



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

March 26, 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: ST. LUCIE PLANT, UNIT NOS. 1 AND 2 - ISSUANCE OF AMENDMENTS  
REGARDING THE UNUSUAL EVENT FIRE RELATED EMERGENCY ACTION  
LEVEL SCHEME (EPID L-2018-LLA-0016)

Dear Mr. Nazar:

The U.S. Nuclear Regulatory Commission has issued the enclosed Amendment Nos. 244 and 195 to Renewed Facility Operating License Nos. DPR-67 and NPF-16 for the St. Lucie Plant, Unit Nos. 1 and 2 (St. Lucie 1 and 2), respectively. These amendments consist of changes to the renewed facility operating licenses in response to Florida Power and Light Company's application dated January 31, 2018.

The amendments revise the Emergency Plan for St. Lucie 1 and 2 to adopt a limited scope of the Nuclear Energy Institute 99-01, Revision 6, Emergency Activation Level scheme for the fire-related notification of unusual event.

A copy of the safety evaluation is also enclosed. The Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

A handwritten signature in black ink, appearing to read "Perry H. Buckberg".

Perry H. Buckberg, 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. 244 to DPR-67
2. Amendment No. 195 to NPF-16
3. Safety Evaluation

cc: Listserv



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

FLORIDA POWER & LIGHT COMPANY

DOCKET NO. 50-335

ST. LUCIE PLANT UNIT NO. 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 244  
Renewed License No. DPR-67

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Florida Power & Light Company (FPL, the licensee), dated January 31, 2018, 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, by Amendment No. 244, Renewed Facility Operating License No. DPR-67 is amended as set forth in the licensee's application dated January 31, 2018, and evaluated in the NRC staff's safety evaluation for this amendment.
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

*Michelle L Evans for*

Brian E. Holian, Acting Director  
Office of Nuclear Reactor Regulation

Date of Issuance: March 26, 2018



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

FLORIDA POWER & LIGHT COMPANY

ORLANDO UTILITIES COMMISSION OF  
THE CITY OF ORLANDO, FLORIDA

AND

FLORIDA MUNICIPAL POWER AGENCY

DOCKET NO. 50-389

ST. LUCIE PLANT UNIT NO. 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 195  
Renewed License No. NPF-16

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Florida Power & Light Company (FPL, the licensee), dated January 31, 2018, 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, by Amendment No. 195, Renewed Facility Operating License No. NPF-16 is amended as set forth in the licensee's application dated January 31, 2018, and evaluated in the NRC staff's safety evaluation for this amendment.
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

A handwritten signature in cursive script that reads "Michele Evans for".

Brian E. Holian, Acting Director  
Office of Nuclear Reactor Regulation

Date of Issuance: March 26, 2018



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NOS. 244 AND 195

TO RENEWED FACILITY OPERATING LICENSES NOS. DPR-67 AND NPF-16

FLORIDA POWER AND LIGHT COMPANY, ET AL.

ST. LUCIE PLANT, UNIT NOS. 1 AND 2

DOCKET NOS. 50-335 AND 50-389

1.0 INTRODUCTION

By letter dated January 31, 2018 (Reference 1), Florida Power and Light Company, et al. (the licensee) requested amendments to Renewed Facility Operating License Nos. DPR-67 and NPF-16 for the St. Lucie Plant, Unit Nos. 1 and 2, respectively. The proposed amendments would revise Notification of Unusual Event Emergency Action Level (EAL) HU2, "FIRE within the PROTECTED AREA Not Extinguished Within 15 Minutes of Detection OR EXPLOSION within the PROTECTED Area," which is currently based on the Nuclear Energy Institute (NEI) document NEI 99-01, Revision 5, "Methodology for Development of Emergency Action Levels," dated February 2008 (Reference 2), to one based on NEI 99-01, Revision 6, "Development of Emergency Action Levels for Non-Passive Reactors," dated November 2012 (Reference 3). Revision 6 of NEI 99-01 was endorsed by the U.S. Nuclear Regulatory Commission (NRC, the Commission) in a letter dated March 28, 2013 (Reference 4).

2.0 REGULATORY EVALUATION

The applicable regulations and guidance for the emergency plans are provided in Sections 2.1 and 2.2 as follows:

2.1 Regulations

Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.47, "Emergency plans," sets forth emergency plan requirements for nuclear power reactors. The regulations in 10 CFR 50.47(a)(1)(i) state, in part, that:

. . . no initial operating license for a nuclear power reactor will be issued unless a finding is made by the NRC that there is reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency.

Section 50.47(b) establishes the planning standards that the onsite and offsite emergency response plans must meet for NRC staff to make a finding that there is reasonable assurance that adequate protective measures can and will be taken in the event of a radiological

emergency. Planning Standard (4) of this section requires that onsite and offsite emergency response plans meet the following standard:

A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee, and State and local response plans call for reliance on information provided by facility licensees for determinations of minimum initial offsite response measures.

