



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

November 9, 2015

Mr. Mano Nazar
President and Chief Nuclear Officer
Nuclear Division
NextEra Energy
P.O. Box 14000
Juno Beach, FL 33408-0420

SUBJECT: TURKEY POINT NUCLEAR GENERATING UNIT NOS. 3 AND 4 – ISSUANCE
OF AMENDMENTS REGARDING EMERGENCY CORE COOLING SYSTEM
TECHNICAL SPECIFICATIONS (CAC NOS. MF5177 AND MF5178)

Dear Mr. Nazar:

The U.S. Nuclear Regulatory Commission (NRC or the Commission) has issued the enclosed Amendment No. 267 to Renewed Facility Operating License (RFOL) No. DPR-31 and Amendment No. 262 to RFOL No. DPR-41 for the 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 (the licensee) dated November 13, 2014.

The amendments revised TS 3/4.5.2, "ECCS [Emergency Core Cooling System] Subsystems – T_{avg} [average temperature] Greater Than or Equal to 350°F [degrees Fahrenheit]," to correct nonconservative TS requirements. The amendments also made editorial changes to the TSs.

M. Nazar

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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,



Audrey L. Klett, 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. 267 to DPR-31
2. Amendment No. 262 to DPR-41
3. Safety Evaluation.

cc w/enclosures: Distribution via Listserv



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

FLORIDA POWER & LIGHT COMPANY

DOCKET NO. 50-250

TURKEY POINT NUCLEAR GENERATING UNIT NO. 3

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 267
Renewed License No. DPR-31

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Florida Power & Light Company (the licensee) dated November 13, 2014, 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 Title 10 of the *Code of Federal Regulations* (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.

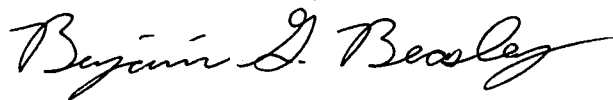
2. Accordingly, the license is amended by changes to the Operating License and Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Renewed Facility Operating License No. DPR-31 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 267 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 60 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Benjamin G. Beasley, Chief
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Operating License and
Technical Specifications

Date of Issuance: November 9, 2015



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. 262
Renewed License No. DPR-41

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Florida Power & Light Company (the licensee) dated November 13, 2014, 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 Title 10 of the *Code of Federal Regulations* (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 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. 262 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 60 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Benjamin G. Beasley, Chief
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Operating License and
Technical Specifications

Date of Issuance: November 9, 2015

ATTACHMENT TO LICENSE AMENDMENTS

AMENDMENT NO. 267 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-31

AMENDMENT NO. 262 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-41

DOCKET NOS. 50-250 AND 50-251

Replace page 3 of Renewed Facility Operating License DPR-31 with the attached page 3. The revised page is identified by amendment number and contains marginal lines indicating the areas of change.

Replace page 3 of Renewed Facility Operating License DPR-41 with the attached page 3. The revised page is identified by amendment number and contains marginal lines indicating the areas of change.

Replace the following pages of the Appendix A Technical Specifications with the attached pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

| <u>Remove</u> | <u>Insert</u> |
|---------------|---------------|
| 3/4 5-3 | 3/4 5-3 |
| 3/4 5-4 | 3/4 5-4 |
| 3/4 5-5 | 3/4 5-5 |

- 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. 267 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. 262 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.

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 Specifications 3.0.4 and 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 T_{avg} exceeding 380°F. Safety Injection flow paths may be isolated when T_{avg} is less than 380°F.

***The provisions of Specifications 3.0.4 and 4.0.4 are not applicable.

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

EMERGENCY CORE COOLING SYSTEMS

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

LIMITING CONDITION FOR OPERATION

- d. With two of the four required Safety Injection pumps or their associated discharge flow paths inoperable and the opposite unit in MODE 1, 2, or 3, restore one of the two inoperable pumps or flow paths to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 12 hours and in HOT SHUTDOWN within the following 6 hours. This ACTION applies to both units simultaneously.
- e. With one of the three required Safety Injection pumps or its associated discharge flow path inoperable and the opposite unit in MODE 4, 5, or 6, restore the pump or flow path 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.
- f. With a required Safety Injection pump OPERABLE but not capable of being powered from its associated diesel generator, restore the capability within 14 days or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.
- g. With an ECCS subsystem inoperable due to an RHR pump or its associated discharge flow path being inoperable, restore the inoperable RHR pump or its associated discharge flow path to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.
- h. With the suction flow path from the refueling water storage tank inoperable, restore the suction flow path to OPERABLE status within 1 hour or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

