FPL.

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

St. Lucie Nuclear Plant, Units 1 and 2
Docket Nos. 50-335 and 50-389

Re: Response to Request for Additional Information Regarding License Amendment Request for Adoption of Technical Specifications Task Force (TSTF) Traveler TSTF-422, Revision 2, "Change in Technical Specifications End States, (CE NPSD-1 186)," Using the Consolidated Line Item Improvement Process

References:

1. Florida Power & Light Company letter L-2015-182 "License Amendment Request for Adoption of Technical Specifications Task Force (TSTF) Traveler TSTF-422, Revision 2, 'Change in Technical Specifications End States, (CE NPSD-1186).' Using the Consolidated Line Item Improvement Process," August 31, 2015 (ML15254A180)
2. NRC E-mail "Request for Additional Information - St Lucie TSTF-422- MF6683/MF6684," March 8, 2016 (ML16068A261)

In Reference 1, Florida Power & Light Company (FPL) submitted a license amendment request (LAR) to revise the Technical Specifications (TS) for St. Lucie Units 1 & 2. The proposed amendment would modify the TS to risk-inform requirements regarding selected Required Action end states.

In Reference 2, the NRC staff requested additional information to complete its review of the LAR. The enclosure to this letter provides FPL's response to the request for additional information. In addition, as discussed in the enclosure, FPL is deleting several proposed changes that were included in Reference 1. The changes to the LAR included in this response do not alter the conclusion in Reference 1 that the changes do not present a significant hazards consideration.

Attachments 2 and 3 to the enclosure provide revised markups of the TS for St. Lucie Unit 1 & 2, respectively, showing the proposed changes. These markups supersede the corresponding pages that were included in Attachments 3 and 4 of Reference 1.

Attachments 4 and 5 to the enclosure provide revised (clean) pages of the TS for St. Lucie Unit 1 & 2, respectively, containing the proposed changes. These pages supersede the corresponding pages that were included in Attachments 5 and 6 of Reference 1.

No new or revised commitments are included in this letter.

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NRR

Should you have any questions regarding this submittal, please contact Mr. Mike Snyder, Licensing Manager, at (772) 467-7036

I declare under penalty of perjury that the foregoing is true and correct.

Executed on April 20, 2016

Respectfully submitted,

Christopher R. Costanzo

Site Vice President
St. Lucie Nuclear Plant

CRC/rcs

Enclosure

cc: NRC Regional Administrator, Region II
NRC Senior Resident Inspector, St. Lucie Units 1 and 2
NRC Project Manager
Ms. Cindy Becker, Florida Department of Health

ENCLOSURE

Response to Request for Additional Information Regarding License Amendment Request for Adoption of Technical Specifications Task Force (TSTF) Traveler TSTF-422, Revision 2, "Change in Technical Specifications End States, (CE NPSD-1 186)"

1. RAI-MF6683/4-STSB-01

The proposed change to both units' TS LCO 3.4.1.3 "RCS Loops – Hot Shutdown," adds an insertion in the LCO ACTION 'a' statement per TSTF-422. The insertion states:

> "Initiate action to make at least one steam generator available for decay heat removal via natural circulation."

The approved TSTF-422 change for the LCO also requires that the above Action must be initiated "immediately." The proposed change does not specify such Completion Time requirement. Please revise the change per the approved TSTF, or provide justification for the change as proposed in the application.

FPL Response

FPL revised the Action in TS 3.4.1.3 for St. Lucie Units 1 & 2 to specify an immediate Completion Time. This change is included in the attachments to this enclosure containing revised TS markups and revised (clean) TS pages.

2. RAI-MF6683/4-STSB-02

The Staff's review finds that TS changes proposed in the LAR reflect changes to pages affected by recent Unit 1 Amendment 227 and Unit 2 Amendment 177. The following marked-up TS pages included in the TSTF-422 LAR were changed after August 31, 2015, LAR issued date:

- Unit 1 TS pages 3/4 7-20 and 3/4 7-20a
- Unit 2 TS page 3/4 7-17

For example, the current TS LCO page 3/4 7-20 was updated by amendment 227, whereas the submitted TS mark-up page shows amendment # 206. As a result, the proposed TS mark-up to LCO 3.7.7.1, Action 'e' is now specified as Action 'g' in the current TSs. To ensure an accurate staff safety evaluation, please provide TS change pages that reflect the current St. Lucie TSs.

FPL Response

FPL updated the TS markups and revised (clean) TS pages based on the currently approved version of the TS. The updated pages are provided in the attachments to this enclosure, which contain revised TS markups and clean TS pages.

3. RAI-MF6683/4-STSB-03

Section 5.0 of the safety evaluation (SE) (ADAMS Accession No. ML011980047) for Topical Report CE NPSD-1186, REV. 00, provides justification for the approved end-states related changes for the Combustion Engineering (CE) units standard technical specifications (STS). The application states that the PSL Units 1 and 2 TSs have not been converted to the Standard TS (STS) of NUREG-1432, "Standard Technical Specifications - Combustion Engineering Plants," (on which TSTF-422, Revision 2 is based).

