment request (LAR) to adopt the Technical Specifications changes identified in Technical Specification Task Force Traveler 432-A, Rev. 1 "Change in Technical Specifications End States, WCAP-16294."

By letter dated September 8, 2015 (ADAMS Accession No. ML15240A232), the Nuclear Regulatory Commission (NRC) sent SNC a request for additional information (RAI). Enclosure 1 provides the SNC response to the NRC RAI. Additionally, SNC proposes to revise the Technical Specifications and Bases pages submitted as part of the LAR, as provided in Enclosures 2 and 3 of this letter.

This letter contains no NRC commitments. If you have any questions, please contact Ken McElroy at (205) 992-7369.

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

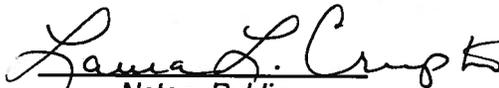
Respectfully submitted,



C. R. Pierce  
Regulatory Affairs Director

CRP/EGA

Sworn to and subscribed before me this 8<sup>th</sup> day of Oct, 2015.

  
Notary Public

My commission expires: 10-7-2017

- Enclosures
1. SNC Response to NRC RAI
  2. Mark-up of Technical Specifications and Bases Pages
  3. Clean-typed Technical Specifications Pages

cc: Southern Nuclear Operating Company  
Mr. S. E. Kuczynski, Chairman, President & CEO  
Mr. D. G. Bost, Executive Vice President & Chief Nuclear Officer  
Mr. D. R. Madison, Vice President – Fleet Operations  
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Mr. B. J. Adams, Vice President – Engineering  
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RType: CVC7000

U. S. Nuclear Regulatory Commission  
Mr. V. M. McCree, Regional Administrator  
Mr. L. D. Wert, Regional Administrator (Acting)  
Mr. R. E. Martin, NRR Senior Project Manager – Vogtle 1 & 2  
Mr. L. M. Cain, Senior Resident Inspector – Vogtle 1 & 2



**Vogtle Electric Generating Plant – Units 1 and 2  
Response to Request for Additional Information  
Regarding Adoption of TSTF-432-A, Rev. 1  
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**Enclosure 1**

**SNC Response to NRC RAI**

By letter dated May 6, 2015 (Agencywide Documents Access and Management System [ADAMS] Accession No. ML15128A239), Southern Nuclear Operating Company (SNC) submitted a license amendment request (LAR) to adopt the Technical Specifications changes identified in Technical Specification Task Force (TSTF) Traveler 432-A, Rev. 1, "Change in Technical Specifications End States, WCAP-16294." By letter dated September 8, 2015, the Nuclear Regulatory Commission (NRC) sent SNC a request for additional information (RAI). This enclosure provides the SNC response to the NRC RAI.

**NRC Request for Additional Information:**

**Discussion:**

The U.S. Nuclear Regulatory Commission (NRC) staff's review of the licensee's application determined that the proposed end state change for TS Limiting Conditions for Operation (LCO) 3.7.10, "Control Room Emergency Filtration System (CREFS) – Both Units Operating," and TS LCO 3.7.11, "CREFS – One Unit Operating," are not consistent with the approved TSTF-432 changes as explained below:

LCOs 3.7.10, Condition D and LCO 3.7.11 Condition F relate to a loss of both or one or more of CREFS trains due to inoperable control room envelope (CRE) boundary.

Conditions A, B and C in LCO 3.7.10 and Conditions A thru E in LCO 3.7.11 relate to a loss of both or one or more trains for reasons other than Condition D or F, respectively.

Required Action F.3 in LCO 3.7.10 or H.2 in LCO 3.7.11 currently places the unit in MODE 5 within 37 hours or 36 hours, respectively, when Required Action and associated Completion Time (for all Conditions) not met. The licensee's proposed end state change is to be in Mode 4 in 12 hours for these Required Actions.

The NRC staff's approved safety evaluation (ADAMS Accession No. ML 100770146, dated March 29, 2010) as well as the TSTF-432, Revision 1, dated November 29, 2010 (ADAMS Accession No. ML 103360003) justify an end state allowance for a loss of one or two CREFS trains due to inoperable control room envelope boundary in MODE 1, 2, 3, or 4. The proposed end state change to Required Action F.3 or H.2, if approved, would apply to all subject LCOs Conditions including those which are not associated with an inoperable CRE boundary, whereas, the TSTF allows the end state allowance specifically for a Condition associated with an inoperable CRE boundary only. Hence, the proposed change is not consistent with the approved TSTF-432 change.