EMERGENCY CORE COOLING SYSTEMS

SURVEILLANCE REQUIREMENTS

4.5.2 Each ECCS component and flow path shall be demonstrated OPERABLE:

- a. In accordance with the Surveillance Frequency Control Program by verifying by control room indication that the following valves are in the indicated positions with power to the valve operators removed:

| <u>Valve Number</u> | <u>Valve Function</u> | <u>Valve Position</u> |
|---------------------|--------------------------|-----------------------|
| 864A and B | Supply from RWST to ECCS | Open |
| 862A and B | RWST Supply to RHR pumps | Open |
| 863A and B | RHR Recirculation | Closed |
| 866A and B | H.H.S.I. to Hot Legs | Closed |
| HCV-758* | RHR HX Outlet | Open |

To permit positive valve position indication for surveillance or maintenance purposes in the event that continuous valve position indication is unavailable in the control room, power may be restored to these valves for a period not to exceed 1 hour.

- b. In accordance with the Surveillance Frequency Control Program by:
- 1) Verifying ECCS locations susceptible to gas accumulation are sufficiently filled with water, and
 - 2) Verifying that each valve (manual, power-operated, or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position.**
- c. By verifying that each SI and RHR pump develops the indicated differential pressure applicable to the operating conditions when tested pursuant to Specification 4.0.5:
- 1) SI pump ≥ 1083 psid at a metered flowrate ≥ 300 gpm (normal alignment or Unit 4 SI pumps aligned to Unit 3 RWST), or
 ≥ 1113 psid at a metered flowrate ≥ 280 gpm (Unit 3 SI pumps aligned to Unit 4 RWST).
 - 2) RHR pump Develops the indicated differential pressure applicable to the operating conditions in accordance with Figure 3.5-1.

*Air Supply to HCV-758 shall be verified shut off and sealed closed in accordance with the Surveillance Frequency Control Program.

**Not required to be met for system vent flow paths opened under administrative control.



UNITED STATES
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WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION FOR
AMENDMENT NO. 267 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-31 AND
AMENDMENT NO. 262 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 November 13, 2014,¹ Florida Power & Light Company (the licensee) requested changes to the Technical Specifications (TSs) for Turkey Point Nuclear Generating Unit Nos. 3 and 4 (Turkey Point), which are contained in Appendix A of Renewed Facility Operating Licenses DPR-31 and DPR-41. The licensee proposed to revise TS 3/4.5.2, "ECCS [Emergency Core Cooling System] Subsystems – T_{avg} [average temperature] Greater Than or Equal to 350°F [degrees Fahrenheit]," to correct nonconservative TS requirements and make editorial changes to the TSs. The U.S. Nuclear Regulatory Commission (NRC) staff's proposed no significant hazards consideration (NSHC) for this application was published in the *Federal Register* (FR) on March 3, 2015 (80 FR 11478).

2.0 REGULATORY EVALUATION

2.1. Description of the ECCS Design and Operation at Turkey Point

Chapters 6 and 9 of the Turkey Point Updated Final Safety Analysis Report (UFSAR) state that adequate emergency core cooling is provided by the Safety Injection (SI) System. The SI System constitutes the ECCS, and its primary purpose is to automatically deliver cooling water to the reactor core in the event of a loss-of-coolant accident (LOCA). The SI System's components operate in three modes. These modes are delineated as passive accumulator injection, active safety injection, and recirculation. The high head SI and low head residual heat removal (RHR) pumps inject borated water from the refueling water storage tank (RWST). The SI pumps align to take suction from the RHR pumps to recirculate spilled coolant injected water and Containment Spray System drainage back to the reactor from the containment sump. The

¹ Agencywide Documents Access and Management Systems (ADAMS) Accession Number ML14337A013.

RHR pumps discharge through the RHR heat exchangers and then to the SI pump suction. The recirculation phase is initiated after the RWST volume is depleted. This phase differs from the injection phase in that the RHR pumps are re-aligned to take suction from the containment sump. In its application dated November 13, 2014, the licensee stated that Turkey Point 3 and 4 share the SI System. There are four SI pumps available for Turkey Point 3 and 4. The RHR system is not shared between Turkey Point 3 and 4; rather, it has two RHR pumps per unit.