Since, the subject TSs have not been converted to the STS, the Staff requests the licensee to review the Staff's SE to determine whether St. Lucie's plant-specific systems, functions and nomenclature for the proposed changes, are equivalent to those addressed in the Staff's SE. Please provide the results of that review, including a discussion of any differences. The application does not provide this level of detail.

FPL Response

The St. Lucie license amendment request (LAR) to adopt TSTF-422 discusses that because the St. Lucie Unit 1 and Unit 2 TS have not been converted to the standard TS, the layout of the TS when compared to TSTF-422 may differ significantly in format; however, the technical differences are minor. In addition, section 2.2 of the LAR identifies 15 differences between the St. Lucie TS and the standard TS. The discussion of each difference concludes that the difference does not invalidate the applicability of TSTF-422, Revision 2 and the model safety evaluation (SE) to the St. Lucie Unit 1 and Unit 2 TS.

FPL compared the St. Lucie TS containing proposed changes to the corresponding TS in section 5.0 of the safety evaluation for Topical Report (TR) CE NPSD-1186-A, revision 00. The evaluation of each requested change in section 5.0 of the SE identified the plants for which the change is applicable. The changes proposed by FPL are consistent with the plant applicability included in the SE where the changes are applicable to all plants or the change is specifically applicable to St. Lucie.

Attachment 1 provides the results of the comparison of the St. Lucie TS systems and the TS systems evaluated in the SE for TR CE NPSD-1186-A. The review concludes that the St. Lucie TS systems containing proposed changes are equivalent to those systems included in the SE for the TR.

4. Additional Changes

FPL is removing two proposed changes that were included in the LAR as discussed below.

1. TS Table 3.3-3, Engineered Safety Feature Actuation System Instrumentation

   Action 11 (Unit 1) and Action 15 (Unit 2) in Table 3.3-3 apply to Functional Unit 7, Auxiliary Feedwater (AFAS), in Modes 1, 2, and 3 with the manual (trip buttons) or automatic actuation logic inoperable. The LAR proposed modifying Action 11 (Unit 1) and Action 15 (Unit 2) with the statement: "LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN."

FPL is removing this proposed change. Functional Unit 7 is applicable only in Modes 1, 2, and 3; therefore, the proposed change is not applicable to entering HOT SHUTDOWN (Mode 4). Further, TSTF-422 does not modify standard TS 3.3.5, ESFAS Logic and Manual Trip, to revise the end state for inoperable manual trip or automatic actuation logic associated with AFAS. Therefore, eliminating this change is consistent with TSTF-422.

The TS pages that are deleted from the LAR include Unit 1 page 3/4 3-13 and Unit 2 page 3/4 3-16. The Bases changes associated with these changes are also deleted.

2. TS Table 3.3-6, Radiation Monitoring Instrumentation

Action 17 (Unit 1) and Action 26 (Unit 2) in Table 3.3-6 apply to Functional Unit 1.d, Area Monitors - Control Room Isolation, in all Modes. With less than the required number of area monitors operable, Action 17 and Action 26 require action within one hour to initiate and maintain operation of the control room emergency ventilation system in the recirculation mode of operation. The LAR proposed modifying Actions 17 (Unit 1) and Action 26 (Unit 2) with the statement: "LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN."

FPL is removing this proposed change. TS 3.3.8, Control Room Isolation Signal, Required Action (RA) A.1, in the standard TS addresses the condition in which the control room isolation radiation monitors are inoperable. The RA, which is similar to St. Lucie Actions 17 and 26, directs placing the control room emergency air cleanup system in the emergency radiation protection mode within one hour. TSTF-422 did not modify RA A.1. On the other hand, RA B.2 was revised to require a plant shutdown to Mode 4 if RA A.1 was not met and to include the addition of a note prohibiting use of LCO 3.0.4.a when entering Mode 4. St. Lucie TS does not contain an action corresponding to RA B.2 in the standard TS; therefore, removing the proposed change maintains consistency with TSTF-422.

The TS pages that are deleted from the LAR include Unit 1 page 3/4 3-23 and Unit 2 page 3/4 3-27. The Bases changes associated with these changes are also deleted.

