UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

February 20, 2018

Mr. Mano Nazar
President and Chief Nuclear Officer
Nuclear Division
Florida Power & Light Company
Mail Stop: EX/JB
700 Universe Blvd.
Juno Beach, FL 33408

SUBJECT: TURKEY POINT NUCLEAR GENERATING UNIT NOS. 3 AND 4 - ISSUANCE OF AMENDMENTS REGARDING THE TECHNICAL SPECIFICATION REQUIREMENTS PERTAINING TO MODE CHANGE LIMITATIONS (CAC NOS. MF9903 AND MF9904; EPID L-2017-LLA-0254)

Dear Mr. Nazar:

The U.S. Nuclear Regulatory Commission (NRC or the Commission) has issued the enclosed Amendment No. 278 to Renewed Facility Operating License (RFOL) No. DPR-31 and Amendment No. 273 to RFOL No. DPR-41 for Turkey Point Nuclear Generating Unit Nos. 3 and 4, respectively. The amendments change the Technical Specifications (TSs) in response to the application from Florida Power & Light Company dated June 29, 2017 (L-2017-091).

The amendments revise the TS requirements for mode change limitations in TS 3.0.4 and 4.0.4 based on Technical Specifications Tasks Force, TSTF-359, Revision 9, "Increase Flexibility in Mode Restraints." The NRC staff's safety evaluation of the amendments is enclosed.

A Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

Michael J. Wentzel, Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-250 and 50-251

Enclosures:
1. Amendment No. 278 to DPR-31
2. Amendment No. 273 to DPR-41
3. Safety Evaluation

cc: Listserv

UNITED STATES
NUCLEAR REGULATORY COMMISSION
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FLORIDA POWER & LIGHT COMPANY

DOCKET NO. 50-250

TURKEY POINT NUCLEAR GENERATING UNIT NO. 3

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 278
Renewed License No. DPR-31

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Florida Power & Light Company (the licensee) dated April 9, 2017, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Renewed Facility Operating License and Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B. of Renewed Facility Operating License No. DPR-31 is hereby amended to read as follows:

   B. Technical Specifications

   The Technical Specifications contained in Appendix A, as revised through Amendment No. 273 are hereby incorporated into this renewed license. The Environmental Protection Plan contained in Appendix B is hereby incorporated into this renewed license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance and shall be implemented within 90 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Undine Shoop, Chief
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Facility Operating License
and Technical Specifications

Date of Issuance: February 20, 2018

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

FLORIDA POWER & LIGHT COMPANY

DOCKET NO. 50-251

TURKEY POINT NUCLEAR GENERATING UNIT NO. 4

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 273
Renewed License No. DPR-41

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Florida Power & Light Company (the licensee) dated April 9, 2017, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Renewed Facility Operating License and Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B. of Renewed Facility Operating License No. DPR-41 is hereby amended to read as follows:

   B. Technical Specifications

   The Technical Specifications contained in Appendix A, as revised through Amendment No. 273 are hereby incorporated into this renewed license. The Environmental Protection Plan contained in Appendix B is hereby incorporated into this renewed license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance and shall be implemented within 90 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Undine Shoop, Chief
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Facility Operating License
and Technical Specifications

Date of Issuance: February 20, 2018

ATTACHMENT TO LICENSE AMENDMENTS

AMENDMENT NO. 278 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-31

AMENDMENT NO. 273 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-41

TURKEY POINT NUCLEAR GENERATING UNIT NOS. 3 AND 4

DOCKET NOS. 50-250 AND 50-251

Replace page 3 of Renewed Facility Operating License No. DPR-31 with the attached page 3. The revised page is identified by amendment number and contains a marginal line indicating the area of change.

Replace page 3 of Renewed Facility Operating License No. DPR-41 with the attached page 3. The revised page is identified by amendment number and contains a marginal line indicating the area of change.

Replace the following page of the Appendix A Technical Specifications with the attached page. The revised page is identified by amendment number and contains marginal lines indicating the areas of change.

Remove	Insert
3/4 0-1	3/4 0-1
3/4 0-3	3/4 0-3
3/4 2-13	3/4 2-13
3/4 3-45	3/4 3-45
3/4 4-10	3/4 4-10
3/4 4-21	3/4 4-21
3/4 4-27	3/4 4-27
3/4 5-3	3/4 5-3
3/4 7-3	3/4 7-3
3/4 7-13	3/4 7-13
3/4 7-14	3/4 7-14
3/4 7-16	3/4 7-16
3/4 8-2	3/4 8-2

E. Pursuant to the Act and 10 CFR Parts 40 and 70 to receive, possess, and use at any time 100 milligrams each of any source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactively contaminated apparatus;

F. Pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of Turkey Point Units Nos. 3 and 4.

3. This renewed operating license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations: 10 CFR Part 20, Section 30.34 of 10 CFR Part 30, Section 40.41 of 10 CFR Part 40, Sections 50.54 and 50.59 of 10 CFR Part 50, and Section 70.32 of 10 CFR Part 70; and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect, and is subject to the additional conditions specified below:

A. Maximum Power Level

The applicant is authorized to operate the facility at reactor core power levels not in excess of 2644 megawatts (thermal).

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 278, are hereby incorporated into this renewed license. The Environmental Protection Plan contained in Appendix B is hereby incorporated into this renewed license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

C. Final Safety Analysis Report

The licensee's Final Safety Analysis Report supplement submitted pursuant to 10 CFR 54.21(d), as revised on November 1, 2001, describes certain future inspection activities to be completed before the period of extended operation. The licensee shall complete these activities no later than July 19, 2012.

The Final Safety Analysis Report supplement as revised on November 1, 2001, described above, shall be included in the next scheduled update to the Final Safety Analysis Report required by 10 CFR 50.71(e)(4), following the issuance of this renewed license. Until that update is complete, the licensee may make changes to the programs described in such supplement without prior Commission approval, provided that the licensee evaluates each such change pursuant to the criteria set forth in 10 CFR 50.59 and otherwise complies with the requirements in that section.

E. Pursuant to the Act and 10 CFR Parts 40 and 70 to receive, possess, and use at any time 100 milligrams each of any source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactively contaminated apparatus;

F. Pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of Turkey Point Units Nos. 3 and 4.

3. This renewed operating license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations: 10 CFR Part 20, Section 30.34 of 10 CFR Part 30, Section 40.41 of 10 CFR Part 40, Sections 50.54 and 50.59 of 10 CFR Part 50, and Section 70.32 of 10 CFR Part 70; and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect, and is subject to the additional conditions specified below:

A. Maximum Power Level

The applicant is authorized to operate the facility at reactor core power levels not in excess of 2644 megawatts (thermal).

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 273, are hereby incorporated into this renewed license. The Environmental Protection Plan contained in Appendix B is hereby incorporated into this renewed license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

C. Final Safety Analysis Report

The licensee's Final Safety Analysis Report supplement submitted pursuant to 10 CFR 54.21(d), as revised on November 1, 2001, describes certain future inspection activities to be completed before the period of extended operation. The licensee shall complete these activities no later than April 10, 2013.

The Final Safety Analysis Report supplement as revised on November 1, 2001, described above, shall be included in the next scheduled update to the Final Safety Analysis Report required by 10 CFR 50.71(e)(4), following the issuance of this renewed license. Until that update is complete, the licensee may make changes to the programs described in such supplement without prior Commission approval, provided that the licensee evaluates each such change pursuant to the criteria set forth in 10 CFR 50.59 and otherwise complies with the requirements in that section.

3/4 LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

3/4.0 APPLICABILITY

LIMITING CONDITIONS FOR OPERATION

3.0.1 Compliance with the Limiting Conditions for Operation contained in the succeeding specifications is required during the OPERATIONAL MODES or other conditions specified therein; except that upon failure to meet the Limiting Conditions for Operation, the associated ACTION requirements shall be met, except as provided in Specification 3.0.6.

3.0.2 Noncompliance with a specification shall exist when the requirements of the Limiting Condition for Operation and associated ACTION requirements are not met within the specified time intervals, except as provided in Specification 3.0.6. If the Limiting Condition for Operation is restored prior to expiration of the specified time intervals, completion of the ACTION requirements is not required.

3.0.3 When a Limiting Condition for Operation is not met, except as provided in the associated ACTION requirements, within 1 hour action shall be initiated to place the unit, as applicable, in:

a. At least HOT STANDBY within the next 6 hours,

b. At least HOT SHUTDOWN within the following 6 hours, and

c. At least COLD SHUTDOWN within the subsequent 24 hours.

Where corrective measures are completed that permit operation under the ACTION requirements, the action may be taken in accordance with the specified time limits as measured from the time of failure to meet the Limiting Condition for Operation. Exceptions to these requirements are stated in the individual specifications.

This specification is not applicable in MODES 5 or 6.

3.0.4 When an LCO is not met, entry into a MODE or other specified condition in the Applicability shall only be made:

a. When the associated ACTIONS to be entered permit continued operation in the MODE or other specified condition in the Applicability for an unlimited period of time;

b. After performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering the MODE or other specified condition in the Applicability, and establishment of risk management actions, if appropriate; exceptions to this Specification are stated in the individual Specifications, or

c. When an allowance is stated in the individual value, parameter, or other Specification.