Furthermore, Standard Technical Specifications (NUREG-1431, Revision 4), LCO 3.7.10, Condition F, Required Action F.1 requires to enter LCO 3.0.3 when two CREFS trains are inoperable in MODE 1, 2, 3, or 4 for reasons other than Condition B. (Condition B relates to a loss of one or more CREFS trains due to inoperable CRE boundary in MODE 1, 2, 3, or 4.)

**Request for Additional Information:**

The NRC staff requests the licensee to revise its proposed end state change to be consistent with the approved TSTF-432, or provide technical basis for the subject change as currently proposed in the application.

**SNC Response to the Request for Additional Information:**

The changes in TSTF-432-A, Rev. 1 for Revision 3.0 of the Improved Standard Technical Specification (ISTS) 3.7.10, Control Room Emergency Filtration System (CREFS), provides a revised end state for ISTS 3.7.10, Condition C when the Required Action and Completion Time of Condition A or B are not met. ISTS 3.7.10, Condition A involves situations where one CREFS train is inoperable, and ISTS 3.7.10, Condition B involves situations where two (both) CREFS trains are inoperable due to an inoperable control room boundary. The revised end state condition would allow the unit to be placed in a MODE where overall plant risk is reduced (MODE 4) instead of requiring that the unit be placed in a MODE where the where the Limiting Condition for Operability (LCO) is no longer applicable (MODE 5).

The changes identified in TSTF-432 for ISTS 3.7.10 are applicable to Vogtle Technical Specifications (TS) 3.7.10 and 3.7.11, and are proposed with the following variances and differences.

The CREFS design that is assumed in ISTS 3.7.10 and TSTF-432 consists of two independent, redundant trains, each of which is capable of pressurizing the control room and maintaining habitability within the control room envelope (CRE). The CRE is the area within the confines of the CRE boundary that contains the spaces that control room occupants inhabit to control the unit during normal and accident conditions. Requirements for operability of the CRE are included in the CREFS operability requirements of ISTS 3.7.10. The two train CREFS design and shared CRE that is assumed in ISTS 3.7.10 and TSTF-432 is typical for dual unit Westinghouse plants.

The Vogtle CREFS design has a total of four redundant, completely independent, full capacity CREFS trains that recirculate and filter the air in the common Unit 1 and 2 CRE. The CREFS trains for Unit 1 are powered from Unit 1 safety buses A and B, and the CREFS trains for Unit 2 are powered from Unit 2 safety buses A and B. Operability of the CRE is included in the CREFS operability requirements of Vogtle TS 3.7.10, "Control Room Emergency Filtration System (CREFS) – Both Units Operating," and 3.7.11, "Control Room Emergency Filtration System (CREFS) – One Unit Operating." The increased redundancy provided by the four train Vogtle CREFS design is reflected in the Conditions and Required Actions of Vogtle TS 3.7.10 and 3.7.11.

ISTS 3.7.10, Condition A applies in situations where one CREFS train is inoperable in MODES 1, 2, 3, or 4. In this Condition, the remaining OPERABLE CREFS train is adequate to perform the control room protection function. However, overall reliability is reduced because a single failure in the OPERABLE CREFS train could result in loss of the CREFS function. ISTS 3.7.10, Condition A applies to CREFS train inoperability due to: 1) an inoperable CRE boundary, or 2) causes other than an inoperable CRE boundary. The Required Action and Completion Time for ISTS 3.7.10, Condition A is to restore the inoperable CREFS train within 7 days.

Vogtle TS 3.7.10, Condition A, and Vogtle TS 3.7.11, Conditions A and B, apply when one CREFS train is inoperable for reasons other than an inoperable CRE boundary. With a single CREFS train inoperable for reasons other than an inoperable CRE boundary, one train of CREFS in the unaffected unit must be placed in the emergency mode of operation within 7 days. In this condition, the remaining operable CREFS train for the affected unit is adequate to perform the CRE occupant protection function. However, overall reliability is reduced because a failure in the operable CREFS train could result in a loss of the CREFS function for the affected

unit. Placing one CREFS train in the unaffected unit in the emergency mode of operation ensures the CRE occupants remain protected for postulated accidents and single failure conditions.