ATTACHMENTS

1. Comparison of St. Lucie Technical Specifications (TS) Systems to those Considered in the NRC Safety Evaluation for Topical Report CE NPSD-1186
2. Markups of the Technical Specifications - Unit 1
3. Markups of the Technical Specifications - Unit 2
4. Revised Technical Specifications Pages - Unit 1
5. Revised Technical Specifications Pages - Unit 2

ATTACHMENT 1

Comparison of St. Lucie Technical Specifications (TS) Systems to those Considered in the NRC Safety Evaluation for Topical Report CE NPSD-1186, Revision 00

Comparison of St. Lucie Technical Specifications (TS) Systems to those Considered in the NRC Safety Evaluation (SE) for Topical Report CE NPSD-1186, Revision 00

St. Lucie Unit 1 System	St. Lucie Unit 2 System	CE NPSD-1186 System	Comparison
TS 3.4.1.3 Reactor Coolant System Mode 4	TS 3.4.1.3 Reactor Coolant System Mode 4	TS 3.4.6 RCS Loops Mode 4	SE for CE NPSD-1186: An RCS loop consists of a hot leg, SG, crossover pipe between the SG and an RCP, the RCP, and a cold leg. The operational meaning with respect to this TS is that water flows from the reactor vessel into a hot leg, either into a SG or a SDC system where it is cooled, and is returned to the reactor vessel via one or more cold legs. The flow rate must be sufficient to both cool the core and to ensure good boron mixing. St. Lucie 1 & 2: The major components of the RCS are the reactor vessel; two parallel heat transfer loops, each containing one steam generator and two reactor coolant pumps; a pressurizer connected to one of the reactor vessel outlet pipes, and associated piping. CONCLUSION: The St. Lucie RCS is equivalent to that considered in the safety evaluation (SE) for CE NPSD-1186. As noted in the SE, this TS is applicable to all plants.
TS 3.6.1.3 Containment Air Locks	TS 3.6.1.3 Containment Air Locks	TS 3.6.2 Containment Air Locks	SE for CE NPSD-1186: Containment air locks provide a controlled personnel passage between outside and inside the containment building with two doors/door-seals in series with a small compartment between the doors. When operable, only one door can be opened at a time, thus providing a continuous containment building pressure boundary. The two doors provide redundant closures. St. Lucie 1 & 2: Two personnel air locks are provided. These are welded steel assemblies with two double gasketed doors in series. Provision is made to pressurize the space between the gaskets for leak testing. The doors are mechanically interlocked to ensure that one door cannot be opened until the second door is sealed. CONCLUSION: The St. Lucie air locks are equivalent to those considered in the SE for CE NPSD-1186. As noted in the SE, this TS is applicable to all plants.

Comparison of St. Lucie Technical Specifications (TS) Systems to those Considered in the NRC Safety Evaluation (SE) for Topical Report CE NPSD-1186, Revision 00

St. Lucie Unit 1 System	St. Lucie Unit 2 System	CE NPSD-1186 System	Comparison
TS 3.6.1.4 Containment Internal Pressure	TS 3.6.1.4 Containment Internal Pressure	TS 3.6.4 Containment Pressure	Containment pressure is a parameter that must be within limits during Modes 1, 2, 3, and 4. CONCLUSION: As noted in the SE for CE NPSD-1186, this TS is applicable to all plants.
TS 3.6.1.5 Containment Air Temperature	TS 3.6.1.5 Containment Air Temperature	TS 3.6.5 Containment Air Temperature	Containment average air temperature is a parameter that must be less than or equal to 120°F in Modes 1, 2, 3, and 4. CONCLUSION: As noted in the SE for CE NPSD-1186, this TS is applicable to all plants.
TS 3.6.3.1 Containment Isolation Valves	TS 3.6.3 Containment Isolation Valves	TS 3.6.3 - Containment Isolation Valves	SE for CE NPSD-1186: For systems that communicate with the containment atmosphere, two redundant isolation valves are provided for each line that penetrates containment. For systems that do not communicate with the containment atmosphere, at least one isolation valve is provided for each line. St. Lucie 1 & 2: Lines which connect directly to the containment atmosphere and are not used to mitigate the effects of a LOCA are provided with two valves in series. Except for the shutdown cooling lines, each line that penetrates the reactor containment and is neither part of the reactor coolant pressure boundary nor connected directly to the containment atmosphere has at least one containment isolation valve located outside the containment as close to the containment as practical. CONCLUSION: The containment isolation schemes for St. Lucie are equivalent to those considered in the SE for CE NPSD-1186. As noted in the SE, this TS is applicable to all plants.
TS 3.6.6.2 Shield Building	TS 3.6.6.2 Shield Building	TS 3.6.11 Shield Building	SE for CE NPSD-1186: The shield building is a concrete structure that surrounds the primary containment in some PWRs. Between the primary containment and the shield building inner wall is an annular space that collects containment leakage that may occur following an accident. Following a LOCA, the shield building exhaust air cleanup system establishes a negative pressure in the annulus between the shield building and the steel containment vessel. Filters in the system then control the release of radioactive contaminants to the environment. St. Lucie 1 & 2: The shield building is a reinforced concrete structure of right cylinder configuration

Comparison of St. Lucie Technical Specifications (TS) Systems to those Considered in the NRC Safety Evaluation (SE) for Topical Report CE NPSD-1186, Revision 00