This Specification shall not prevent 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.

APPLICABILITY

SURVEILLANCE REQUIREMENTS

4.0.1 Surveillance Requirements shall be met during the OPERATIONAL MODES or other conditions specified for individual Limiting Conditions for Operation unless otherwise stated in an individual Surveillance Requirement. Failure to perform a Surveillance Requirement within the allowed surveillance interval, defined by Specification 4.0.2, shall constitute noncompliance with the OPERABILITY requirements for a Limiting Condition for Operation. Surveillance Requirements do not have to be performed on inoperable equipment.

4.0.2 Each Surveillance Requirement shall be performed within the specified time interval with a maximum allowable extension not to exceed 25% of the surveillance interval. If an ACTION item requires periodic performance on a "once per . . ." basis, the above frequency extension applies to each performance after the initial performance. Exceptions to this Specification are stated in the individual Specifications.

4.0.3 If it is discovered that a Surveillance was not performed within its specified frequency, then compliance with the requirement to declare the Limiting Condition of Operation not met may be delayed, from the time of discovery, up to 24 hours or up to the limit of the specified frequency, whichever is greater. This delay period is permitted to allow performance of the Surveillance. A risk evaluation shall be performed for any Surveillance delayed greater than 24 hours and the risk impact shall be managed.

If the surveillance is not performed within the delay period, the Limiting Condition of Operation must immediately be declared not met, and the applicable ACTION(s) must be entered.

When the Surveillance is performed within the delay period and the Surveillance is not met, the Limiting Condition of Operation must immediately be declared not met, and the applicable ACTION(s) must be entered.

4.0.4 Entry into a MODE or other specified condition in the Applicability of an LCO shall only be made when the LCO's Surveillances have been met within their specified frequency, except as provided by Specification 4.0.3. When an LCO is not met due to Surveillances not having been met, entry into a MODE or other specified condition in the Applicability shall only be made in accordance with Specification 3.0.4.

This provision shall not prevent entry into 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.

4.0.5 Surveillance Requirements for inservice inspection of ASME Code Class 1, 2, and 3 components shall be applicable as follows:

a. Inservice inspection of ASME Code Class 1, 2, and 3 components shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50, Section 50.55a.

LIMITING CONDITION FOR OPERATION (Continued)

ACTION (Continued)

2. Reduce THERMAL POWER to less than 50% of RATED THERMAL POWER within 2 hours and reduce the Power Range Neutron Flux-High Trip Setpoints to less than or equal to 55% of RATED THERMAL POWER within the next 4 hours; and

3. Identify and correct the cause of the out-of -limit condition prior to increasing THERMAL POWER; subsequent POWER OPERATION above 50% of RATED THERMAL POWER may proceed provided that the QUADRANT POWER TILT RATIO is verified within its limit at least once per hour for 12 hours or until verified at 95% or greater RATED THERMAL POWER.

SURVEILLANCE REQUIREMENTS

4.2.4.1 The QUADRANT POWER TILT RATIO shall be determined to be within the limit above 50% of RATED THERMAL POWER by:

a. Calculating the ratio in accordance with the Surveillance Frequency Control Program when the Power Range Upper Detector High Flux Deviation and Power Range Lower Detector High Flux Deviation Alarms are OPERABLE, and

b. Calculating the ratio at least once per 12 hours during steady-state operation when either alarm is inoperable.

4.2.4.2 The QUADRANT POWER TILT RATIO shall be determined to be within the limit when above 75% of RATED THERMAL POWER with one Power Range channel inoperable by using the movable incore detectors to confirm that the normalized symmetric power distribution, obtained either from two sets of four symmetric thimble locations or full-core flux map, or by incore thermocouple map is consistent with the indicated QUADRANT POWER TILT RATIO in accordance with the Surveillance Frequency Control Program.

4.2.4.3 If the QUADRANT POWER TILT RATIO is not within its limit within 24 hours and the POWER DISTRIBUTION LIMITS of 3.2.2 and 3.2.3 are within their limits, a Special Report in accordance with 6.9.2 shall be submitted within 30 days including an evaluation of the cause of the discrepancy.

INSTRUMENTATION

ACCIDENT MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.3 The accident monitoring instrumentation channels shown in Table 3.3-5 shall be OPERABLE.

APPLICABILITY: As shown in Table 3.3-5.

ACTION:

a. As shown in Table 3.3-5.

b. Separate Action entry is allowed for each Instrument.

SURVEILLANCE REQUIREMENTS

4.3.3.3 Each accident monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK and CHANNEL CALIBRATION at the frequencies shown in Table 4.3-4.

3/4.4.4 RELIEF VALVES

LIMITING CONDITION FOR OPERATION

3.4.4 Both power-operated relief valves (PORVs) and their associated block valves shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

a. With one or both PORVs inoperable because of excessive leakage, within 1 hour either restore the PORV(s) to OPERABLE status or close the associated block valve(s) with power maintained to the block valve(s); otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

b. With one PORV inoperable due to causes other than excessive leakage, within 1 hour either restore the PORV to OPERABLE status or close its associated block valve and remove power from the block valve; otherwise, be in HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

c. With both PORVs inoperable due to causes other than excessive leakage, within 1 hour either restore at least one PORV to OPERABLE status or close each PORV's associated block valve and remove power from the block valve; with both block valves closed with power removed, restore at least one PORV to OPERABLE status within 30 days and restore power to its associated block valve; otherwise, be in at least HOT STANDBY within the next 6 hours and HOT SHUTDOWN within the following 6 hours.

d. With one or both block valve(s) inoperable, within 1 hour either restore the block valve(s) to OPERABLE status or close the block valve(s) and remove power from the block valve(s); otherwise, place its associated PORV in manual control within the next hour, and be in at least HOT STANDBY within the next 6 hours and HOT SHUTDOWN within the following 6 hours. Restore at least one block valve to OPERABLE status within 30 days if both block valves are inoperable; otherwise, be in at least HOT STANDBY within the next 6 hours and HOT SHUTDOWN within the following 6 hours.

3/4.4.8 SPECIFIC ACTIVITY

LIMITING CONDITION FOR OPERATION

3.4.8 The specific activity of the primary coolant shall be limited to:

a. Less than or equal to 0.25 microcuries per gram DOSE EQUIVALENT I-131, and

b. Less than or equal to 447.7 microcuries per gram DOSE EQUIVALENT XE-133.

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

ACTION:

NOTE: LCO 3.0.4.c is applicable to DOSE EQUIVALENT I-131.

a. With the specific activity of the reactor coolant greater than 0.25 microcuries per gram DOSE EQUIVALENT I-131, verify DOSE EQUIVALENT I-131 is less than or equal to 60 microcuries per gram once per 4 hours.

b. With the specific activity of the reactor coolant greater than 0.25 microcuries per gram DOSE EQUIVALENT I-131, but less than or equal to 60 microcuries per gram, operation may continue for up to 48 hours while efforts are made to restore DOSE EQUIVALENT I-131 to within the 0.25 microcuries per gram limit.

c. With the specific activity of the reactor coolant greater than 0.25 microcuries per gram DOSE EQUIVALENT I-131 for greater than or equal to 48 hours during one continuous time interval, or greater than 60 microcuries per gram DOSE EQUIVALENT I-131, be in HOT STANDBY within 6 hours and COLD SHUTDOWN within the next 30 hours.

d. With the specific activity of the reactor coolant greater than 447.7 microcuries per gram DOSE EQUIVALENT XE-133, operation may continue for up to 48 hours while efforts are made to restore DOSE EQUIVALENT XE-133 to within the 447.7 microcuries per gram limit.

e. With the specific activity of the reactor coolant greater than 447.7 microcuries per gram DOSE EQUIVALENT XE-133 for greater than or equal to 48 hours during one continuous time interval, be in HOT STANDBY within 6 hours and COLD SHUTDOWN within the next 30 hours.

SURVEILLANCE REQUIREMENTS

4.4.8 The specific activity of the reactor coolant shall be determined to be within the limits by performing the sampling and analysis described in Table 4.4-4.

REACTOR COOLANT SYSTEM

OVERPRESSURE MITIGATING SYSTEMS

LIMITING CONDITION FOR OPERATION

3.4.9.3 The high pressure safety injection flow paths to the Reactor Coolant System (RCS) shall be isolated, and at least one of the following Overpressure Mitigating Systems shall be OPERABLE:

a. Two power-operated relief valves (PORVs) with a lift setting of ≤ 448 psig, or

b. The RCS depressurized with a RCS vent of greater than or equal to 2.20 square inches.

APPLICABILITY MODES 4 (when the temperature of any RCS cold leg is less than or equal to 275°F), 5, and 6 with the reactor vessel head on.