Vogtle TS 3.7.10, Condition B, and Vogtle TS 3.7.11, Condition C, apply when one CREFS train is inoperable in each unit for reasons other than an inoperable CRE boundary. With one CREFS train inoperable in each unit for reasons other than an inoperable CRE boundary, the two remaining operable CREFS trains must be placed in the emergency mode of operation within 7 days. In this condition, the remaining operable CREFS trains are adequate to perform the CRE occupant protection function for each unit. However, overall reliability is reduced because a failure in one of the operable CREFS trains could result in a loss of the CREFS function for the affected unit. Placing one CREFS train in the emergency mode of operation in each unit ensures the CRE occupants remain protected for postulated accidents and single failure conditions.

For conditions involving inoperability of a single CREFS train for reasons other than an inoperable CRE boundary, or inoperability of one CREFS train in each unit for reasons other than an inoperable CRE boundary, the Required Actions and Completion Times of Vogtle TS 3.7.10, Conditions A and B, and Vogtle TS 3.7.11, Conditions A, B, and C, are equivalent to the Required Action and Completion Time of ISTS 3.7.10, Condition A. ISTS 3.7.10, Condition A requires restoration of an inoperable CREFS train within 7 days, and Vogtle TS 3.7.10, Conditions A and B, and Vogtle TS 3.7.11, Conditions A, B, and C, require that the CREFS train in the unaffected unit be placed in the emergency mode of operation within 7 days.

These Required Actions and Completion Times are equivalent because in each case the Required Action ensures the CRE occupants remain protected for postulated accidents and eliminates single failure vulnerability of the CREFS safety function within the same time frame. The differences in the Required Actions between ISTS 3.7.10, Condition A and Vogtle TS 3.7.10, Conditions A and B, and Vogtle TS 3.7.11, Conditions A, B, and C, reflect plant-specific differences in the Vogtle Unit 1 and 2 CREFS design that do not adversely affect applicability of the end state changes identified in TSTF-432 for Vogtle TS 3.7.10 and 3.7.11.

With respect to inoperability of a CREFS train due to an inoperable CRE boundary, inoperability of a single CREFS train due to an inoperable CRE boundary is addressed in ISTS 3.7.10, Condition A, and inoperability of two (both) CREFS trains due to an inoperable CRE boundary is addressed in ISTS 3.7.10, Condition B. The revised end state conditions of TSTF-432 are applicable to ISTS 3.7.10, Conditions A and B.

Inoperability of one or more CREFS trains due to an inoperable CRE boundary is collectively addressed in Vogtle TS 3.7.10, Condition D, and Vogtle TS 3.7.11, Condition F. The combined presentation of Required Actions and Completion Times in Vogtle TS 3.7.10, Condition D, and Vogtle TS 3.7.11, Condition F, reflects changes that were made with the adoption of TSTF-448 in license amendments 154 and 135 for Vogtle Units 1 and 2 (NRC ADAMS Accession No. ML082480712). The changes in TSTF-448 also included adoption of a Control Room Envelope Habitability Program. Adoption of the end state changes from TSTF-432 for Vogtle TS 3.7.10, Condition D, and Vogtle TS 3.7.11, Condition F is consistent with the intent of TSTF-432, which is to place the unit in a MODE where overall plant risk is reduced if the CRE boundary is inoperable and cannot be restored within the required Completion Time. Remaining within the Applicability of the LCO is acceptable to restore inoperable equipment because the plant risk in MODE 4 is similar to or lower than MODE 5.

Additionally, Completion Times of 7 hours and 13 hours are proposed for the Required Actions of Vogtle TS 3.7.10, Condition F to place the affected unit(s) in MODE 3 and MODE 4, respectively. The 7 hour Completion Time to place the affected unit(s) in MODE 3 is consistent with the Completion Time that is currently reflected in the plant Technical Specifications for Required Action F.2, and the 13 hour Completion Time that is proposed for Required Action F.3 (i.e., 6 additional hours) is 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 difference does not adversely affect the applicability or intent of the end state changes identified in TSTF-432 for Vogtle TS 3.7.10, Condition F.