St. Lucie Unit 1 System	St. Lucie Unit 2 System	CE NPSD-1186 System	Comparison
			with a shallow dome roof surrounding the containment vessel. An annular space of approximately four feet is provided between the containment vessel and the interior face of the concrete shield building. The design of the shield building provides for biological shielding, controlled release of the annulus atmosphere under accident conditions, and environmental protection of the containment vessel. The shield building ventilation system maintains a slight negative pressure in the shield building annulus following a loss of coolant accident (LOCA), mixes shield building in-leakage with the air in the annulus and with any leakage from the containment and discharges it through a filter train which includes charcoal adsorbers. CONCLUSION: The St. Lucie shield building is equivalent to that considered in the SE for CE NPSD-1186. The SE for CE NPSD-1186 specifically identifies that this TS is applicable to St. Lucie 1 & 2.
TS 3.7.3.1 Component Cooling Water	TS 3.7.3 Component Cooling Water	TS 3.7.7 Component Cooling Water System	SE for CE NPSD-1186: The CCW system provides cooling to critical components in the RCS and also provides heat removal capability for various plant safety systems, both at power and on SDC. St. Lucie 1 & 2: The component cooling water system is designed to provide a heat sink for auxiliary systems under normal operating and shutdown conditions and provide a heat sink for safety related components associated with reactor decay heat removal for safe shutdown or LOCA conditions. CONCLUSION: The St. Lucie component cooling water system is equivalent to that considered in the SE for CE NPSD-1186. As noted in the SE, this TS is applicable to all CEOG Member PWRs except ANO2.
TS 3.7.4.1 Intake Cooling Water	TS 3.7.4 Intake Cooling Water	TS 3.7.8 Service Water System/Salt Water Cooling System/Essential Spray Pond System/Auxiliary	SE for CE NPSD-1186: This TS covers systems that provide a heat sink for the removal of process heat and operating heat from the safety-related components during a transient or design basis accident. The SE contains a footnote that recognizes the terminology for cooling water systems varies among the CEOG plants. St. Lucie 1 & 2: The intake cooling water system is designed to provide a heat sink for the component cooling, turbine cooling, and steam generator open blowdown cooling systems under

Comparison of St. Lucie Technical Specifications (TS) Systems to those Considered in the NRC Safety Evaluation (SE) for Topical Report CE NPSD-1186, Revision 00

St. Lucie Unit 1 System	St. Lucie Unit 2 System	CE NPSD-1186 System	Comparison
		Component Cooling Water	normal operating and shutdown conditions and to provide a heat sink for the component cooling system under accident conditions. CONCLUSION: The St. Lucie intake cooling water system is equivalent to the cooling water system considered in the SE for CE NPSD-1186. As noted in the SE, this TS is applicable to all plants.
TS 3.7.7.1 Control Room Emergency Ventilation System	TS 3.7.7 Control Room Emergency Ventilation System	TS 3.7.11 Control Room Emergency Air Cleanup System	SE for CE NPSD-1186: The CREACUS (Alternate designations include CREACS, CREVAS, CREVS, and CREAFS) consists of two independent, redundant trains that recirculate and filter the control room air. Each train consists of a prefilter and demisters(15), a high efficiency particulate air (HEPA) filter, an activated charcoal adsorber section for removal of gaseous activity (principally iodine), and a fan. Ductwork, valves or dampers, and instrumentation also form part of the system, as do demisters that remove water droplets from the air stream. A second bank of HEPA filters follows the adsorber section to collect carbon fines and to backup the main HEPA filter bank if it fails. St. Lucie 1: The control room ventilation system consists of split system air conditioners (i.e., an indoor and outdoor section), a ducted air intake and air distribution system, and a filter train with HEPA filters and charcoal absorbers with two redundant booster centrifugal fans. The Control Room Ventilation System removes potentially radioactive particulates and iodine from the Control Room during the Post-LOCA operating mode using a HEPA filter, charcoal adsorber, and control room emergency ventilation booster fans. St. Lucie 2: The Control Room Emergency Cleanup System removes potentially radioactive particulates and iodine from the control room air during the post-LOCA operating mode. Each unit consists of a roughing filter, HEPA prefilter, charcoal adsorber, HEPA after filter and fan. The system operates along with the CRAC system post-LOCA to maintain a positive control room pressure. The systems contain three redundant air conditioning and two redundant air cleaning trains, with separate power supplied for each train. CONCLUSION: The St. Lucie control room emergency ventilation systems are similar to the

Comparison of St. Lucie Technical Specifications (TS) Systems to those Considered in the NRC Safety Evaluation (SE) for Topical Report CE NPSD-1186, Revision 00