ACTION:

NOTE: LCO 3.0.4.b is not applicable when entering MODE 4.

a. With the high pressure safety injection flow paths to the RCS unisolated, restore isolation of these flow paths within 4 hours.

b. With one PORV inoperable in MODE 4 (when the temperature of any RCS cold leg is less than or equal to 275°F), restore the inoperable PORV to OPERABLE status within 7 days or depressurize and vent the RCS through at least a 2.20 square inch vent within the next 8 hours.

c. With one PORV inoperable in MODES 5 or 6 with the reactor vessel head on, either (1) restore the inoperable PORV to OPERABLE status within 24 hours, or (2) complete depressurization and venting of the RCS through at least a 2.20 square inch vent within a total of 32 hours, or (3) complete depressurization and venting of the RCS through at least one open PORV and associated block valve within a total of 32 hours.

d. With both PORVs inoperable, either restore one PORV to OPERABLE status or complete depressurization and venting of the RCS through at least a 2.20 square inch vent within 24 hours.

e. In the event either the PORVs or a 2.20 square inch vent is used to mitigate an RCS pressure transient, a Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.9.2 within 30 days. The report shall describe the circumstances initiating the transient, the effect of the PORVs or RCS vent(s) on the transient, and any corrective action necessary to prevent recurrence. A Special Report is not required when such a transient is the result of water injection into the RCS for test purposes with an open vent path.

EMERGENCY CORE COOLING SYSTEMS

3/4.5.2 ECCS SUBSYSTEMS - T_{avg} GREATER THAN OR EQUAL TO 350°F

LIMITING CONDITION FOR OPERATION

3.5.2 The following Emergency Core Cooling System (ECCS) equipment and flow paths shall be OPERABLE:

a. Four Safety Injection (SI) pumps, each capable of being powered from its associated OPERABLE diesel generator#, with discharge flow paths aligned to the RCS cold legs,*

b. Two RHR heat exchangers,

c. Two RHR pumps with discharge flow paths aligned to the RCS cold legs,

d. A flow path capable of taking suction from the refueling water storage tank as defined in Specification 3.5.4, and

e. Two flow paths capable of taking suction from the containment sump.

APPLICABILITY: MODES 1, 2, and 3**

ACTION:

a. With one RHR heat exchanger or suction flow path from the containment sump inoperable, restore the inoperable RHR heat exchanger or suction flow path from the containment sump to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

b. In the event the ECCS is actuated and injects water in the Reactor Coolant System, a Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.9.2 within 90 days describing the circumstances of the actuation and the total accumulated actuation cycles to date since January 1, 1990.

c. With one of the four required Safety Injection pumps or its associated discharge flow path inoperable and the opposite unit in MODE 1, 2, or 3, restore the pump or flow path to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 12 hours and in HOT SHUTDOWN within the following 6 hours.***

*Only three Safety Injection (SI) pumps (two associated with the unit and one from the opposite unit), each capable of being powered from its associated OPERABLE diesel generator#, with discharge flow paths aligned to the RCS cold leg are required if the opposite unit is in MODE 4, 5, or 6.

**The provisions of Specification 4.0.4 are not applicable for entry into MODE 3 for the Safety Injection flow paths isolated pursuant to Specification 3.4.9.3 provided that the Safety Injection flow paths are restored to OPERABLE status prior to Tavg exceeding 380°F. Safety Injection flow paths may be isolated when Tavg is less than 380°F.

***The provisions of Specification 4.0.4 are not applicable.

#Inoperability of the required diesel generators does not constitute inoperability of the associated Safety Injection pumps.

PLANT SYSTEMS

AUXILIARY FEEDWATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.1.2 Two independent auxiliary feedwater trains including 3 steam supply flowpaths, 3 pumps and associated discharge water flowpaths shall be OPERABLE.[(1)(2)]

APPLICABILITY: MODES 1, 2 and 3

ACTION:

NOTE: LCO 3.0.4.b is not applicable to the required auxiliary feedwater trains when entering Mode 1.

1) With one of the two required independent auxiliary feedwater trains inoperable, either restore the inoperable train to an OPERABLE status within 72 hours, or place the affected unit(s) in at least HOT STANDBY within the next 6 hours* and in HOT SHUTDOWN within the following 6 hours.

2) With both required auxiliary feedwater trains inoperable, within 2 hours either restore both trains to an OPERABLE status, or restore one train to an OPERABLE status and follow ACTION statement 1 above for the other train. If neither train can be restored to an OPERABLE status within 2 hours, verify the OPERABILITY of both standby feed-water pumps and place the affected unit(s) in at least HOT STANDBY within the next 6 hours* and in HOT SHUTDOWN within the following 6 hours. Otherwise, initiate corrective action to restore at least one auxiliary feedwater train to an OPERABLE status as soon as possible and follow ACTION statement 1 above for the other train.

3) With a single auxiliary feedwater pump inoperable, within 4 hours, verify OPERABILITY of two independent auxiliary feedwater trains, or follow ACTION statements 1 or 2 above as applicable. Upon verification of the OPERABILITY of two independent auxiliary feedwater trains, restore the inoperable auxiliary feedwater pump to an OPERABLE status within 30 days, or place the operating unit(s) in at least HOT STANDBY within 6 hours* and in HOT SHUTDOWN within the following 6 hours.

4) With a single steam supply flowpath inoperable, within 4 hours verify OPERABILITY of two independent steam supply flowpaths or follow ACTION statement 1 or 2 above as applicable. Upon verification of the OPERABILITY of two independent steam supply flowpaths, restore the inoperable steam supply flowpath to OPERABLE status within 7 days of discovery, or place the affected Unit(s) in at least HOT STANDBY within 6 hours* and in HOT SHUTDOWN within the following 6 hours.

NOTES:

(1) One steam supply flowpath shall be OPERABLE in each AFW train and the third steam supply flowpath (via MOV-3-1404 for Unit 3 and MOV-4-1404 for Unit 4) shall be OPERABLE and aligned to either AFW train but not both simultaneously.

(2) During single and two unit operation, one pump shall be OPERABLE in each train and the third auxiliary feedwater pump shall be OPERABLE and capable of being powered from, and supplying water to either train, except as noted in ACTION 3 of Technical Specification 3.7.1.2. The third auxiliary feedwater pump (normally the "C" pump) can be aligned to either train to restore OPERABILITY in the event one of the required pumps is inoperable.

*If this ACTION applies to both units simultaneously, be in at least HOT STANDBY within the next 12 hours and in HOT SHUTDOWN within the following 6 hours.

PLANT SYSTEMS

3/4.7.1.7 FEEDWATER ISOLATION

LIMITING CONDITION FOR OPERATION

3.7.1.7 Six Feedwater Control Valves (FCVs) both main and bypass and six Feedwater Isolation Valves (FIVs) both main and bypass shall be OPERABLE.*

APPLICABILITY: MODES 1, 2 and 3**

ACTION:

a. With one or more FCVs inoperable, restore operability, or close or isolate the inoperable FCVs within 72 hours, and verify that the inoperable valve(s) is closed or isolated at least once per 7 days or be in HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

b. With one or more FIVs inoperable, restore operability, or close or isolate the inoperable FIV(s) within 72 hours, and verify that the inoperable valve(s) is closed or isolated at least once per 7 days or be in HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

c. With one or more bypass valves in different steam generator flow paths inoperable, restore operability, or close or isolate the inoperable bypass valve(s) within 72 hours, and verify that the inoperable valve(s) is closed or isolated at least once per 7 days or be in HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

d. With two valves in the same steam generator flow paths inoperable, restore operability, or isolate the affected flowpath within 8 hours or be in HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours..

SURVEILLANCE REQUIREMENTS

4.7.1.7 Each FCV, FIV and bypass valve shall be demonstrated OPERABLE:

a. In accordance with the Surveillance Frequency Control Program by:

1) Verifying that each FCV, FIV and bypass valve actuates to the isolation position on an actual or simulated actuation signal.

b. In accordance with the INSERVICE TESTING PROGRAM by:

1) Verifying that each FCV, FIV and bypass valve isolation time is within limits.

*Separate Condition entry is allowed for each valve.

**The provisions of specification 4.0.4 are not applicable.

PLANT SYSTEMS

3/4.7.2 COMPONENT COOLING WATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.2 The Component Cooling Water System (CCW) shall be OPERABLE with:

a. Three CCW pumps, and

b. Two CCW heat exchangers.

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

ACTION:

a. With only two CCW pumps with independent power supplies OPERABLE, restore the inoperable CCW pump to OPERABLE status within 30 days or be in HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With only one CCW pump OPERABLE or with two CCW pumps OPERABLE but not from independent power supplies, restore two pumps from independent power supplies to OPERABLE status within 72 hours or be in HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

c. With less than two CCW heat exchangers OPERABLE, restore two heat exchangers to OPERABLE status within 1 hour or be in HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.2 The Component Cooling Water System (CCW) shall be demonstrated OPERABLE:

a. In accordance with the Surveillance Frequency Control Program, by verifying that two heat exchangers and one pump are capable of removing design basis heat loads.

PLANT SYSTEMS

3/4.7.3 INTAKE COOLING WATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.3 The Intake Cooling Water System (ICW) shall be OPERABLE with:

a. Three ICW pumps, and
b. Two ICW headers.