Section 50.47(b)(4) requires the use of a standard emergency classification and action level scheme, assuring that implementation methods are relatively consistent throughout the industry for a given reactor and containment design while simultaneously providing an opportunity for a licensee to modify its EAL scheme as necessary to address plant-specific design considerations or preferences.

Section IV.B of Appendix E, "Emergency Planning and Preparedness for Production and Utilization Facilities," to 10 CFR Part 50, states, in part:

The means to be used for determining the magnitude of, and for continually assessing the impact of, the release of radioactive materials shall be described, including emergency action levels that are to be used as criteria for determining the need for notification and participation of local and State agencies, the Commission, and other Federal agencies, and the emergency action levels that are to be used for determining when and what type of protective measures should be considered within and outside the site boundary to protect health and safety. The emergency action levels shall be based on in-plant conditions and instrumentation in addition to onsite and offsite monitoring. By June 20, 2012, for nuclear power reactor licensees, these action levels must include hostile action that may adversely affect the nuclear power plant.

## 2.2 Guidance

The EAL development guidance was initially established in Generic Letter (GL) 79-50, "Emergency Plans Submittal Dates," dated October 10, 1979 (Reference 5). This guidance was subsequently revised in NUREG-0654/FEMA-REP-1, Revision 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," November 1980 (Reference 6), which was endorsed by NRC Regulatory Guide (RG) 1.101, Revision 2, "Emergency Planning and Preparedness for Nuclear Power Reactors," October 31, 1981 (Reference 7), as an approach acceptable to the NRC for the development of an EAL scheme.

As industry and regulatory experience was gained with the implementation and use of EAL schemes, the industry issued revised EAL scheme development guidance to reflect lessons learned, numerous of which have been provided to the NRC for review and endorsement as generic (i.e., non-plant-specific) EAL development guidance. Most recently, the industry provided NEI 99-01, Revision 6, to the NRC, which the NRC staff endorsed by letter dated March 28, 2013, as acceptable generic (i.e., not plant-specific) EAL scheme development guidance.

Although the EAL development guidance contained in NEI 99-01, Revision 6, is generic and may not be entirely applicable for some non-passive, large light water reactor (LWR) designs, it

bounds the most typical accident/event scenarios for which emergency response is necessary, in a format that allows for industry standardization and consistent regulatory oversight. Licensees may choose to develop plant-specific EAL schemes using NEI 99-01, Revision 6, with appropriate plant-specific alterations as applicable.

NRC Regulatory Issue Summary (RIS) 2003-18, including Supplements 1 and 2, "Use of NEI 99-01, 'Methodology for Development of Emergency Action Levels'" (Reference 8), also provides guidance for developing or changing a standard EAL scheme. In addition, this RIS and its supplements provide recommendations to assist licensees, consistent with Section IV.B of Appendix E to 10 CFR Part 50, in determining whether to seek prior NRC approval of deviations from the guidance.

In summary, the NRC staff considers NEI 99-01, Revision 6, an acceptable method to develop plant-specific EALs that meet the requirements of Section IV.B of Appendix E to 10 CFR Part 50 and planning standard 10 CFR 50.47(b)(4), with the understanding that licensees may want to develop EALs that differ from the guidance document as allowed in RG 1.101.

### 2.3 NRC Staff Review

The NRC staff verified that the proposed EAL scheme is consistent with the guidance provided in NEI 99-01, Revision 6, to assure that the proposed EAL scheme meets the requirements of Section IV of Appendix E to 10 CFR Part 50 and 10 CFR 50.47(b)(4).

To aid in understanding the nomenclature used in this safety evaluation, the following conventions are used:

- The Recognition Category letter is the first letter for the EAL:
  - H – Hazards and Other Conditions Affecting Plant Safety
- The second letter signifies the emergency classification level:
  - U = Notification of Unusual Event (UE), and
- The number denotes the sequential subcategory designation from the plant-specific EAL scheme.

### 3.0 TECHNICAL EVALUATION

The intent of EAL HU2 is to ensure that an emergency classification is declared based upon the effect that a fire may have on the facility, which would be indicative of a potential degradation of the level of safety of the plant. This EAL is primarily intended to ensure that key emergency response organization members and offsite response organizations are aware of the fire, and post-event damage assessments are promptly implemented. Indications of a protracted fire involving radioactive materials are bounded by Fission Barrier Matrix EALs, as well as the abnormal radiation/radiological effluent EALs.