The proposed Technical Specification and Bases changes for Vogtle TS 3.7.10 are revised to separate Condition F into two separate conditions and create a new Condition G. The revised Condition F will apply to situations involving the "Required Action and Associated Completion Time of Condition A, B, or D not met." Conditions A, B, and D apply to situations involving inoperability of a single CREFS train in one or both units for reasons other than an inoperable CRE boundary, and to situations involving inoperability of one or more CREFS trains due to an inoperable CRE boundary. These conditions are equivalent to those identified in ISTS 3.7.10, Conditions A and B, and the end state changes of TSTF-432-A are applied to the revised Condition F. Conforming changes to the Note for Required Action F.1 are made to reflect the applicable Conditions under which Condition F applies.

For those Conditions in Vogtle TS 3.7.10 that the revised end states changes of TSTF-432 are not applicable, the existing requirements of Vogtle TS 3.7.10, Condition F are provided in a new Condition G. Condition G will apply to situations involving the "Required Action and Associated Completion Time of Condition C or E not met." Vogtle TS 3.7.10, Condition C is applicable to situations where two CREFS trains are inoperable for a single unit for reasons other than an inoperable CRE boundary, and Condition E pertains to control room air temperature not within limits. Neither of these Conditions is included within the scope of TSTF-432. The Required Actions and Completion Times in new Condition G are unchanged from the existing Condition F. Conforming changes to the Note for Required Action G.1 are made to reflect the applicable Conditions under which Condition G applies.

The proposed Technical Specification and Bases changes for Vogtle TS 3.7.11 are revised to separate Condition H into two separate conditions and create a new Condition I. The revised Condition H will apply to situations involving the "Required Action and Associated Completion Time of Condition A, B, C, or F not met." Conditions A, B, C, or F apply to situations involving inoperability of a single CREFS train in one or both units for reasons other than an inoperable CRE boundary, and to situations involving inoperability of one or more CREFS trains due to an inoperable CRE boundary. These conditions are equivalent to those identified in ISTS 3.7.10, Conditions A and B, and the end state changes of TSTF-432-A are applied to the revised Condition H.

For those Conditions in Vogtle TS 3.7.11 that the revised end states changes of TSTF-432 are not applicable, the existing requirements of Vogtle TS 3.7.11, Condition H are provided as a new Condition I. Condition I will apply to situations involving the "Required Action and Associated Completion Time of Condition D, E or G not met." Vogtle TS 3.7.10, Conditions D and E are applicable to situations where two CREFS trains are inoperable for a single unit for reasons other than an inoperable CRE boundary, and Condition G pertains to control room air temperature not within limits. None of these Conditions are included within the scope of TSTF-432. The Required Actions and Completion Times in new Condition I are unchanged from the existing Condition H.

**Vogtle Electric Generating Plant – Units 1 and 2  
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**Enclosure 2**

**Mark-up of Technical Specifications and Bases Pages**

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>F. Required Action and associated Completion Time not met.</p> <p>of Condition A, B, or D</p>	<p>F.1 -----NOTE----- Required Action F.1 is not applicable when entering this Condition from Condition B, <del>D</del>, or <del>E</del>.</p> <p>or D</p> <p>Lock closed the outside air (OSA) intake dampers of the affected unit and lock open the OSA intake dampers of the unaffected unit.</p> <p>AND</p> <p>F.2 Place the affected units(s) in MODE 3.</p> <p>AND</p> <p>F.3 Place the affected unit(s) in MODE <del>5</del>.</p> <p>4</p>	<p>1 hour</p> <p>7 hours</p> <p>13 hours</p> <p>97 hours</p>

INSERT - TS 3.7.10  
Condition G

-----NOTE-----  
LCO 3.0.4.a is not applicable when entering MODE 4.  
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**TS 3.7.10 – Condition G Insert**

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>G. Required Action and associated Completion Time of Condition C or E not met.</p>	<p>G.1 -----NOTE----- Required Action G.1 is not applicable when entering this Condition from Condition E.</p>	
	<p>Lock closed the outside air (OSA) intake dampers of the affected unit and lock open the OSA intake dampers of the unaffected unit.</p>	<p>1 hour</p>
	<p><u>AND</u></p>	
	<p>G.2 Place the affected units(s) in MODE 3.</p>	<p>7 hours</p>
	<p><u>AND</u></p>	
	<p>G.3 Place the affected unit(s) in MODE 5.</p>	<p>37 hours</p>