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

ACTION:

a. With only two ICW pumps with independent power supplies OPERABLE, restore the inoperable ICW pump to OPERABLE status within 14 days or be in HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With only one ICW pump OPERABLE or with two ICW pumps OPERABLE, but not from independent power supplies, restore two pumps from independent power supplies to OPERABLE status within 72 hours or be in HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

c. With only one ICW header OPERABLE, restore two headers to OPERABLE status within 72 hours or be in HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.3 The Intake Cooling Water System (ICW) shall be demonstrated OPERABLE:

a. In accordance with the Surveillance Frequency Control Program by verifying that each valve (manual, power-operated, or automatic) servicing safety-related equipment that is not locked, sealed, or otherwise secured in position is in its correct position; and

b. In accordance with the Surveillance Frequency Control Program during shutdown, by verifying that:

1) Each automatic valve servicing safety-related equipment actuates to its correct position on a SI test signal, and

2) Each Intake Cooling Water System pump starts automatically on a SI test signal.

3) Interlocks required for system operability are OPERABLE.

LIMITING CONDITION FOR OPERATION (Continued)

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

ACTION:

NOTE: LCO 3.0.4.b is not applicable to diesel generators.

a. With one of two startup transformers or an associated circuit inoperable, demonstrate the OPERABILITY of the other startup transformer and its associated circuits by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter. If the inoperable startup transformer is the associated startup transformer and became inoperable while the unit is in MODE 1, reduce THERMAL POWER to ≤30% RATED THERMAL POWER within 24 hours, or restore the inoperable startup transformer and associated circuits to OPERABLE status within the next 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. If THERMAL POWER is reduced to ≤30% RATED THERMAL POWER within 24 hours or if the inoperable startup transformer is associated with the opposite unit restore the startup transformer and its associated circuits to OPERABLE status within 30 days of the loss of OPERABILITY, or be in at least HOT STANDBY within the next 12 hours and in COLD SHUTDOWN within the following 30 hours. If the inoperable startup transformer is the associated startup transformer, and became inoperable while the unit was in MODE 2, 3, or 4, restore the startup transformer and its associated circuits to OPERABLE status within 24 hours or be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours. This ACTION applies to both units simultaneously.

b. With one of the required diesel generators inoperable, demonstrate the OPERABILITY of the above required startup transformers and their associated circuits by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter. If the diesel generator became inoperable due to any cause other than an inoperable support system, an independently testable component, or preplanned preventative maintenance or testing, demonstrate the OPERABILITY of the remaining required diesel generators by performing Surveillance Requirement 4.8.1.1.2.a.4 within 24 hours, unless the absence of any potential common mode failure for the remaining diesel generators is determined. If testing of remaining required diesel generators is required, this testing must be performed regardless of when the inoperable diesel generator is restored to OPERABILITY. Restore the inoperable diesel generator to OPERABLE status within 14 days** or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

c. With one startup transformer and one of the required diesel generators inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a on the remaining

** 72 hours if inoperability is associated with Action Statement 3.8.1.1.c.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

AMENDMENT NO. 278 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-31

AMENDMENT NO. 273 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-41

FLORIDA POWER & LIGHT COMPANY

TURKEY POINT NUCLEAR GENERATING UNIT NOS. 3 AND 4

DOCKET NOS. 50-250 AND 50-251

1.0 INTRODUCTION

By application dated June 29, 2017 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17195A569), Florida Power & Light Company (the licensee), requested changes to the Technical Specifications (TS) for Turkey Point Nuclear Generating Unit Nos. 3 and 4 (Turkey Point 3 and 4). The proposed changes would modify TS requirements for mode change limitations in Limiting Condition for Operation (LCO) 3.0.4 and Surveillance Requirement (SR) 4.0.4 to adopt the provisions of Industry/Technical Specifications Task Force (TSTF) change 359, "Increase Flexibility in Mode Restraints." The availability of TSTF-359 for adoption by licensees was announced in the *Federal Register* on April 4, 2003 (68 FR 16579).

TSTF-359 is one of the industry's initiatives under the risk-informed TS program. These initiatives are intended to maintain or improve safety while reducing unnecessary burden, and to make TS requirements consistent with the Nuclear Regulatory Commission's (NRC's or the Commission's) other risk-informed regulatory requirements, in particular, the maintenance rule.

The current Standard Technical Specifications (STS, NUREG 1430 – 1434) specify that a nuclear power plant cannot go to higher modes of operation[1] (i.e., move toward power operation) unless all TS systems, normally required for the higher mode, are operable. This limitation is included (with several exceptions for some plants) in LCO 3.0.4 and SR 3.0.4. LCO 3.0.4 and SR 3.0.4 in the STS currently state, in part, that when an LCO or SR is not met, "entry into a MODE or other specified condition in the applicability shall not be made except when the associated actions to be entered permit continued operation in the MODE or other specified condition in the applicability for an unlimited period of time." The industry believes that this requirement is unnecessarily restrictive and can unduly delay plant startup while considerable resources are being used to resolve startup issues that are risk insignificant or low risk. A maintenance activity that takes longer than planned can delay a mode change and adversely impact a utility's orderly plant startup and return to power operation. The objective of

[1] MODE numbers decrease in the transition "up to a higher mode of operation"; power operation is MODE 1.

the proposed change is to provide additional operational flexibility without compromising plant safety.

The licensee is proposing the following variations from the TS changes described in TSTF-359, Revision 9, dated April 4, 2003. Specifically,

1. The Turkey Point 3 and 4 TSs utilize different numbering and titles than NUREG-1431, "Standard Technical Specifications – Westinghouse Plants," on which TSTF-359 was based. Additionally, the Turkey Point 3 and 4 TS do not contain all of the TS that were revised by TSTF-359. These differences are administrative in nature.

2. The licensee proposed retaining the existing exceptions to SR 4.0.4 in the Turkey Point 3 and 4 TSs, and not including the paragraph below that is included in TSTF-359 for the Bases of SR 3.0.4 in the proposed Bases for SR 4.0.4.

   > The precise requirements for performance of SRs are specified such that exceptions to SR 3.0.4 are not necessary. The specific time frames and conditions necessary for meeting the SRs are specified in the Frequency, in the Surveillance, or both. This allows performance of Surveillances when the prerequisite condition(s) specified in a Surveillance procedure require entry into the MODE or other specified condition in the Applicability of the associated LCO prior to the performance or completion of a Surveillance. A Surveillance that could not be performed until after entering the LCO's Applicability, would have its Frequency specified such that it is not "due" until the specific conditions needed are met. Alternately, the Surveillance may be stated in the form of a Note, as not required (to be met or performed) until a particular event, condition, or time has been reached. Further discussion of the specific formats of SRs' annotation is found in Section 1.4, Frequency.

   The Turkey Point 3 and 4 TSs have not been converted to the STS (NUREG 1431). The STS list "specified frequencies," which consist of the requirements of the Frequency column of each SR, as well as certain Notes in the Surveillance column that modify performance requirements. The Turkey Point 3 and 4 TSs do not list individual SRs that specify the timeframes and conditions necessary for meeting the SRs to allow entry into the mode of condition of applicability without having performed the SR. Therefore, the licensee is proposing to retain existing SR 4.0.4 exceptions in the TS. This will allow the performance requirements to be met, which may include Notes. Removing SR 4.0.4 exceptions from the Turkey Point 3 and 4 TS would not capture these requirements. Therefore, the NRC Staff finds this variation acceptable.

3. The licensee proposes to modify the LCO 3.0.4.b exclusion for auxiliary feedwater (AFW) in TSTF-359 from "LCO 3.0.4.b not applicable when entering MODE 1" to "LCO 3.0.4.b is not applicable to the required auxiliary feedwater trains when entering MODE 1." This variation is evaluated in Section 3.1.1 of this safety evaluation.

4. TSTF-359 and the model safety evaluation refer to Regulatory Guide (RG) 1.182, "Assessing and Managing Risk before Maintenance Activities at Nuclear Power Plants." However, RG 1.182 was withdrawn in November 2012 because it was redundant to the inclusion of its information in RG 1.160, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants." Therefore, the proposed bases for Turkey Point 3 and 4 LCO 3.0.4 refer to RG 1.160 rather than RG 1.182. This is an administrative variation.

The proposed changes to LCO 3.0.4 and SR 4.0.4 would allow, for systems and components, mode changes into a TS condition that have specific required actions and completion times. The licensee will utilize the LCO 3.0.4 and SR 4.0.4 allowances only when they determine that there is a high likelihood that the LCO will be satisfied within the LCO completion time, after the mode change. In addition, the LCO 3.0.4 and SR 4.0.4 allowances can be applied to values and parameters in specifications when explicitly stated in the TS (nonsystem/component TS such as: Reactor Coolant System Specific Activity). These changes are in addition to the current mode change allowance when a required action has an indefinite completion time. The LCO 3.0.4 and SR 4.0.4 mode change allowances are not permitted for the systems and components (termed "higher risk") listed in Section 3.1.1 of this safety evaluation, "Identification of Risk-Important TS Systems and Components," for the modes specified. Two examples are: (1) Westinghouse plants cannot transition from Mode 5 to Mode 4 without a High Head Safety Injection System train operable; and, (2) Westinghouse plants cannot transition up into any mode with an inoperable required emergency diesel generator.