Chapter 6 of the Turkey Point UFSAR states that the RHR pumps deliver to all three cold legs through the piping between the accumulators and the cold legs. The high head SI pumps deliver into two separate headers, one going to the cold legs and one to the hot legs. Motor operated valves (MOVs) 864A and 864B at the outlet of the RWST and valves 862A and 862B for RHR pump suction from the tank are normally open and are only closed momentarily for testing or during refueling for maintenance. The valves are maintained open by keeping the motor circuit breakers locked open in the motor control centers. MOVs 866A and 866B, which control the two flow paths to the hot legs, are maintained inoperative by keeping the motor circuit breakers locked open at the motor control centers. The header to the cold legs divides into three injection lines connecting to the pipes from the accumulators close to the reactor coolant system cold leg piping. The ability is provided to isolate the pumps on separate headers.

Sections 6.2 and 9.5.4 of the Turkey Point UFSAR describe the RWST as supplying borated water to the refueling canal for refueling operations. The RWST also provides borated water to the SI, RHR, and containment spray pumps for a LOCA. The RWST is constructed of epoxy coated carbon steel. The capacity of the RWST tank is based on the requirement for filling the refueling canal, which is provided in Table 9.5-1 of the Turkey Point UFSAR. This capacity provides an amount of borated water to assure: a volume sufficient to refill the reactor vessel above the nozzles; the volume of borated refueling water needed to increase the concentration of initially spilled water to a point that assures no return to criticality with the reactor at cold shutdown; and a sufficient volume of water on the floor to permit the initiation of recirculation.

TS 3/4.5.2 is applicable in MODES 1 (power operation), 2 (startup), and 3 (hot standby) and specifies the limiting conditions for operation (LCOs), Actions, and Surveillance Requirements (SRs) for the SI pumps, RHR pumps, RHR heat exchangers, and the associated discharge and suction source flow paths for the SI and RHR pumps. LCO 3.5.2 also specifies diesel generator power requirements for the SI pumps.

2.2 Licensee's Proposed Changes

The licensee proposed to revise TS 3/4.5.2 to correct nonconservative TS requirements and make editorial changes to the TSs for consistency and clarity.

The licensee proposed to correct TS 3/4.5.2, Action 'a' such that the 72-hour allowed outage time will not apply to LCO 3.5.2.d when the suction flow path from the RWST is inoperable. The licensee proposed a new Action 'h' to restore the suction flow path from the RWST to operable status within 1 hour or be in at least hot standby within the next 6 hours and in hot shutdown within the following 6 hours. Action 'a' would also be revised to clarify that it is only applicable to RHR heat exchangers and the suction flow paths from the containment sump. A provision in

SR 4.5.2.a permits restoration of power to listed isolation valves for up to 24 hours for temporary operation of the isolation valves for surveillance and maintenance. The licensee proposed to change this provision to state 1 hour instead of 24 hours to address this nonconservatism.

The licensee also proposed several editorial changes to provide consistency and clarity. The licensee proposed to remove the word OPERABLE from LCO 3.5.2.a, b, c, d, and e and add the phrase "flow paths" to LCO 3.5.2.a and c. The licensee proposed to revise Actions 'c' and 'e' to include the phrases, "or its associated discharge flow path," and "or flow path." The licensee proposed to revise Action 'd' to include the phrases, "or their associated discharge flow paths," and "or flow paths." The licensee proposed to revise Action 'g' to include the phrase, "or its associated discharge flow path." The licensee proposed to revise Note * to remove the word, "OPERABLE," and to add the phrase, "flow paths." The licensee proposed to revise Note # to replace the text, "EDG's," with "diesel generators."

Section 3 of this safety evaluation describes the proposed changes in additional detail.

2.3 Regulatory Review

The NRC staff considered the following regulatory requirements, guidance, and plant-specific licensing and design basis information during its review of the licensee's request.

The Commission's regulatory requirements related to the content of TSs are set forth in Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.36, "Technical specifications." Section 50.36(b) states that each license authorizing operation of a production or utilization facility will include TSs that will be derived from the analyses and evaluation included in the safety analysis report, and amendments thereto, submitted pursuant to 10 CFR 50.34. The Commission may include such additional TSs as the Commission finds appropriate.

Paragraph 50.36(c) of 10 CFR states that the TSs will include items in the following categories: (1) safety limits, limiting safety system settings, and limiting control settings; (2) LCOs; (3) SRs; (4) design features; and (5) administrative controls.