St. Lucie Unit 1 System	St. Lucie Unit 2 System	CE NPSD-1186 System	Comparison
			CREACUS considered in the SE for CE NPSD-1186. (The St. Lucie Unit 1 system contains a single filter train.) As noted in the SE, this TS is applicable to all plants.
TS 3.7.8.1 ECCS area Ventilation System	TS 3.7.8 ECCS area Ventilation System	TS 3.7.13 ECCS Pump Room Exhaust Air Cleanup System and ESF Pump Room Exhaust and Cleanup System	SE for CE NPSD-1186: The ECCS pump room exhaust air cleanup system (ECCS PREACS) and the ESF pump room exhaust air cleanup system (ESF PREACS) filters air from the area of active ESF components during the recirculation phase of a LOCA. This protects the public from radiological exposure resulting from auxiliary building leaks in the ECCS system. The ECCS PREACS consists of two independent, redundant equipment trains. A single train will maintain room temperature within acceptable limits. St. Lucie 1 & 2: The emergency core cooling system (ECCS) area ventilation system is designed to provide post-LOCA filtration and adsorption of fission products in the exhaust air from certain areas of the reactor auxiliary building. CONCLUSION: The St. Lucie ECCS area ventilation system is equivalent to that considered in the SE for CE NPSD-1186. As specifically noted in the SE, this TS is applicable to St. Lucie 1 & 2.
TS 3.8.1.1 AC Sources	TS 3.8.1.1 AC Sources	TS 3.8.1 - AC Sources. Operating	SE for CE NPSD-1186: The unit Class 1E electrical power distribution system AC sources consist of the offsite power sources (preferred power sources, normal and alternate(s)), and the onsite standby power sources (Train A and Train B emergency diesel generators). In addition, many sites, including SONGS Units 2 and 3 and St. Lucie Units 1 and 2, provide a cross-tie capability between units. St. Lucie 1 & 2: The normal source of auxiliary ac power for plant start-up or shutdown is from the incoming off-site transmission lines through the plant switchyard and start-up transformers. In the event of a complete loss of the normal offsite ac power sources, station on-site emergency ac power system will be supplied by the on-site emergency diesel generators (EDGs) and station batteries. In the event that all offsite and onsite power sources fail, except for one Unit 2 EDG , power will be transferred from the only operating Unit 2 EDG to one of the Unit 1 4.16 KV Class 1E distribution buses via the station blackout cross-tie. In the event of a total loss of AC power, and a loss of one EDG on St. Lucie Unit 1, power can be provided to one of the Unit 2 Class 1E

Comparison of St. Lucie Technical Specifications (TS) Systems to those Considered in the NRC Safety Evaluation (SE) for Topical Report CE NPSD-1186, Revision 00

St. Lucie Unit 1 System	St. Lucie Unit 2 System	CE NPSD-1186 System	Comparison
			redundant divisions from the only available site EDG set. The power will be transferred via a cross-tie connecting the safety-related swing switchgear of the two units. CONCLUSION: The St. Lucie AC sources are equivalent to those considered in the SE for CE NPSD-1186. As noted in the SE, this TS is applicable to all plants.
TS 3.8.2.3 DC Distribution - Operating	TS 3.8.2.1 DC Sources-Operating	TS 3.8.4 DC Sources Operating	SE for CE NPSD-1186: The DC electrical power system: 1. Provides normal and emergency DC electrical power for the AC emergency power system, emergency auxiliaries, and control and switching during all modes of operation, 2. Provides motive and control power to selected safety related equipment, and 3. Provides power to preferred AC vital buses (via inverters). For CEOG Member PWRs (with the exception of San Onofre, Palo Verde, Calvert Cliffs, and Waterford), the Class 1E 125 VDC electrical power system consists of two independent and redundant safety related subsystems. St. Lucie 1 & 2: Power is provided at 125 volts dc (ungrounded) for plant control and instrumentation and for operation of dc motor operated equipment such as valve operators and emergency lube oil pumps. As for the 4.16 kV and 480 volt ac emergency systems, the 125 volt dc system is arranged into two main redundant load groups A and B and a third service or swing load group AB. Load groups A and B are each capable of supplying the minimum dc power requirements to safely shut down the plant and/or mitigate the consequences of a LOCA. Redundant 120 volt ac single phase instrument buses provide power to essential instrumentation. Each bus is supplied separately from an inverter connected to one of the two Class 1E 125 volt dc buses. CONCLUSION: The St. Lucie DC sources are equivalent to those considered in the SE for CE NPSD-1186. As noted in the SE, this TS is applicable to all plants.

ATTACHMENT 2

Markups of the Technical Specifications - Unit 1

REACTOR COOLANT SYSTEM

HOT SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.4.1.3 At least two of the loops listed below shall be OPERABLE and at least one reactor coolant or shutdown cooling loop shall be in operation.*

a. Reactor Coolant Loop A and its associated steam generator and at least one associated reactor coolant pump,

b. Reactor Coolant Loop B and its associated steam generator and at least one associated reactor coolant pump,

c. Shutdown Cooling Loop A,

d. Shutdown Cooling Loop B.

APPLICABILITY: MODE 4.