BASES

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ACTIONS

D.1 (continued)

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

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

E.1

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

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

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

in which overall plant risk is reduced

or D

4

(continued)

**BASES**

**ACTIONS**

F.1, F.2, and F.3 (continued) 12

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

overall plant risk is reduced

INSERT BASES  
 3.7.10 Condition F,  
 Change 1

INSERT BASES  
 3.7.10 Condition F,  
 Change 2

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

INSERT BASES  
 Condition G

**SURVEILLANCE REQUIREMENTS**

SR 3.7.10.1

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

SR 3.7.10.2

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

(continued)

### **INSERT – Bases 3.7.10 Condition F, Change 1**

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

### **INSERT – Bases 3.7.10 Condition F, Change 2**

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

## INSERT – Bases 3.7.10 Condition G

### G.1, G.2, and G.3

If the Required Actions and associated Completion Times of Conditions C or E are not met, action must be taken to place the unit in a condition where the inoperable CREFS train(s) are no longer required. Locking closed the outside air (OSA) dampers in the affected unit and locking open the OSA dampers in the unaffected unit within 1 hour, ensures that all CRE air intake is monitored by redundant radiogas monitors that actuate OPERABLE CREFS trains. The affected unit(s) must also be placed in MODE 3 within the following 6 hours and MODE 5 within the following 36 hours, which removes the requirement for CRE occupant protection in the event of an SI in the affected unit(s). These actions ensure that if the CRE occupants cannot be protected from all postulated accident and single failure conditions, the unit or units are placed in a MODE where the protection is no longer required. The allowed Completion Times are reasonable, based on operating experience, to perform the Required Actions and to reach the required unit conditions from full power conditions in an orderly manner without challenging unit systems.

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

**BASES**

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**SURVEILLANCE  
REQUIREMENTS**

SR 3.7.10.5 (continued)

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

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**REFERENCES**

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

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

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>F. One or more CREFS trains inoperable due to inoperable CRE boundary.</p>	<p>F.1 Initiate action to implement mitigating actions.</p> <p><u>AND</u></p> <p>F.2 Verify mitigating actions ensure CRE occupant exposures to radiological, chemical, and smoke hazards will not exceed limits.</p> <p><u>AND</u></p> <p>F.3 Restore CRE boundary to OPERABLE status.</p>	<p>Immediately</p> <p>24 hours</p> <p>90 days</p>
<p>G. Control room air temperature not within limit.</p>	<p>G.1 Restore control room air temperature to within limit.</p>	<p>7 days</p>
<p>H. Required Action and associated Completion Time not met for operating unit.</p>	<p>H.1 Place the unit in MODE 3.</p> <p><u>AND</u></p> <p>H.2 Place the unit in MODE 5.</p>	<p>6 hours</p> <p>12 hours</p> <p>36 hours</p>
<p><b>SURVEILLANCE REQUIREMENTS</b></p>		
<p><b>SURVEILLANCE</b></p>		<p><b>FREQUENCY</b></p>
<p>SR 3.7.11.1</p>	<p>The Surveillance Requirements of Specification 3.7.10 are applicable.</p>	<p>In accordance with applicable SRs.</p>

of Condition A, B, C, or F

INSERT - TS 3.7.11 Condition I

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

**TS 3.7.11 – Condition I Insert**

CONDITION	REQUIRED ACTION	COMPLETION TIME
I. Required Action and associated Completion Time of Condition D, E, or G not met for operating unit.	I.1 Place the unit in MODE 3.	6 hours
	I.2 Place the unit in MODE 5.	36 hours

**BASES**

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**ACTIONS**

F.1 (continued)

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

G.1

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

INSERT BASES  
Condition H

I.1 and I.2

H.1 and H.2

of Condition D, E, or G are not met

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

(continued)

BASES

ACTIONS

E.1 (continued)

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

G.1

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

INSERT BASES  
Condition H

I.1 and I.2

H.1 and H.2

of Condition D, E, or G are not met

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

(continued)

## INSERT – Bases 3.7.11 Condition H

### H.1 and H.2

If the Required Actions and associated Completion Times of Conditions A, B, C or F are not met for the operating unit, action must be taken to place the unit in a condition in which overall plant risk is reduced. The operating unit must be placed in MODE 3 within 6 hours and MODE 4 within 12 hours. These actions ensure that if the CRE occupants cannot be protected from all postulated accident and single failure conditions, the unit is placed in a MODE where overall plant risk is reduced.