2.0 REGULATORY EVALUATION

In Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50, Section 36, the Commission established its regulatory requirements related to the content of TS. Pursuant to 10 CFR 50.36, TS are required to include items in the following five specific categories related to station operation: (1) safety limits, limiting safety system settings, and limiting control settings; (2) LCOs; (3) SRs; (4) design features; and (5) administrative controls. The rule does not specify the particular requirements to be included in a plant's TS. As stated in 10 CFR 50.36(c)(2)(i), the "Limiting conditions for operation are the lowest functional capability or performance levels of equipment required for safe operation of the facility. When a limiting condition for operation of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the technical specifications ...." By convention, the LCOs are contained in Sections 3.1 through 3.10 of the STS and Sections 3/4.1 through 3/4.12 for Turkey Point 3 and 4. TS Section 3/4.0, "Applicability," provides details or ground rules for complying with the LCOs. LCO 3.0.4 and SR 4.0.4 address requirements for LCO compliance when transitioning between modes.

Technical specifications have taken advantage of risk technology as experience and capability have increased. Since the mid-1980's, the NRC has been reviewing and granting improvements to TS that are based, at least in part, on probabilistic risk assessment (PRA) insights. In its final policy statement on TS improvements of July 22, 1993 (58 FR 39132), the Commission stated that it expects that licensees will utilize any plant-specific PRA or risk survey in preparing their TS-related submittals. In evaluating these submittals, the NRC staff applies the guidance in RG 1.174, Revision 3, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis," dated January 2018 and in RG 1.177, Revision 1, "An Approach for Plant-Specific, Risk-Informed Decisionmaking: Technical Specifications," dated May 2011. The NRC staff has appropriately

adapted this guidance to assess the acceptability of upward mode changes with equipment inoperable. This review had the following objectives:

- To ensure that the plant risk does not increase unacceptably during the actual implementation of the proposed change (e.g., when the plant enters a mode while an LCO is not met). This risk increase is referred to as "temporary."
- To compare and assess the risk impact of the proposed change to the acceptance guidelines of the Commission's Safety Goal Policy Statement (51 FR 30028), as documented in RG 1.174. The risk impact, which is measured by the average yearly risk increase associated with the change, aims at minimizing the "cumulative" risk associated with the proposed change so that the plant's average baseline risk is maintained within a minimal range.
- To assess the licensee's ability to identify risk-significant configurations resulting from maintenance or other operational activities and take appropriate compensatory measures to avoid such configurations.

The NRC staff reviewed licensee reliance on 10 CFR 50.65(a)(4) for the non-higher-risk systems and components, and related guidance to assess and manage the risk of upward mode changes. The Commission has found that compliance with the industry guidance for implementation of 10 CFR 50.65(a)(4), as endorsed by RG 1.160, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," and mandated by LCO 3.0.4, SR 4.0.4, and SR 4.0.3, satisfies the configuration risk management objectives of RG 1.177 for TS surveillance interval and completion time extensions[2]. The licensee's reliance on 10 CFR 50.65(a)(4) processes that are consistent with the provisions of the NRC-endorsed industry guidance was also found to be adequate for managing the risk of missed surveillances as described in the *Federal Register* on September 28, 2001 (66 FR 49714).

The NRC staff review also had the objective of ensuring that existing NRC inspection programs have the necessary controls in place to allow the NRC staff to oversee the implementation of the proposed change, reliance on 10 CFR 50.65(a)(4) processes or programs, and the ability to adequately assess the licensee's performance associated with risk assessments. The review encompassed inspection procedures (i.e., NRC Inspection Procedure 62709 dated December 28, 2000, "Configuration Risk Assessment and Risk Management Process," and NRC Inspection Procedure 71111.13 dated January 17, 2002, "Maintenance Risk Assessments and Emergent Work Control"), the significance determination process (i.e., "Maintenance Risk Assessment and Risk Management Significance Determination Process"), enforcement guidance (i.e., Enforcement Manual Section 7.11, "Actions Involving the Maintenance Rule"), and the associated reactor oversight process.

2.1 Proposed Change to Turkey Point 3 and 4 LCO 3.0.4 and SR 4.0.4

Currently, Turkey Point 3 and 4 LCO 3.0.4 does not allow entrance into a higher mode (or other specified condition) in the applicability when an LCO is not met, except when the associated Actions to be entered permit continued operation in that mode or condition indefinitely, or a specific exception is granted. Similarly, when an LCO's surveillances have not been met within

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[2] RG 1.182 was superseded by RG 1.160, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," Revision 3 (77 FR 70846). However, the industry guidance that is endorsed is the same in both Regulatory Guides, and consequently, compliance with the endorsed industry guidance provides an acceptable method of implementing 10 CFR 50.65(a)(4).

their specified frequency, entry into a higher mode (or other specified condition) is not allowed by SR 4.0.4. The current Turkey Point 3 and 4 TS LCO 3.0.4 reads:

> Entry into an OPERATIONAL MODE or other specified condition shall not be made when the conditions for the Limiting Conditions for Operation are not met and the associated ACTION requires a shutdown if they are not met within a specified time interval. Entry into an OPERATIONAL MODE or specified condition may be made in accordance with ACTION requirements when conformance to them permits continued operation of the facility for an unlimited period of time. This provision shall not prevent passage through or to OPERATIONAL MODES as required to comply with ACTION requirements. Exceptions to these requirements are stated in the individual specifications.

The licensee's proposed revision to LCO 3.0.4 will read:

> When an LCO is not met, entry into a MODE or other specified condition in the Applicability shall only be made:
>
> a. When the associated ACTIONS to be entered permit continued operation in the MODE or other specified condition in the Applicability for an unlimited period of time;
>
> b. After performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering the MODE or other specified condition in the Applicability, and establishment of risk management actions, if appropriate; exceptions to this Specification are stated in the individual Specifications, or
>
> c. When an allowance is stated in the individual value, parameter, or other Specification.
>
> This Specification shall not prevent 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 Turkey Point 3 and 4 current TS SR 4.0.4 reads:

> Entry into an OPERATIONAL MODE or other specified condition shall not be made unless the Surveillance Requirement(s) associated with a Limiting Condition for Operation has been performed within the stated surveillance interval or as otherwise specified. This provision shall not prevent passage through or to OPERATIONAL MODES as required to comply with ACTION requirements.

The licensee's proposed revision to SR 4.04 will read:

> Entry into a MODE or other specified condition in the Applicability of an LCO shall only be made when the LCO's Surveillances have been met within their specified frequency, except as provided by Specification 4.0.3. When an LCO is not met due to Surveillances not having been met, entry into a MODE or

other specified condition in the Applicability shall only be made in accordance with Specification 3.0.4.

This provision shall not prevent entry into 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 proposed LCO 3.0.4.a retains the current allowance for when the required actions allow indefinite operation. The proposed LCO 3.0.4.b allows entering modes or other specified conditions in the applicability except when higher-risk systems and components (listed in Section 3.1.1), for the mode being entered, are inoperable. When applying LCO 3.0.4.b, the decision for entering a higher mode or condition in the Applicability of the LCO will be made by plant management after the required risk assessment has been performed and requisite risk management actions established, through the program established to implement 10 CFR 50.65(a)(4). Entry into the modes or other specified conditions in the Applicability of the TS shall be for no more than the duration of the applicable required actions completion time, or until the LCO is met. The licensee has proposed to remove current notes in individual specifications that prohibit mode changes that are now encompassed by LCO 3.0.4.b. Similarly, the licensee has proposed to add notes that prohibit mode changes under LCO 3.0.4.b for higher-risk systems and components. The proposed LCO 3.0.4.b allowance can involve multiple components in a single LCO or in multiple LCOs; however, use of the LCO 3.0.4.b provisions are always contingent upon completion of a 10 CFR 50.65(a)(4)-based risk assessment.

The notes limiting the applicability, to Modes 1, 2, 3, and 4 of the current TS LCO 3.0.4 and SR 4.0.4 are holdovers from the Turkey Point 3 and 4 operating licenses. The notes limiting the applicability of LCO 3.0.4 and SR 4.0.4 are no longer needed and are removed consistent with approved TSTF-359, Revision 9. Consideration was originally given to adding notes to various TS, as defined by the tables of higher-risk systems, precluding entry into Modes 5 and 6 for pressurized-water reactors (PWRs). However, it was determined that the addition of notes in these cases is unnecessary the action statements require immediate completion times, which means that entry into the Mode or other specified condition in the Applicability is not allowed and the notes would be superfluous.

LCO 3.0.4 allowances related to values and parameters of TS are not typically addressed by LCO 3.0.4.b risk assessments, and are therefore addressed by a new LCO 3.0.4(c). LCO 3.0.4(c) refers to allowances already in the TS and annotated in the individual TS. LCO 3.0.4(c) also allows for entry into the modes or other specified conditions in the Applicability for TS for no more than the duration of the applicable required actions completion time or until the LCO is met or the unit is not within the applicability of the TS.