ACTION:

and immediately initiate action to make at least one steam generator available for decay heat removal via natural circulation. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN

a. With less than the above required reactor coolant or shutdown cooling loops OPERABLE, within one (1) hour initiate corrective action to return the required loops to OPERABLE status. ~~If the remaining OPERABLE loop is a shutdown cooling loop, be in COLD SHUTDOWN within 30 hours.~~

b. With no reactor coolant or shutdown cooling loop in operation, suspend operations that would cause introduction into the RCS, coolant with boron concentration less than required to meet SHUTDOWN MARGIN of Technical Specification 3.1.1.1 and within one (1) hour initiate corrective action to return the required reactor coolant loop to operation.

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* All reactor coolant pumps and shutdown cooling pumps may be de-energized for up to 1 hour provided (1) no operations are permitted that would cause introduction into the RCS, coolant with boron concentration less than required to meet the SHUTDOWN MARGIN of Technical Specification 3.1.1.1 and (2) core outlet temperature is maintained at least 10°F below saturation temperature.

3/4.7.7 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.7.1 The control room emergency ventilation system shall be OPERABLE with:

a. Two booster fans,

b. Two isolation valves in each outside air intake duct,

c. Two isolation valves in the toilet area air exhaust duct,

d. One filter train,

e. At least two air conditioning units, and

f. Two isolation valves in the kitchen area exhaust duct.

NOTE

The control room envelope boundary may be opened intermittently under administrative control.

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

ACTION:

MODES 1, 2, 3 and 4:

a. With one booster fan inoperable, restore the inoperable fan to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in ~~COLD SHUTDOWN within the following 30 hours.~~

b. With one isolation valve per air duct inoperable, operation may continue provided the other isolation valve in the same duct is maintained closed; otherwise, be in at least HOT STANDBY within the next 6 hours and in ~~COLD SHUTDOWN within the following 30 hours~~.

c. With the filter train inoperable for reasons other than an inoperable Control Room Envelope boundary:

1. Immediately initiate action to implement mitigating actions, and
2. Within 1 hour, verify LCO 3.4.8, "Specific Activity," is met, and
3. Within 24 hours restore the filter train to OPERABLE status.

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

d. With only one air conditioning unit OPERABLE, restore at least two air conditioning units to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in ~~COLD SHUTDOWN within the following 30 hours.~~

HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN

ACTION: (continued)

MODES 1, 2, 3 and 4: (continued)

NOTE
Action not applicable when second booster fan intentionally made inoperable.

e. With two booster fans inoperable for reasons other than an inoperable Control Room Envelope boundary:

1. Immediately initiate action to implement mitigating actions, and
2. Within 1 hour, verify LCO 3.4.8, "Specific Activity," is met, and
3. Within 24 hours restore at least one booster fan to OPERABLE status.

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

NOTE
Action not applicable when third air conditioning unit intentionally made inoperable.

f. With three air conditioning units inoperable for reasons other than an inoperable Control Room Envelope boundary, restore at least one air conditioning unit to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours.

g. With the filter train inoperable due to an inoperable Control Room Envelope boundary:

1. Immediately initiate actions to implement mitigating actions, and
2. Within 24 hours, verify mitigating actions to ensure Control Room Envelope occupant exposures to radiological, chemical, and smoke hazards will not exceed limits, and
3. Restore Control Room Envelope boundary to OPERABLE status within 90 days.

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.~~

HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN

ATTACHMENT 3

Markups of the Technical Specifications - Unit 2

REACTOR COOLANT SYSTEM

HOT SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.4.1.3 At least two of the loop(s)/train(s) listed below shall be OPERABLE and at least one Reactor Coolant and/or shutdown cooling loops shall be in operation.*

a. Reactor Coolant Loop 2A and its associated steam generator and at least one associated Reactor Coolant pump,**

b. Reactor Coolant Loop 2B and its associated steam generator and at least one associated Reactor Coolant pump,**

c. Shutdown Cooling Train 2A,

d. Shutdown Cooling Train 2B.

and immediately initiate action to make at least one steam generator available for decay heat removal via natural circulation. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN

APPLICABILITY: MODE 4.

ACTION:

a. With less than the above required Reactor Coolant and/or shutdown cooling loops OPERABLE, immediately initiate corrective action to return the required loops to OPERABLE status as soon as possible~~; if the remaining OPERABLE loop is a shutdown cooling loop, be in COLD SHUTDOWN within 30 hours~~.

b. With no Reactor Coolant or shutdown cooling loop in operation, suspend operations that would cause introduction into the RCS, coolant with boron concentration less than required to meet SHUTDOWN MARGIN of Technical Specifications 3.1.1.1 and immediately initiate corrective action to return the required coolant loop to operation.

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* All Reactor Coolant pumps and shutdown cooling pumps may be de-energized for up to 1 hour provided (1) no operations are permitted that would cause introduction into the RCS, coolant with boron concentration less than required to meet the SHUTDOWN MARGIN of Technical Specification 3.1.1.1 and (2) core outlet temperature is maintained at least 10°F below saturation temperature.

