

August 14, 2015

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

SUBJECT: ST. LUCIE PLANT, UNIT NOS. 1 AND 2 - ISSUANCE OF AMENDMENTS
REGARDING TECHNICAL SPECIFICATION CHANGE TO REMOVE REACTOR
COOLANT SYSTEM CHEMISTRY REQUIREMENTS AND RELOCATE TO
LICENSEE-CONTROLLED DOCUMENTS (TAC NOS. MF4633 AND MF4634)

Dear Mr. Nazar:

The U.S. Nuclear Regulatory Commission (NRC or the Commission) has issued the enclosed Amendment Nos. 225 and 175 to Renewed Facility Operating License Nos. DPR-67 and NPF-16 for the St. Lucie Plant, Unit Nos. 1 and 2, respectively. These amendments consist of changes to the Technical Specifications in response to Florida Power & Light Company's application dated August 8, 2014.

The amendments remove TS 3/4.4.7, "Chemistry," from the TSs and require inclusion of those specifications in the Updated Final Safety Analysis Report, which the licensee is required to control by the provisions set forth in Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.59, "Changes, tests, and experiments." The removal of TS 3/4.4.7 is consistent with the requirements in 10 CFR, Section 50.36, "Technical specifications."

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 for

Farideh E. Saba, Senior Project Manager
Plant Licensing Branch II-2
Division of Operator Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-335 and 50-389

Enclosures:

1. Amendment No. 225 to DPR-67
2. Amendment No. 175 to NPF-16
3. Safety Evaluation

cc w/enclosures: Distribution via Listserv

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ADAMS Accession No.: ML15161A442

*by e-mail

**by memorandum

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NAME	RElliott	GKulesa	STurk	SHelton	FSaba (AKlett for)
DATE	06/18/15	01/29/15	08/7/15	08/14/15	08/14/15

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FLORIDA POWER AND LIGHT COMPANY

DOCKET NO. 50-335

ST. LUCIE PLANT UNIT NO. 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 225
Renewed License No. DPR-67

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Florida Power & Light Company (FPL, the licensee), dated August 8, 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 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.

Enclosure 1

2. Accordingly, Renewed Facility Operating License No. DPR-67 is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and by amending paragraph 3.B to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 225, are hereby incorporated in the renewed license. FPL shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 60 days. Implementation of the amendment shall also include revision of the Updated Final Safety Analysis Report as described in the licensee's letter dated August 8, 2014.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Shana R. Helton, Chief
Plant Licensing Branch II-2
Division of Operator Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Renewed Facility
Operating License and
Technical Specifications

Date of Issuance: August 14, 2015

ATTACHMENT TO LICENSE AMENDMENT NO. 225
TO RENEWED FACILITY OPERATING LICENSE NO. DPR-67
DOCKET NO. 50-335

Replace Page 3 of Renewed Operating License DPR-67 with the attached Page 3.

Replace the following pages of Appendix A, Technical Specifications, with the attached pages. The revised pages are identified by amendment number and contains a vertical line indicating the area of change.

Remove Page

V
3/4 4-15
3/4 4-16

Insert Page

V
3/4 4-15
3/4 4-16

FLORIDA POWER AND LIGHT COMPANY

DOCKET NO. 50-389

ST. LUCIE PLANT, UNIT NO. 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 175
Renewed License No. NPF-16

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Florida Power & Light Company (FPL, the licensee), dated August 8, 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 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.

Enclosure 2

2. Accordingly, Renewed Facility Operating License No. NPF-16 is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and by amending paragraph 3.B to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 175, are hereby incorporated in the renewed license. FPL shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 60 days. Implementation of the amendment shall also include revision of the Updated Final Safety Analysis Report as described in the licensee's letter dated August 8, 2014.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Shana R. Helton, Chief
Plant Licensing Branch II-2
Division of Operator Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Renewed Facility
Operating License and
Technical Specifications

Date of Issuance: August 14, 2015

ATTACHMENT TO LICENSE AMENDMENT NO. 175
TO RENEWED FACILITY OPERATING LICENSE NO. NPF-16
DOCKET NO. 50-389

Replace Page 3 of Renewed Operating License NPF-16 with the attached Page 3.

Replace the following pages of Appendix A, Technical Specifications, with the attached pages. The revised pages are identified by amendment number and contain a vertical line indicating the area of change.

Remove Page

VI
XXIV
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3/4 4-24

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VI
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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NOS. 225 AND 175
TO RENEWED FACILITY OPERATING LICENSE NOS. DPR-67 AND NPF-16
FLORIDA POWER AND LIGHT COMPANY
ST. LUCIE PLANT, UNIT NOS. 1 AND 2
DOCKET NOS. 50-335 AND 50-389

1.0 INTRODUCTION

By application dated August 8, 2014 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML14225A654), Florida Power & Light Company (the licensee) submitted license amendment requests for the St. Lucie Plant, Unit Nos. 1 and 2 (St. Lucie 1 and 2), to remove reactor coolant system (RCS) chemistry requirements from Technical Specifications (TSs) and relocate them to licensee controlled documents. The licensee requested to eliminate the TS 3/4.4.7, "Chemistry," from the TSs and relocate the requirements to the Updated Final Safety Analysis Report (UFSAR). The U.S. Nuclear Regulatory Commission (NRC) staff's proposed no significant hazards consideration (NSHC) for these amendments was published in the *Federal Register* (FR) on October 28, 2014 (79 FR 64225).