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

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

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

**BASES**

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I.1 and I.2

**ACTIONS**

H.1 and H.2 (continued)

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

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**SURVEILLANCE  
REQUIREMENTS**

SR 3.7.11.1

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

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**REFERENCES**

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

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

**Vogtle Electric Generating Plant – Units 1 and 2  
Response to Request for Additional Information  
Regarding Adoption of TSTF-432-A, Rev. 1  
“Change in Technical Specifications End States (WCAP-16294),  
Using the Consolidated Line Item Improvement Process”**

**Enclosure 3**

**Clean-typed Technical Specifications Pages**

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>F. Required Action and associated Completion Time of Condition A, B, or D not met.</p>	<p>F.1 -----NOTE----- Required Action F.1 is not applicable when entering this Condition from Condition B or D. -----</p>	
	<p>Lock closed the outside air (OSA) intake dampers of the affected unit and lock open the OSA intake dampers of the unaffected unit.</p>	<p>1 hour</p>
	<p><u>AND</u></p> <p>F.2 Place the affected units(s) in MODE 3.</p>	<p>7 hours</p>
	<p><u>AND</u></p> <p>F.3 -----NOTE----- LCO 3.0.4.a is not applicable when entering MODE 4. -----</p> <p>Place the affected unit(s) in MODE 4.</p>	<p>13 hours</p>

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>G. Required Action and associated Completion Time of Condition C or E not met.</p>	<p>G.1 -----NOTE----- Required Action G.1 is not applicable when entering this Condition from Condition E. ----- Lock closed the outside air (OSA) intake dampers of the affected unit and lock open the OSA intake dampers of the unaffected unit.</p> <p><u>AND</u></p> <p>G.2 Place the affected units(s) in MODE 3.</p> <p><u>AND</u></p> <p>G.3 Place the affected unit(s) in MODE 5.</p>	<p>1 hour</p> <p>7 hours</p> <p>37 hours</p>

**SURVEILLANCE REQUIREMENTS**

SURVEILLANCE		FREQUENCY
SR 3.7.10.1	Verify control room air temperature $\leq 85^{\circ}\text{F}$ .	In accordance with the Surveillance Frequency Control Program
SR 3.7.10.2	Operate each CREFS train for $\geq 10$ continuous hours with the heater control circuit energized.	In accordance with the Surveillance Frequency Control Program
SR 3.7.10.3	Perform required CREFS filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP
SR 3.7.10.4	Verify each CREFS train actuates (switches to emergency mode) on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.7.10.5	Perform required CRE unfiltered air inleakage testing in accordance with the Control Room Envelope Habitability Program.	In accordance with the Control Room Envelope Habitability Program

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>F. One or more CREFS trains inoperable due to inoperable CRE boundary.</p>	<p>F.1 Initiate action to implement mitigating actions.</p> <p><u>AND</u></p> <p>F.2 Verify mitigating actions ensure CRE occupant exposures to radiological, chemical, and smoke hazards will not exceed limits.</p> <p><u>AND</u></p> <p>F.3 Restore CRE boundary to OPERABLE status.</p>	<p>Immediately</p> <p>24 hours</p> <p>90 days</p>
<p>G. Control room air temperature not within limit.</p>	<p>G.1 Restore control room air temperature to within limit.</p>	<p>7 days</p>
<p>H. Required Action and associated Completion Time of Condition A, B, C, or F not met for operating unit.</p>	<p>H.1 Place the unit in MODE 3.</p> <p><u>AND</u></p> <p>H.2 <del>NOTE</del> LCO 3.0.4.a is not applicable when entering MODE 4.</p> <p>Place the unit in MODE 4.</p>	<p>6 hours</p> <p>12 hours</p>
<p>I. Required Action and associated Completion Time of Condition D, E, or G not met for operating unit.</p>	<p>I.1 Place the unit in MODE 3.</p> <p><u>AND</u></p> <p>I.2 Place the unit in MODE 5.</p>	<p>6 hours</p> <p>36 hours</p>

**SURVEILLANCE REQUIREMENTS**

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