** A Reactor Coolant pump shall not be started with two idle loops and one or more of the Reactor Coolant System cold leg temperatures less than or equal to that specified in Table 3.4-3 unless the secondary water temperature of each steam generator is less than 40°F above each of the Reactor Coolant System cold leg temperatures.

3/4.7.7 CONTROL ROOM EMERGENCY AIR CLEANUP SYSTEM (CREACS)

LIMITING CONDITION FOR OPERATION

3.7.7 Two independent control room emergency air cleanup systems shall be OPERABLE with:

a. A filter train and its associated fan per system, and
b. At least one air conditioning unit per system, and
c. Two isolation valves in the kitchen area exhaust duct, and
d. Two isolation valves in the toilet area exhaust duct, and
e. Two isolation valves in each (North and South) air intake duct.

NOTE
The control room envelope boundary may be opened intermittently under administrative control.

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

ACTION:

MODES 1, 2, 3, and 4:

a. With one control room emergency air cleanup system inoperable for reasons other than an inoperable Control Room Envelope boundary, restore the inoperable system to OPERABLE status within 7 days or be in at least HOT STANDBY within 6 hours and in ~~COLD SHUTDOWN within the following 30 hours.~~

b. With one or more control room emergency air cleanup systems inoperable due to an inoperable Control Room Envelope boundary:

1. Immediately initiate actions to implement mitigating actions, and
2. Within 24 hours, verify mitigating actions to ensure Control Room Envelope occupant exposures to radiological, chemical, and smoke hazards will not exceed limits, and
3. Restore Control Room Envelope boundary to OPERABLE status within 90 days.

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

HOT SHUTDOWN within the following 6 hours, LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN

c. With an isolation valve in an air intake duct or air exhaust duct inoperable, operation may continue provided the other isolation valve in the same air intake or air exhaust duct is maintained closed; otherwise be in at least HOT STANDBY in the next 6 hours and in ~~COLD SHUTDOWN within the following 30 hours~~.

NOTE
Action not applicable when second CREACS train intentionally made inoperable.

d. With two control room emergency air cleanup systems inoperable for reasons other than an inoperable Control Room Envelope boundary:

1. Immediately initiate action to implement mitigating actions, and
2. Within 1 hour, verify LCO 3.4.8, "Specific Activity," is met, and
3. Within 24 hours restore at least one CREACS train to OPERABLE status.

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

ATTACHMENT 4

Revised Technical Specifications Pages - Unit 1

REACTOR COOLANT SYSTEM

HOT SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.4.1.3 At least two of the loops listed below shall be OPERABLE and at least one reactor coolant or shutdown cooling loop shall be in operation.*

a. Reactor Coolant Loop A and its associated steam generator and at least one associated reactor coolant pump,

b. Reactor Coolant Loop B and its associated steam generator and at least one associated reactor coolant pump,

c. Shutdown Cooling Loop A,

d. Shutdown Cooling Loop B.

APPLICABILITY: MODE 4.

ACTION:

a. With less than the above required reactor coolant or shutdown cooling loops OPERABLE, within one (1) hour initiate corrective action to return the required loops to OPERABLE status and immediately initiate action to make at least one steam generator available for decay heat removal via natural circulation. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.

b. With no reactor coolant or shutdown cooling loop in operation, suspend operations that would cause introduction into the RCS, coolant with boron concentration less than required to meet SHUTDOWN MARGIN of Technical Specification 3.1.1.1 and within one (1) hour initiate corrective action to return the required reactor coolant loop to operation.

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* All reactor coolant pumps and shutdown cooling pumps may be de-energized for up to 1 hour provided (1) no operations are permitted that would cause introduction into the RCS, coolant with boron concentration less than required to meet the SHUTDOWN MARGIN of Technical Specification 3.1.1.1 and (2) core outlet temperature is maintained at least 10°F below saturation temperature.

3/4.7.7 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.7.1 The control room emergency ventilation system shall be OPERABLE with:

a. Two booster fans,
b. Two isolation valves in each outside air intake duct,
c. Two isolation valves in the toilet area air exhaust duct,
d. One filter train,
e. At least two air conditioning units, and
f. Two isolation valves in the kitchen area exhaust duct.

NOTE

The control room envelope boundary may be opened intermittently under administrative control.

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

ACTION:

MODES 1, 2, 3 and 4:

a. With one booster fan inoperable, restore the inoperable fan to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.

b. With one isolation valve per air duct inoperable, operation may continue provided the other isolation valve in the same duct is maintained closed; otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.

c. With the filter train inoperable for reasons other than an inoperable Control Room Envelope boundary:

   1. Immediately initiate action to implement mitigating actions, and
   2. Within 1 hour, verify LCO 3.4.8, "Specific Activity," is met, and
   3. Within 24 hours restore the filter train to OPERABLE status.

   With the above requirements not met, be in at least HOT STANDBY within the next 6 hours and HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.

d. With only one air conditioning unit OPERABLE, restore at least two air conditioning units to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.