Paragraph 50.36(c)(2)(i) of 10 CFR defines LCOs as the lowest functional capability or performance levels of equipment required for safe operation of a facility and requires that when an LCO of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the TSs until the condition can be met.

Paragraph 50.36(c)(3) of 10 CFR states that SRs are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the LCOs will be met.

NRC Administrative Letter (AL) 98-10, "Dispositioning of Technical Specification that are Insufficient to Assure Plant Safety," dated December 29, 1998,² provides the NRC's staff

² ADAMS Legacy Library Accession No. 9812280273. The document is also available from the NRC's public Web site at: <http://www.nrc.gov/reading-rm/doc-collections/gen-comm/admin-letters/1998/al98010.html>.

expectations regarding the correction of facility TSs when they are found to contain nonconservative values or specify incorrect actions. NRC Administrative Letter 98-10 states that the discovery of an improper or inadequate TS value or required action is considered a degraded or nonconforming condition. Additional guidance is in NRC Regulatory Issue Summary (RIS) 2005-20, dated April 16, 2008.³ The NRC considers imposing administrative controls in response to the improper or inadequate TS as an acceptable short-term corrective action. The NRC staff expects licensees to submit an amendment request in a timely fashion following the imposition of such administrative controls.

3.0 TECHNICAL EVALUATION

The staff reviewed the proposed changes for compliance with 10 CFR 50.36. In general, licensees must fully describe and justify the desired TS changes. The staff then makes a determination as to whether the proposed changes maintain adequate safety. Licensees may revise the TSs provided that plant-specific review supports a finding of continued adequate safety because: (1) the change is editorial, administrative or provides clarification (i.e., no requirements are materially altered), (2) the change is more restrictive than the licensee's current requirement, or (3) the change is less restrictive than the licensee's current requirement, but nonetheless still affords adequate assurance of safety when judged against current regulatory standards. Changes that result in relaxation (less restrictive condition) of current TS requirements require detailed justification.

3.1 Changes to LCO 3.5.2 and its Footnotes

In its application, the licensee proposed editorial changes to LCO 3.5.2 and two of its footnotes to add clarity and consistency throughout TS 3/4.5.2. The licensee proposed revising the list of required equipment LCO 3.5.2 as follows, with deletions denoted in strikethrough text and additions denoted in underlined and italicized text:

- 3.5.2 The following Emergency Core Cooling System (ECCS) equipment and flow paths shall be OPERABLE:
- a. Four ~~OPERABLE~~-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 ~~OPERABLE~~-RHR heat exchangers,
 - c. Two ~~OPERABLE~~-RHR pumps with discharge *flow paths* aligned to the RCS cold legs,
 - d. An ~~OPERABLE~~-flow path capable of taking suction from the refueling water storage tank as defined in Specification 3.5.4, and

³ ADAMS Accession No. ML073531473.

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

The licensee proposed revising two of the four footnotes on TS page 3/4 5-3 as follows, with deletions denoted in strikethrough text and additions denoted in underlined and italicized text:

*Only three ~~OPERABLE~~ 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.

[#]Inoperability of the required ~~EDG's~~ *diesel generators* does not constitute inoperability of the associated Safety Injection pumps.

The licensee proposed to delete term, "OPERABLE," from LCOs 3.5.2.a, b, c, d, and e and footnote * where required ECCS equipment is described. The statement that introduces the list of required ECCS equipment includes the requirement that they must be OPERABLE. The term, "OPERABLE," which describes the associated diesel generators in LCO 3.5.2.a remains unchanged. The NRC staff concludes that the deletions are editorial and do not change current requirements because the term, "OPERABLE," in LCOs 3.5.2.a, b, c, d, and e and Footnote * is redundant to the introductory LCO statement, which states, "The following [ECCS] equipment and flow paths shall be OPERABLE."

The licensee also proposed to add the term, "flow paths," to the descriptions in LCOs 3.5.2.a and c and footnote * to specifically include them in the operability requirement. This change clarifies the equipment for which the LCO is applicable and is consistent with the introductory LCO statement. The NRC staff concludes that these changes are editorial and do not change current requirements.

The licensee proposed revising footnote # by replacing the acronym, "EDG's," which stands for emergency diesel generators, with "diesel generators," for consistency with the LCOs, Actions, and footnotes where the words diesel generators are used in TS 3/4.5.2. The acronym, "EDG's," is neither defined nor used elsewhere in TS 3/4.5.2. The NRC staff concludes that this change is editorial, does not change current requirements, and provides consistency within TS 3/4.5.2 because footnote # is the only place within TS 3/4.5.2 where the acronym, "EDG's," is used.