3.0 TECHNICAL EVALUATION

During the development of the current STS, improvements were made to LCO 3.0.4, such as clarifying its applicability with respect to plant shutdowns, cold shutdown mode and refueling mode. In addition, during the STS development, almost all the LCO with completion times greater than or equal to 30 days, and many LCO with completion times greater than or equal to 7 days, were given individual LCO 3.0.4 exceptions. During some conversions to the STS, individual plants provided acceptable justifications for other LCO 3.0.4 exceptions. All of these specific LCO 3.0.4 exceptions allow entry into a mode or other specified condition in the TS applicability while relying on the TS required actions and associated completion times. The change proposed by the licensee for Turkey Point 3 and 4 would provide standardization and

consistency to the use and application of LCO 3.0.4, both internal to and between each of the specifications, as well as with the STS. This proposed change will also ensure consistency through the utilization of appropriate levels of risk assessment of plant configurations for application of LCO 3.0.4. However, nothing in this safety evaluation should be interpreted as encouraging upward mode transition with inoperable equipment. Good practice should dictate that such transitions should normally be initiated only when all required equipment is operable and that mode transition with inoperable equipment should be the exception rather than the rule. The current LCO 3.0.4.a allowances are retained in the proposal and do not represent a change in risk from the current situation. The LCO 3.0.4.b allowances apply to systems and components, and require a risk assessment prior to utilization to ensure an acceptable level of safety is maintained. The LCO 3.0.4(c) allowances apply to parameters and values that have been previously approved by the NRC in a plant's specific TS. The licensee provided in their TS Bases a discussion and list of each NRC approved LCO 3.0.4(c) specific value and parameter allowance. The bases of LCO 3.0.4 are revised to explain the new allowances and their utilization.

In its review of TSTF-359, the NRC staff did a generic qualitative assessment of the risk impact of the proposed change in LCO 3.0.4.b allowances by evaluating how licensee implementation of the proposed risk-informed approach is expected to meet the requirements of the applicable RGs. The NRC staff referred to the guidance provided in RG 1.174 and in RG 1.177. RG 1.177 provides the NRC staff's recommendations on using risk information to assess the impact of proposed changes to nuclear power plant TS on the risk associated with plant operation. Although RG 1.177 does not specifically address the type of generic change in this proposal, the NRC staff considered the approach documented in RG 1.177 in evaluating the risk information provided in support the proposed changes in LCO 3.0.4.

The NRC staff's evaluation of how the implementation of the proposed risk-informed approach, used to justify LCO 3.0.4.b allowances, agrees with the objectives of the guidance outlined in RG 1.177 is discussed in Section 3.1. Oversight of the risk-informed approach associated with the LCO 3.0.4.b allowances is discussed in Section 3.2 of this safety evaluation.

3.1 Evaluation of Risk Management

Both the temporary and cumulative risk of the proposed change is adequately limited. The temporary risk is limited by the exclusion of higher-risk systems and components, and completion time limits contained in TS (Section 3.1.1 of this safety evaluation). The cumulative risk is limited by the temporary risk limitations and by the expected low frequency of the proposed mode changes with inoperable equipment (Section 3.1.2 of this safety evaluation). Adequate NRC oversight of the licensee's ability to use the LCO 3.0.4.b provisions under appropriate circumstances, that is, to identify risk-significant configurations when entering a higher mode or condition in the applicability of an LCO (Section 3.1.3 of this safety evaluation) is provided by NRC inspection of the licensee's implementation of 10 CFR 50.65(a)(4) as applied to the proposed change.

3.1.1 Temporary Risk Increases

RG 1.177 proposes the incremental conditional core damage probability (ICCDP) and the incremental conditional large early release probability (ICLERP) as appropriate measures of the increase in probability of core damage and large early release, respectively, during the period of implementation of a proposed TS change. In addition, RG 1.177 stresses the need to preclude potentially high-risk configurations introduced by the proposed change. The ICCDP associated

with any specified plant condition, such as the condition introduced by entering a higher mode with plant equipment inoperable, is expressed by the following equation:

$$ICCDP = \Delta R\ d = (R_1 - R_0)\ d \qquad (1)$$

where:

ΔR = the conditional risk increase, in terms of core damage frequency (CDF), caused by the specified condition

d = the duration of the specified plant condition

R_1 = the plant CDF with the specified condition permanently present

R_0 = the plant CDF without the specified condition

The same expression can be used for ICLERP by substituting the measure of risk, that is, large early release frequency (LERF) for CDF. The magnitude of the ICCDP and ICLERP values associated with plant conditions applicable to LCO 3.0.4.b allowances can be managed by controlling the conditional risk increase, ΔR (in terms of both CDF and LERF) and the duration, d, of such conditions. The following sections discuss how the key elements of the proposed risk-informed approach, used to justify LCO 3.0.4.b allowances, are expected to limit ΔR and d and, thus, prevent any significant temporary risk increases.

Identification of Risk-Important TS Systems and Components

A major element that limits the risk of the proposed mode change flexibility is the exclusion of certain systems and associated LCO for the mode change allowance. TS allow operation in Mode 1 (power operation) with specified levels of inoperability for specified times. This provides a benchmark of currently acceptable risk against which to measure any incremental risk inherent in the proposed LCO 3.0.4.b. If a system inoperability accrues risk at a higher rate in one or more of the transition modes than it would in Mode 1, then an upward transition into that mode should not be allowed without demonstration of a high degree of experience and sophistication in risk management. However, the risk management process evaluated in Section 3.1.3 is adequate if higher-risk systems/components are excluded from the scope of LCO 3.0.4.b.

The importance of most TS systems in mitigating accidents increases as power increases. However, some TS systems are relatively more important during lower power and shutdown operations, because:

- Certain events are peculiar to modes of plant operation other than power operation,
- Certain events are more probable at modes of plant operation other than power operation, and
- Some modes of plant operation have less mitigation system capability than power operation.

The risk information submitted in support of the proposed changes to LCO 3.0.4 and SR 4.0.4 in TSTF-359 included qualitative risk assessments performed by each owners group to identify

higher risk systems and components at the various modes of operation, including transitions between modes, as the plant moves upward from the refueling mode of operation toward power operation. The owners groups' generic qualitative risk assessments are included as attachments to TSTF-359, Revision 9. Each of the owners groups' generic qualitative risk assessments discuss the technical approach used and the systems/components subsequently determined to be of higher risk significance; the systems/components not to be granted the LCO 3.0.4 allowances for the various modes are listed. The Westinghouse owners groups' (WOG) generic qualitative risk assessments:

- "WOG Qualitative Risk Assessment Supporting Increased Flexibility in MODE Restraints."

Following interactions with the NRC staff, all owners groups used the same systematic approach in their qualitative risk assessments to identify the higher-risk systems in the STS, consisting of the following steps:

- Identification of plant conditions (i.e., plant parameters and availability of key mitigation systems) associated with changes in plant modes while returning to power,

- Identification of key activities that have the potential to impact risk and which are in progress during transitions between modes while the plant is returning to power,

- Identification of applicable accident initiating events for each mode or other specified condition in the applicability, and

- Identification of the higher-risk systems and components by combining the information in the first three steps (qualitative risk assessment)

The risk assessments properly used the results and insights from previous deterministic and probabilistic studies to systematically search for plant conditions in which certain key plant components are more important in mitigating accidents than during operation at power (Mode 1). This search was systematic, taking the following factors into account for the various stages of returning the plant to power:

- The status of accident mitigation and normally operating systems

- The status of key plant parameters such as reactor coolant system pressure

- The key activities that are in progress during transitions between modes which have the potential to impact risk (e.g., the transfer from auxiliary to main feedwater at some PWR plants when Mode 1 is entered)

- The applicable accident initiating events for each mode of plant operation, and

- Design and operational differences among plants or groups of plants

The following systems and components were identified by the PWR owners group as higher-risk systems and components, when the plant is entering a new mode.

Westinghouse Owners Group (WOG) Plants

System	Entering Mode
Emergency Diesel Generators (EDGs)	5, 4, 3, 2, 1
Auxiliary Feedwater (AFW) System (for plants depending on AFW for startup)	4, 3, 2, 1
High Head Safety Injection System	4
Cold Overpressure Protection System	5, 4
Residual Heat Removal (RHR) System	5

If a licensee identifies a higher-risk system for only some of the modes of applicability, the TS for that system would be modified by a note that reads, for example, "LCO 3.0.4.b is not applicable when entering MODE 1 from MODE 2." Systems identified as higher risk for Modes 5 and 6 for PWRs, are also excluded from transitioning up to the mode of higher risk, and as previously discussed, notes for those transitions are superfluous. In addition, mode transitions for Modes 5 and 6 for PWRs, will be addressed by administrative controls.

In summary, the NRC staff's review of the owners groups qualitative risk assessments finds that they are of adequate quality to support the application (i.e., they identify the higher-risk systems and components) associated with entering higher modes of plant operation with equipment inoperable while returning to power.

The licensee proposes to modify the LCO 3.0.4.b exclusion for AFW in TSTF-359 from "LCO 3.0.4b not applicable when entering MODE 1" to "LCO 3.0.4.b is not applicable to the required auxiliary feedwater trains when entering MODE 1." The note will prohibit a transition to MODE 1 with less than two independent AFW trains operable. The change will permit a transition to MODE 1 in accordance with LCO 3.0.4.b with a single AFW pump or steam supply flow path inoperable provided two independent AFW trains are operable.