2.0 REGULATORY EVALUATION

2.1. Description of the St. Lucie 1 and 2 Design Basis and Operation regarding RCS Chemistry

Section 5.2.3.4, "Coolant Chemistry," of the St. Lucie 1 UFSAR states that control of RCS chemistry is a function of the chemical and volume control system (CVCS) and that all wetted RCS surfaces are compatible with the coolant water chemistry. St. Lucie 1 UFSAR Table 9.3-8, "Reactor Coolant and Reactor Makeup Water Chemistry," specifies the reactor coolant chemistry and purity limits to be maintained. The chemistry and purity of the reactor coolant are controlled to ensure: the plant is accessible for maintenance and operation without excessive radiation exposure to the operating personnel; long-term operation of the plant is achieved without excessive fouling of heat transfer surfaces; and the corrosion rate of the materials in contact with the reactor coolant is kept at a minimum.

Section 5.2.3.2.1, "Reactor Coolant Chemistry," of the St. Lucie 2 UFSAR states that controlled water chemistry is maintained within the RCS, control of the reactor coolant chemistry is the function of the CVCS, and that water chemistry limits applicable to the RCS are given in Subsection 9.3.4. Section 9.3.4.2.1.4, "Chemistry and Purity Control," of the St. Lucie 2 UFSAR

states that during normal operations and during plant shutdowns, the chemistry and purity of the reactor coolant are controlled to provide: minimum reactor plant radiation levels to permit ready access for plant maintenance and operation; avoidance of corrosion and excessive fouling of heat transfer surfaces; minimum corrosion rate of materials in contact with reactor coolant; and a coordinated Lithium-Boron control program. Table 9.3-5, "Reactor Coolant and Primary Water Chemistry," describes limits for RCS chemistry parameters.

St. Lucie 1 and 2 TS 3/4.4.7 contains a limiting condition for operation (LCO), which states that during all modes of operation, the RCS chemistry shall be maintained within the steady-state and transient limits provided in this TS. This TS also contains action statements for the licensee to follow when those limits are not met. This TS also contains a surveillance requirement for determining whether RCS chemistry is within the TS limits.

The TS Bases for TS 3/4.4.7, which are contained in the licensee's letters dated May 7, 2014 (ADAMS Accession No. ML14133A008), for St. Lucie 1 and October 17, 2014 (ADAMS Accession No. ML14302A265), for St. Lucie 2 state (differences between the units' TS bases are noted in parentheses):

The limitations on [RCS] chemistry ensure that corrosion of the [RCS] is minimized and reduce(s) the potential for [RCS] leakage or failure due to stress corrosion. Maintaining the chemistry within the Steady State Limits provides adequate corrosion protection to ensure the structural integrity of the [RCS] over the life of the plant. The associated effects of exceeding the oxygen, chloride and fluoride limits are time and temperature dependent. Corrosion studies show that operation may be continued with contaminant concentration levels in excess of the Steady State Limits, up to the Transient Limits, for the specified limit(ed) time intervals without having a significant effect on the structural integrity of the [RCS]. The time interval permitting continued operation within the restrictions of the Transient Limits provides time for taking corrective actions to restore the contaminant concentrations to within the Steady State Limits.

The surveillance requirements provide adequate assurance that concentrations in excess of the limits will be detected in sufficient time to take corrective action.

2.2 Regulatory Review

The licensee requested to delete TS 3/4.4.7 from the TSs. The licensee also requested that these requirements be relocated to the UFSAR and be controlled in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.59, "Changes, tests, and experiments." 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.

Section 50.36, "Technical specifications," of 10 CFR contains the requirements for items that must be in the TSs. Paragraph 50.36(c)(2)(ii) of 10 CFR states that a TS LCO of a nuclear reactor must be established for each item meeting one or more of the following criteria:

Criterion 1. Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary.

Criterion 2. A process variable, design feature, or operating restriction that is an initial condition of a design-basis accident (DBA) or transient analysis that either assumes the failure of, or presents a challenge to the integrity of a fission product barrier.

Criterion 3. A structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.

Criterion 4. A structure, system, or component which operating experience or probabilistic risk assessment has shown to be significant to public health and safety.

In the FR notice that announced the final rulemaking that added these four criteria to 10 CFR 50.36 (60 FR 36953; July 19, 1995), the NRC staff stated that the rule codifies criteria for determining the content of TSs, and that each licensee covered by these regulations may voluntarily use the criteria as a basis to propose the relocation of existing TSs that do not meet any of the criteria from the facility license to licensee-controlled documents. The staff also stated in this FR notice that related surveillance requirements and actions would be retained for each LCO that remains in the TSs.