The NRC staff finds that the changes to LCO 3.5.2 and footnotes * and # are acceptable because they clarify and maintain current licensing basis requirements and meet 10 CFR 50.36.

3.2 Changes to TS 3/4.5.2, Actions 'c,' 'd,' 'e,' and 'g'

In its application, the licensee proposed changes to Actions 'c,' 'd,' 'e,' and 'g' to add clarity and consistency throughout TS 3/4.5.2. The licensee proposed revising Actions 'c' and 'd' to include the discharge flow path associated with each SI pump consistent with LCO 3.5.2.a. The licensee proposed revising Action 'e' to include the discharge flow path associated with each SI pump consistent with LCO 3.5.2.a as modified by footnote * for one unit in MODES 1, 2, or 3 and the other unit in MODES 4, 5, or 6. The licensee proposed revising Action 'g' to include the

discharge flow path associated with each RHR pump consistent with LCO 3.5.2.c. The proposed changes are as follows, with additions denoted by underlined and italicized text:

- 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.⁴
- d. With two of the four required Safety Injection pumps or their associated discharge flow paths inoperable and the opposite unit in MODE 1, 2, or 3, restore one of the two inoperable pumps or flow paths to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 12 hours and in HOT SHUTDOWN within the following 6 hours. This ACTION applies to both units simultaneously.
- e. With one of the three required Safety Injection pumps or its associated discharge flow path inoperable and the opposite unit in MODE 4, 5, or 6, restore the pump or flow path 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.
- g. With an ECCS subsystem inoperable due to an RHR pump or its associated discharge flow path being inoperable, restore the inoperable RHR pump or its associated discharge flow path to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

The NRC staff concludes that these changes are acceptable because they meet 10 CFR 50.36, clarify and maintain current licensing basis requirements, and are consistent with their associated LCOs.

3.3 Changes to TS 3/4.5.2, Action 'a' and SR 4.5.2.a, and New Action 'h'

Amendments 101 and 95 issued for Turkey Point 3 and 4 on February 22, 1984,⁴ added valves 863A and 863B to the existing list of valves required to have their power removed. These amendments also changed the provision to allow restoration of power for a limited time to comply with the TS SR. The temporary period of 24 hours was unchanged; the change only identified that temporary restoration of power may be necessary under limited circumstances to provide flexibility in the surveillance and maintenance of the valves. In its application, the licensee stated that the provision was necessary because the Control Room did not receive positive position indication for valves whose power has been removed. If the position of one of these valves were to be changed at some time after power was removed, then the Control room would have no positive indication of the realignment. In its application, the licensee stated that

⁴ ADAMS Accession No. ML013410472.

plant modifications were implemented as described in Amendments 101 and 95 in order to provide for single continuous position indication in the Control Room.

The nonconservative aspect of TS 3/4.5.2 is applicable to a portion of the RWST suction piping common to both ECCS trains and subsystems. The Turkey Point 3 and 4 ECCS configuration has common suction piping from the RWST such that failure of an isolation valve could render both SI and/or RHR trains inoperable. Isolation valves MOV 3/4 864A/B for the ECCS suction flow path from the RWST are in series such that the misposition of either valve would result in the complete loss of suction flow path from the RWST. Similarly, isolation valves MOV 3/4-862A/B for the RHR suction flow path to the RWST are in series and downstream of ECCS isolation valves such that the misposition of any one of the four valves would result in loss of suction to both RHR pumps. The licensee determined that this TS is nonconservative because the loss of the suction flow path from the RWST is a loss of safety function and places Turkey Point 3 and 4 in a condition outside of its accident analysis; therefore, the licensee is required to initiate shutdown within 1 hour in accordance with LCO 3.0.3. However, the current TS 3/4.5.2 Action statements allow the licensee up to 72 hours to return the flow path to OPERABLE status before taking steps to shut down. Therefore, consistent with AL 98-10, the licensee proposed changes to Action 'a' and SR 4.5.2.a and a new Action 'h' to address this nonconservative TS.

Action 'a' is applicable to the required ECCS components or flow paths except for inoperable SI pumps or an inoperable RHR pump. In its application, the licensee proposed to revise Action 'a' to exclude an inoperable suction flow path from the RWST by providing actions specific for one RHR heat exchanger or suction flow path from the containment sump being inoperable. The licensee proposed a new Action 'h' for an inoperable suction flow path from the RWST to either restore operability within 1 hour or place the affected unit in the lowest applicable mode (i.e., HOT SHUTDOWN) for which TS 3/4.5.2 is no longer applicable. In its application, the licensee stated that together, these two changes address the current nonconservative Action 'a' requirements for a suction flow path from the RWST.