The Turkey Point 3 and 4 AFW system includes three steam turbine-driven pumps such that each pump supplies feedwater to either Unit 3 or 4, with any single pump supplying the total feedwater requirement of either unit. Two pumps are normally aligned to one AFW train, and the third pump is normally aligned to the other AFW train. TS 3.7.1.2, Auxiliary Feedwater, requires that two independent auxiliary feedwater trains including three steam supply flow paths, three pumps, and associated discharge water flow paths shall be operable. The LCO requires a third steam supply flow path aligned to one of the AFW trains and a third AFW pump that can be aligned to either train to restore operability in the event a train-associated AFW pump becomes inoperable.

In addition, two non-safety grade standby steam generator feedwater pumps (SSGFP) are provided. The SSGFPs are normally used to supply feedwater during startup, shutdown, and hot standby conditions. One pump is motor-driven and the other pump is diesel engine-driven. While the AFW system is the normal supply of feedwater in the event of a loss of offsite power, feedwater can also be supplied by the diesel engine-driven SSGFP. The configuration of Turkey Point 3 and 4 AFW system and SSGFP would allow the mode change to proceed with a single AFW pump or steam supply inoperable. Prohibiting Mode 1 entry without two operable

AFW trains is appropriate while entry into Mode 1 with two operable trains provides sufficient AFW capability to mitigate a loss of feedwater during startup activities in Mode 1. LCO 3.0.4.b continues to require a risk assessment addressing inoperable systems and components. The NRC staff agrees with the modification of LCO 3.0.4.b to prohibit transition to MODE 1 in accordance with LCO 3.0.4.b, with a single AFW pump or steam supply flow path inoperable.

Limited Time in TS Required Actions

Any temporary risk increase will be limited by, among other factors, duration constraints imposed by the TS completion times of the inoperable systems. For the systems and components that are not higher risk, any temporary risk increase associated with the proposed allowance will be smaller than what is considered acceptable when the same systems and components are inoperable at power. This is due to the fact that completion times associated with the majority of TS systems and components were developed for power operation and pose a smaller plant risk for action statement entries initiated or occurring at lower modes of operation as compared to power operation.

The LCO 3.0.4.b allowance will be used only when the licensee determines that there is a high likelihood that the LCO will be satisfied following the mode change. This will minimize the likelihood of additional temporary risk increases associated with the need to exit a mode due to failure to restore the unavailable equipment within the completion time. In most cases, licensees will enter into a higher mode with the intent to move up to Mode 1 (power operation). As discussed in Section 3.2, the revised reactor oversight process monitors unplanned power changes as a performance indicator. The reactor oversight process, thus, discourages licensees from entering a mode or other specified condition in the applicability of an LCO, and moving up in power, when there is a likelihood that the mode would have to be subsequently exited due to failure to restore the unavailable equipment within the completion time. Another disincentive for licensees to enter a higher mode when an LCO is not met is related to reporting requirements. It clearly states in 10 CFR 50.72 and 50.73 that a report is required when a nuclear plant shutdown or mode change is required by TS. The NRC's oversight program will provide the framework for inspectors and other staff to follow the history at a specific plant of entering higher modes while an LCO is not met, and use such information in assessing the licensee's actions and performance.

3.1.2 Cumulative Risk Increases

The cumulative risk impact of the change to allow the plant to enter a higher mode of operation with one or more safety-related components unavailable (as proposed here), is measured by the average yearly risk increase associated with the change. In general, this cumulative risk increase is assessed in terms of both CDF and LERF (i.e., ΔCDF and ΔLERF, respectively). The increase in CDF due to the proposed change is expressed by the following equation, which integrates the risk impact from all expected specified conditions (i.e., all expected plant conditions caused by mode changes with various TS systems and components unavailable).

$$\Delta CDF = \Sigma(\Delta CDF_i) = \Sigma\ ICCDP_i\ f_i \qquad (2)$$

Where

ΔCDF_i = the CDF increase due to specified condition i

$ICCDP_i$ = the ICCDP associated with specified condition i

f_i = the average yearly frequency of occurrence of specified condition i

A similar expression can be used for ΔLERF by substituting the measure of risk (i.e., LERF for CDF). The magnitude of the ΔCDF and ΔLERF values associated with plant conditions applicable to LCO 3.0.4.b allowances can be managed by controlling the temporary risk increases, in terms of both CDF and LERF (i.e., ICCDP and ICLERP), and the frequency (f), of each of such conditions. In addition to the points made in the previous section regarding temporary risk increases, the following points put into perspective how the key elements of the proposed risk-informed approach, used to justify an LCO 3.0.4.b allowance, are expected to prevent significant cumulative risk increases by limiting the frequency of its use:

- The frequency of risk-significant conditions will be limited by not providing the LCO 3.0.4.b allowances to the higher risk systems and components.

- The frequency of risk-significant conditions will be limited by the requirement to assess the likelihood that the LCO will be satisfied following the mode change.

- The frequency of risk-significant conditions is limited by the fact that such conditions can occur only when the plant is returning to power following shutdown, that is, during a small fraction of time per year (data over the past 5 years indicate that the plants are averaging 2.1 startups per year).

The addition of the proposed LCO 3.0.4.b allowances to the plant maintenance activities is not expected to change the plant's average (cumulative) risk significantly.

3.1.3 Risk Assessment and Risk Management of Mode Changes

With all safety systems and components operable, a plant can transition up in mode to power operation. With one or more system(s) or component(s) inoperable, this change permits a plant to transition up in mode to power operation if the inoperable system(s) or component(s) are not in the pre-analyzed higher risk category, a 10 CFR 50.65(a)(4)-based risk assessment is performed prior to the mode transition, and the requisite risk management actions are taken. The proposed TS Bases state that when an LCO is not met, LCO 3.0.4 also allows entering MODES or other specified conditions in the Applicability following assessment of the risk impact and determination that the impact can be managed. The risk assessment may use quantitative, qualitative, or blended approaches, and the risk assessment will be conducted using the plant program, procedures, and criteria in place to implement 10 CFR 50.65(a)(4), which requires that risk impacts of maintenance activities to be assessed and managed.

It should be noted that the risk assessment, for the purposes of LCO 3.0.4.b, must take into account all inoperable TS equipment regardless of whether the equipment is included in the licensee's normal 10 CFR 50.65(a)(4) risk assessment scope. The risk assessments will be conducted using the procedures and guidance endorsed by RG 1.160. The results of the risk assessment shall be considered in determining the acceptability of entering the MODE or other specified condition in the Applicability, and any corresponding risk management actions. A risk assessment and establishment of risk management actions, as appropriate, are required for determination of acceptable risk for entering MODE or other specified conditions in the Applicability when an LCO is not met. Elements of acceptable risk assessment and risk management actions are included in Section 11 of NUMARC 93-01, "Assessment of Risk Resulting from Performance of Maintenance Activities" (ADAMS Accession No. ML11116A198),

as endorsed by RG 1.160, which addresses general guidance for conduct of the risk assessment, gives quantitative and qualitative guidelines for establishing risk management actions, and provides example risk management actions. These risk management actions include actions to plan and conduct other activities in a manner that controls overall risk, actions to increase risk awareness by shift and management personnel, actions to reduce the duration of the conditions, actions to minimize the magnitude of risk increases (establishment of backup success paths or compensatory measures), and determination that the proposed MODE change is acceptable.

The guidance references state that a licensee's risk assessment process should be sufficiently robust and comprehensive to assess risk associated with maintenance activities during power operation, low power, and shutdown conditions (all modes of operation), including changes in plant conditions. NUMARC 93-01 states that the risk assessment should include consideration of: the degree of redundancy available for performance of the safety function(s) served by the out-of-service equipment; the duration of the out-of-service condition; component and system dependencies that are affected; the risk impact of performing the maintenance during shutdown versus at power; and, the impact of mode transition risk. For power operation, key plant safety functions are those that ensure the integrity of the reactor coolant pressure boundary, ensure the capability to shut down and maintain the reactor in safe shutdown condition, and ensure the capability to prevent or mitigate the consequences of accidents that could result in potentially significant offsite exposures.

While the inoperabilities permitted by the completion times of TS required actions take into consideration the safety significance and redundancy of the system or components within the scope of an LCO, the completion times generally do not address or consider concurrent system or component inoperabilities in multiple LCOs. Therefore, the performance of the 10 CFR 50.65(a)(4) risk assessment that looks at the entire plant configuration is essential (and required) prior to changing the mode. The 10 CFR 50.65(a)(4)-based risk assessment will be used to confirm (or reject) the appropriateness of transitioning up in mode given the actual status of plant safety equipment.

The risk impact on the plant condition of invoking an LCO 3.0.4.b allowance will be assessed and managed through the program established to implement 10 CFR 50.65(a)(4). This program is consistent with RG 1.177 and RG 1.174 in its approach. The implementation guidance for paragraph (a)(4) of the Maintenance Rule addresses controlling temporary risk increases resulting from maintenance activities. This guidance, consistent with guidance in RG 1.177, establishes action thresholds based on qualitative and quantitative considerations and risk management actions. Significant temporary risk increases following an LCO 3.0.4.b allowance are unlikely to occur unless:

- High-risk configurations are allowed (e.g., certain combinations of multiple component outages), or

- Risk management of plant operation activities is inadequate.