In its letter dated May 9, 1988, (ADAMS Accession Number ML11264A057) from the Director of the Office of Nuclear Reactor Regulation, Thomas E. Murley, to Walter S. Wilgus of the Babcock and Wilcox Owners Group, the NRC staff documented its conclusions as to which specifications must be retained in the Standard Technical Specifications (STSs) and which specifications could be relocated to other licensee-controlled documents, based on the staff's review of the Commission's Interim Policy Statement on Technical Specification Improvements, dated February 6, 1987 (52 FR 3788). Appendix B, "Staff Review of Nuclear Steam Supply System Vendor Owners Groups' Application of the Commission's Interim Policy Statement," of the May 9, 1988, letter's enclosure lists Westinghouse STS LCO 3.4.7, "Chemistry," as an LCO that may be relocated to licensee-controlled documents.

Paragraph 50.59(c)(1) states that a licensee can make changes in the facility or procedures as described in the UFSAR and conduct tests or experiments not described in the UFSAR without obtaining a license amendment pursuant to 10 CFR 50.90 if none of the criteria in Paragraph 50.59(c)(2) are met. Paragraph 50.59(c)(3) of 10 CFR states that the UFSAR is considered to include FSAR changes resulting from evaluations performed pursuant to 10 CFR 50.59 and analyses performed pursuant to 10 CFR 50.90 since submittal of the last FSAR update pursuant to 10 CFR 50.71.

3.0 TECHNICAL EVALUATION

In its application dated August 8, 2014, the licensee requested to delete TS 3/4.4.7 from the TSs. The NRC staff compared the proposed deletion of TS 3/4.4.7 against the regulatory requirements of 10 CFR 50.36(c) and the guidance provided in the staff's letter dated May 9, 1988. TS 3/4.4.7 provides limits on the oxygen, chloride, and fluoride content in the RCS to minimize corrosion. Maintaining chemistry parameters within limits provides protection from corrosion, which reduces the potential for RCS leakage or failure caused by corrosion mechanisms. Chemistry control can minimize corrosion over the long term, and inservice inspection of components can identify corrosion before significant degradation occurs.

Section 50.36 of 10 CFR, "Technical specifications," contains the requirements for items that must be in the TSs. Paragraph 50.36(c)(2)(ii) provides four criteria for determining when a TS LCO must be established. The NRC staff reviewed the current RCS Chemistry TS against each of these four criteria to determine whether this TS needs to continue to be included in the TSs. Criterion 1 does not apply to TS 3/4.4.7. RCS chemistry limits are not related to installed instrumentation used to detect excessive RCS leakage. Therefore, the RCS chemistry limits do not meet Criterion 1. With respect to Criterion 2, the RCS chemistry limits are not a process variable, design feature, or operating restriction that is an initial condition of a DBA or transient analysis that either assumes the failure of, or presents a challenge to, the integrity of a fission product barrier. Therefore, the RCS chemistry limits do not satisfy Criterion 2. With respect to Criterion 3, the RCS chemistry limits are not a structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a DBA or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. Therefore, the RCS chemistry limits do not satisfy Criterion 3. Regarding Criterion 4, the RCS chemistry limits are not a structure, system, or component in which operating experience or probabilistic risk assessment has shown to be significant to public health and safety. Therefore, the RCS chemistry limits do not meet Criterion 4.

Because the RCS chemistry limits do not meet any of these criteria, the NRC staff determined that the licensee is not required to retain this LCO and its associated applicability, actions, and surveillance requirements in the TSs. This determination is also consistent with the NRC letter dated May 9, 1988, from Thomas E. Murley, to Walter S. Wilgus. Therefore, the NRC staff determined it is acceptable to delete TS 3/4.4.7 from the TSs.

In its application dated August 8, 2014, the licensee requested that TS 3/4.4.7 be relocated to the UFSAR. The licensee stated that following NRC approval of this proposed amendment, changes to the relocated requirements will be controlled by the provisions of 10 CFR 50.59 to determine if prior NRC approval is required. The NRC staff determined that relocation of the RCS chemistry TS 3/4.4.7 requirements, such as the steady state and transient limits and the limits on oxygen, chloride, and fluoride content in the RCS, into the UFSAR provides reasonable assurance that the licensee will inspect and maintain RCS chemistry to minimize corrosion of reactor coolant surfaces and ensure plant operation conforms with the design bases. Section 50.59 of 10 CFR requires the licensee to determine whether any changes to the chemistry requirements relocated into the UFSAR will need prior NRC approval via a license amendment.

Based on the aforementioned considerations, the NRC staff has concluded that it is acceptable to delete TS 3/4.4.7 from the TSs and relocate such requirements to the UFSAR to be

controlled by the licensee in accordance with 10 CFR 50.59.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, on June 19, 2015, 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) of the proposed issuance of the amendments. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

These amendments change inspection or surveillance requirements or requirements with respect to installation or use of facility components located within the restricted area as defined in 10 CFR Part 20. The NRC staff determined that the amendments involve no significant change in the types, or significant increase in, the amounts of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. By *Federal Register* notice dated October 28, 2014 (79 FR 64225), the Commission previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on these findings. 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 amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributors: Matthew G. Yoder
 Perry Buckberg
 Audrey Klett

Date: August 14, 2015