In its application, the licensee also proposed changes to the provision under the list of valves in SR 4.5.2.a to address the nonconservative TS. The licensee proposed to permit power restoration to the valves for a period not to exceed 1 hour (vs. 24 hours) in the event that the continuous valve position indication is unavailable in the Control Room. The licensee stated that this is consistent with the new Action 'h' that is proposed in the application.

The licensee proposed to revise Action 'a' as follows, with deletions denoted by strikethrough text and additions denoted by underlined and italicized text:

- a. ~~With any one of the required ECCS components or flow paths~~ *RHR heat exchanger or suction flow path from the containment sump* inoperable, ~~except for inoperable Safety Injection Pump(s) or an inoperable RHR pump,~~ restore the inoperable component *RHR heat exchanger* or 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.

The licensee proposed a new Action 'h' for LCO 3.5.2.d that would state:

- h. With the suction flow path from the refueling water storage tank inoperable, restore the suction flow path to OPERABLE status within 1 hour or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

The licensee proposed to revise the provision in SR 4.5.2.a as follows, with deletions denoted by strikethrough text and additions denoted by underlined and italicized text:

To permit ~~temporary operation of these valves~~ positive valve position indication for surveillance or maintenance purposes in the event that continuous valve position indication is unavailable in the control room, power may be restored to these valves for a period not to exceed 24 hours.

The revision to Action 'a' relocates the requirements for an inoperable suction flow path from the RWST to a new Action 'h' to address a condition outside of the accident analysis for the ECCS. The past licensing actions for TS 3/4.5.2 did not address the ECCS being in a condition outside of the accident analysis when the RWST suction flow path is inoperable. Therefore, the staff finds that revising the action statements as described above would serve to address this nonconservatism in the TS. By revising Action 'a' and adding Action 'h,' the licensee would promptly address the loss of a suction flow path from the RWST to the ECCS and make conservative preparation for entering shutdown actions. The time of 1 hour to restore operability of the suction flow path from the RWST is consistent with the requirement in Turkey Point TS LCO 3.0.3 to initiate action within 1 hour to place the applicable units in the specified modes when an LCO is not met. When the unit reaches HOT SHUTDOWN (i.e., MODE 4), the unit has exited the mode of applicability for LCO 3.5.2. The staff concludes that the combined changes to Action 'a' and the new Action 'h' are acceptable because they meet 10 CFR 50.36(c)(2)(i) and are more restrictive changes that only allow continued operation for 1 hour instead of 72 hours and 14 days, respectively, if a suction flow path from the RWST becomes inoperable.

SR 4.5.2.a currently allows the temporary operation of the valves listed in the SR and power to be restored to them for a period of 24 hours. This power restoration provision in the SR is for positive valve position indication in the Control Room. The normal condition of these valves during the applicable modes is open and power removed. With power restored to the valves, it is possible to misalign one of the valves with no positive indication of the misalignment in the Control Room. The proposed change would reduce the amount of time that power is supplied to the valves from 24 hours to 1 hour. The NRC staff concludes that the proposed change to the time limit in this SR is consistent with the new Action 'h' requirement to restore operability of a suction flow path from the RWST within 1 hour. The staff concludes that the change to the SR 4.5.2 provision meets 10 CFR 50.36 and is more restrictive because the amount of time power can be restored to the valves is reduced from 24 hours to 1 hour. Therefore, the NRC staff finds the proposed changes to the SR are acceptable and correct a nonconservative TS.

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 October, 16, 2015,⁵ 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 the installation or use of facility components located within the restricted area as defined in 10 CFR Part 20. 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 that the amendments involve NSHC, and there has been no public comment on such finding published in the FR on March 3, 2015 (80 FR 11478). 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

Based on the aforementioned considerations, the NRC staff concluded 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 Contributors: Davida K. Cunanan
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Date: November 9, 2015

⁵ The NRC staff notified the State official by telephone and by e-mail. The e-mail is in ADAMS under Accession No. ML15289A207.

M. Nazar

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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,

/RA/

Audrey L. Klett, 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. 267 to DPR-31
2. Amendment No. 262 to DPR-41
3. Safety Evaluation

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*by memorandum **by email

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