The requirements associated with the proposed change are established to ensure that such conditions will not occur.

The thresholds of the cumulative (aggregate) risk impacts, assessed pursuant to 10 CFR 50.65(a)(4) and the associated implementation guidance, are based on the permanent change guidelines in NRC RG 1.174. Therefore, licensees will manage the risk exercising LCO 3.0.4 in

conjunction with the risk from other concurrent plant activities to ensure that any increase, in terms of CDF and LERF will be small and consistent with the Commission's Safety Goal Policy Statement.

3.2 Oversight

The reactor oversight process (ROP) provides a means for assessing the licensee's performance in the application of the proposed mode change flexibility. The adequacy of the licensee's assessment and management of maintenance-related risk is addressed by existing inspection programs and guidance for 10 CFR 50.65(a)(4). Although the current versions of that guidance do not specifically address application of the licensee's (a)(4) program to support risk-informed TS, it is expected that, in most cases, risk assessment and management associated with risk-informed TS would be required by (a)(4) anyway because maintenance activities will be involved.

Adoption of the proposed change will make failure to assess and manage the risk of an upward mode change with inoperable equipment covered by TS, prior to commencing such a mode change, a violation of TS. Further, as explained above in general, under most foreseeable circumstances, such a change in configuration would also require a risk assessment under 10 CFR 50.65(a)(4). Inoperable systems or components will necessitate maintenance to restore them to operability, and hence a 10 CFR 50.65(a)(4) risk assessment would be performed prior to the performance of those maintenance actions (except for immediate plant stabilization and restoration actions if necessary). Further, before altering the plant's configuration, including plant configuration changes associated with mode changes, the licensee must update the existing (a)(4) risk assessment to reflect those changes.

The *Federal Register* Notice issuing a revision to the Maintenance Rule, 10 CFR 50.65 (64 FR 38553), along with NRC Inspection Procedure 71111.13 and NUMARC 93-01, Section 11, dated February 22, 2000, "Assessment of Risk Resulting from Performance of Maintenance Activities," all indicate that to determine the safety impact of a change in plant conditions during maintenance, a risk assessment must be performed before changing plant conditions. The bases for the proposed TS change mandate that the risk assessment and management of upward mode changes will be conducted under the licensee's program and process for meeting 10 CFR 50.65(a)(4). Oversight of licensee performance in assessing and managing the risk of plant maintenance activities is conducted principally by inspection in accordance with Reactor Oversight Program Baseline Inspection Procedure 71111.13. Supplemental Inspection Procedure 62709, "Configuration Risk Assessment and Risk Management Process," is utilized to evaluate the licensee's process, when necessary.

The ROP is described in overview in NUREG-1649, Rev. 6, "Reactor Oversight Process," and in detail in the NRC Inspection Manual. Inspection Procedure 71111.13 requires verification of performance of risk assessments when they are required by 10 CFR 50.65(a)(4) and in accordance with licensee procedures. The procedure also requires verification of the adequacy of those risk assessments and verification of effective implementation of licensee-prescribed risk management actions. The rule itself requires such assessment and management of risk prior to maintenance activities, including preventive maintenance, surveillance, and testing (and promptly for emergent work) during all modes of plant operation. The guidance documents for both industry implementation of (a)(4) and NRC oversight of that implementation indicate that changes in plant configuration (which would include mode changes) in support of maintenance activities must be taken into account in the risk assessment and management process.

Revisions to NRC inspection guidance and licensee implementation procedures will be needed to address oversight of risk assessment and management required by TS in support of mode changes that are not already required under the circumstances by (a)(4). This consideration provides performance-based regulatory oversight of the use of the proposed flexibility, and a disincentive to use the flexibility without the requisite care in planning.

In addition, the NRC staff developed the significance determination process guidance for use in assessing inspection findings related to 10 CFR 50.65(a)(4). This guidance was issued in draft for comment and became final during August 2008. The ROP considers inspection findings and performance indicators in evaluating licensee ability to operate safely. The significance determination process is used to determine the significance of inspection findings related to licensee assessment and management of the risk associated with performing maintenance activities under all plant operating or shutdown conditions. Unplanned reactor scrams and unplanned power changes are two of the Reactor Safety Performance Indicators that the ROP utilizes to assess licensee performance and inform the public. The ROP will provide a disincentive to entering into power operation (Mode 1) when there is a significant likelihood that the mode would have to be subsequently exited due to failure to restore the unavailable equipment within the completion time.

3.3 Summary

The licensee submitted a proposed TS change to allow entry into a higher mode of operation, or other specified condition in the TS Applicability, while relying on the TS conditions, and associated required actions and completion times, provided a risk assessment is performed to confirm the acceptability of that action. The proposal revises Turkey Point 3 and 4 LCO 3.0.4 and SR 4.0.4, and their application to the TS. New paragraphs (a), (b), and (c) are proposed for LCO 3.0.4.

The proposed LCO 3.0.4.a retains the current allowance, permitting the mode change when the TS required actions allow indefinite operation.

Proposed LCO 3.0.4.b is the change to allow entry into a higher mode of operation, or other specified condition in the TS Applicability, while relying on the TS conditions and associated required actions and completion times, provided a risk assessment is performed to confirm the acceptability of that action for the existing plant configuration. The NRC staff review finds that the process proposed by the licensee for assessing and managing risk during the implementation of the proposed LCO 3.0.4.b allowances meets Commission guidance for TS changes. Key elements of this process are listed below.

- A risk assessment shall be performed before any LCO 3.0.4.b allowance is invoked.

- The risk impact on the plant condition when invoking an LCO 3.0.4.b allowance will be assessed and managed through the program established to implement 10 CFR 50.65(a)(4) and the associated guidance in RG 1.160. Allowing entry into a higher mode or condition in the Applicability of an LCO after a 10 CFR 50.65(a)(4) based risk assessment and appropriate risk management actions are taken for the existing plant configuration will ensure that plant safety is maintained.

- The LCO 3.0.4.b allowance will be used only when the licensee determines that there is a high likelihood that the LCO will be satisfied within the required action's completion time.

- TS systems and components that may be of higher risk during mode changes have been identified generically by each owners' group for each plant operational mode or condition. Licensees will identify such plant-specific systems and components in the individual plant TS. The proposed LCO 3.0.4.b allowance does not apply to these systems and components for the mode or condition in the applicability of an LCO at which they are of higher risk.

- In adopting LCO 3.0.4.b, the licensee will ensure that plant procedures in place to implement 10 CFR 50.65(a)(4) address the situation where entering a mode or other specified condition in the applicability is contemplated with plant equipment inoperable. Such plant procedures will follow the guidance endorsed by NRC RG 1.160.

The NRC's reactor oversight process provides the framework for inspectors and other NRC staff to oversee the implementation of 10 CFR 50.65(a)(4) requirements at a specific plant and assess the licensee's actions and performance.

The LCO 3.0.4.b allowance does not apply to values and parameters of the TS that have their own respective LCO (e.g., Reactor Coolant System Specific Activity), but instead those values and parameters are addressed by LCO 3.0.4(c). The TS values and parameters for which mode transition allowances apply, will have a note that states LCO 3.0.4(c) is applicable.

The objective of the proposed change is to provide additional operational flexibility without compromising plant safety.

The licensee has a bases control program in Turkey Point 3 and 4 TS 6.8.4 which is consistent with the bases control program described in the STS for Westinghouse plants, NUREG-1431, Revision 4. The licensee committed to implement the TS Bases change for LCO 3.0.4 and SR 4.0.4 concurrent with the license amendment. The NRC staff agrees that the TS Bases Control Program is the appropriate process for updating the affected TS Bases pages.

The licensee's proposed changes are acceptable because the adopted key elements; requires the licensee to assess and manage risk; and they are consistent with approved TSTF-359 and the Commission's regulations.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the NRC staff notified the State of Florida official (Ms. Cynthia Becker, M.P.H., Chief of the Bureau of Radiation Control, Florida Department of Health) on January 30, 2018 (ADAMS Accession No. ML18033A015), of the proposed issuance of the amendments. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and change surveillance requirements. The NRC staff has determined that the amendments involve no significant increase in the amounts and no significant change in the types of any effluents that may be released offsite and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding, which was published in the *Federal Register* on September 12, 2017 (82 FR 42850), that the

amendments involve no significant hazards consideration, and there has been no public comment on such finding. Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

6.0 CONCLUSION

The Commission has concluded, based on the aforementioned considerations, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) there is reasonable assurance that such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: Tarico Sweat

Date: February 20, 2018

SUBJECT: TURKEY POINT NUCLEAR GENERATING UNIT NOS. 3 AND 4 - ISSUANCE OF AMENDMENTS REGARDING THE TECHNICAL SPECIFICATION REQUIREMENTS PERTAINING TO MODE CHANGE LIMITATIONS (CAC NOS. MF9903 AND MF9904; EPID L-2017-LLA-0254) DATED FEBRUARY 20, 2018

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