ACTION: (continued)

MODES 1, 2, 3 and 4: (continued)

NOTE
Action not applicable when second booster fan intentionally made inoperable.

e. With two booster fans inoperable for reasons other than an inoperable Control Room Envelope boundary:

1. Immediately initiate action to implement mitigating actions, and
2. Within 1 hour, verify LCO 3.4.8, "Specific Activity," is met, and
3. Within 24 hours restore at least one booster fan to OPERABLE status.

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

NOTE
Action not applicable when third air conditioning unit intentionally made inoperable.

f. With three air conditioning units inoperable for reasons other than an inoperable Control Room Envelope boundary, restore at least one air conditioning unit to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours.

g. With the filter train inoperable due to an inoperable Control Room Envelope boundary:

1. Immediately initiate actions to implement mitigating actions, and
2. Within 24 hours, verify mitigating actions to ensure Control Room Envelope occupant exposures to radiological, chemical, and smoke hazards will not exceed limits, and
3. Restore Control Room Envelope boundary to OPERABLE status within 90 days.

With the above requirements not met, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.

ATTACHMENT 5

Revised Technical Specifications Pages - Unit 2

REACTOR COOLANT SYSTEM

HOT SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.4.1.3 At least two of the loop(s)/train(s) listed below shall be OPERABLE and at least one Reactor Coolant and/or shutdown cooling loops shall be in operation.*

a. Reactor Coolant Loop 2A and its associated steam generator and at least one associated Reactor Coolant pump,**

b. Reactor Coolant Loop 2B and its associated steam generator and at least one associated Reactor Coolant pump,**

c. Shutdown Cooling Train 2A,

d. Shutdown Cooling Train 2B.

APPLICABILITY: MODE 4.

ACTION:

a. With less than the above required Reactor Coolant and/or shutdown cooling loops OPERABLE, immediately initiate corrective action to return the required loops to OPERABLE status as soon as possible and immediately initiate action to make at least one steam generator available for decay heat removal via natural circulation. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.

b. With no Reactor Coolant or shutdown cooling loop in operation, suspend operations that would cause introduction into the RCS, coolant with boron concentration less than required to meet SHUTDOWN MARGIN of Technical Specifications 3.1.1.1 and immediately initiate corrective action to return the required coolant loop to operation.

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* All Reactor Coolant pumps and shutdown cooling pumps may be de-energized for up to 1 hour provided (1) no operations are permitted that would cause introduction into the RCS, coolant with boron concentration less than required to meet the SHUTDOWN MARGIN of Technical Specification 3.1.1.1 and (2) core outlet temperature is maintained at least 10°F below saturation temperature.

** A Reactor Coolant pump shall not be started with two idle loops and one or more of the Reactor Coolant System cold leg temperatures less than or equal to that specified in Table 3.4-3 unless the secondary water temperature of each steam generator is less than 40°F above each of the Reactor Coolant System cold leg temperatures.

PLANT SYSTEMS

3/4.7.7 CONTROL ROOM EMERGENCY AIR CLEANUP SYSTEM (CREACS)

LIMITING CONDITION FOR OPERATION

3.7.7 Two independent control room emergency air cleanup systems shall be OPERABLE with:

a. A filter train and its associated fan per system, and
b. At least one air conditioning unit per system, and
c. Two isolation valves in the kitchen area exhaust duct, and
d. Two isolation valves in the toilet area exhaust duct, and
e. Two isolation valves in each (North and South) air intake duct.

NOTE

The control room envelope boundary may be opened intermittently under administrative control.

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

ACTION:

MODES 1, 2, 3, and 4:

a. With one control room emergency air cleanup system inoperable for reasons other than an inoperable Control Room Envelope boundary, restore the inoperable system to OPERABLE status within 7 days or be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.

b. With one or more control room emergency air cleanup systems inoperable due to an inoperable Control Room Envelope boundary:

1. Immediately initiate actions to implement mitigating actions, and
2. Within 24 hours, verify mitigating actions to ensure Control Room Envelope occupant exposures to radiological, chemical, and smoke hazards will not exceed limits, and
3. Restore Control Room Envelope boundary to OPERABLE status within 90 days.

With the above requirements not met, be in at least HOT STANDBY within the next 6 hours and HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.

c. With an isolation valve in an air intake duct or air exhaust duct inoperable, operation may continue provided the other isolation valve in the same air intake or air exhaust duct is maintained closed; otherwise be in at least HOT STANDBY in the next 6 hours and in HOT SHUTDOWN within the following 6 hours. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.

NOTE

Action not applicable when second CREACS train intentionally made inoperable.

d. With two control room emergency air cleanup systems inoperable for reasons other than an inoperable Control Room Envelope boundary:

1. Immediately initiate action to implement mitigating actions, and
2. Within 1 hour, verify LCO 3.4.8, "Specific Activity," is met, and
3. Within 24 hours restore at least one CREACS train to OPERABLE status.

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