The licensee chose to modify this EAL by using a site-specific implementation method that uses a modified numbering format other than that provided in the generic EAL scheme development guidance. The NRC staff verified that the numbering, sequencing, formatting and logical progression for this EAL are consistent with the overall EAL scheme development guidance and address the plant-specific implementation strategies provided, and are, therefore, consistent

with a standard EAL scheme, as required by 10 CFR 50.47(b)(4). The NRC staff also verified that the EAL is worded in an unambiguous manner that addresses human factors engineering and user-friendliness concerns, is technically complete for this classification level, addresses completeness and accuracy issues raised in Appendix 1 to NUREG-0654, and uses objective and observable values based on site-specific indications.

The NRC staff has reviewed the technical bases for the proposed EAL change and the licensee's evaluation of the proposed change. The NRC staff has concluded that the proposed change meets the requirements in Section IV.B.1 of Appendix E to 10 CFR Part 50 and planning standard 10 CFR 50.47(b)(4). Therefore, the NRC staff concludes that the licensee's proposed EAL change, as set forth in the licensee's application dated January 31, 2018, is acceptable and provides reasonable assurance that the licensee can and will take adequate protective measures in the event of a radiological emergency in accordance with 10 CFR 50.47(a)(1)(i). Specifically, the staff concludes that the licensee's updated site-specific EAL and technical basis provided by Attachment 2, "Clean Copy of the Proposed St. Lucie EAL Scheme," of the January 31, 2018, application is acceptable for implementation.

#### 4.0 FINAL NO SIGNIFICANT HAZARDS CONSIDERATION

The NRC's regulation in 10 CFR 50.92(c) states that the NRC may make a final determination, under the procedures in 10 CFR 50.91, that a license amendment involves no significant hazards consideration if operation of the facility, in accordance with the amendment, would not: (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety.

An evaluation of the issue of no significant hazards consideration is presented below:

1. Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

The proposed change does not impact the physical configuration or function of plant structures, systems, or components (SSCs) or the manner in which SSCs are operated, maintained, modified, tested, or inspected. No actual facility equipment or accident analyses are affected by the proposed changes.

The change revises the St. Lucie fire-related unusual event EAL scheme to be consistent with the NRC endorsed EAL scheme contained in NEI 99-01, Revision 6, "Methodology for Development of Emergency Action Levels," but does not alter any of the requirements of the Operating License or the Technical Specifications.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The proposed change does not involve a physical alteration of the plant (no new or different type of equipment will be installed). The proposed change does not create any new failure modes for existing equipment or any new limiting single failures. Additionally, the proposed change does not involve a change in the methods governing normal plant operation, and all safety functions will continue to perform as previously assumed in the accident analyses. Thus, the proposed change does not adversely affect the design function or operation of any structures, systems, and components important to safety.

No new accident scenarios, failure mechanisms, or limiting single failures are introduced as a result of the proposed change. The proposed change does not challenge the performance or integrity of any safety-related system.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any previously evaluated.

3. Does the proposed amendment involve a significant reduction in a margin of safety?

Response: No.

The margin of safety associated with the acceptance criteria of any accident is unchanged. The proposed change will have no effect on the availability, operability, or performance of safety-related systems and components. The proposed change will not adversely affect the operation of plant equipment or the function of equipment assumed in the accident analysis.

The proposed amendment does not involve changes to any safety analyses assumptions, safety limits, or limiting safety system settings. The changes do not adversely impact plant operating margins or the reliability of equipment credited in the safety analyses.

Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Based on the above evaluation, the NRC staff concludes that the three standards of 10 CFR 50.92(c) are satisfied. Therefore, the NRC staff has made a final determination that no significant hazards consideration is involved for the proposed amendments and that the amendments should be issued as allowed by the criteria contained in 10 CFR 50.91.

## 5.0 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 February 14, 2018, of the proposed issuance of the amendments. The State official had no comments.

## 6.0 ENVIRONMENTAL CONSIDERATION

The amendments change administrative procedures for the fire-related notification of unusual event. 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 no significant hazards consideration, and there has been no public comment on such finding published in the *Federal Register* on February 14, 2018 (83 FR 6621). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(10). 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.

## 7.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, 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.

## 8.0 REFERENCES

1. Snyder, M. J., Florida Power & Light Company, letter to U.S. Nuclear Regulatory Commission, "License Amendment Request Focused Adoption of NEI 99-01, Revision 6, Unusual Event Fire-Related Emergency Action Level Scheme," dated January 31, 2018 (ADAMS Accession No. ML18031B011).
2. NEI 99-01, Revision 5, "Methodology for Development of Emergency Action Levels," dated February, 2008 (ADAMS Accession No. ML080430552 [package]).
3. NEI 99-01, Revision 6, "Development of Emergency Action Levels for Non-Passive Reactors," dated November 21, 2012 (ADAMS Accession No. ML13091A209 [package]).
4. Thaggard, M., U.S. Nuclear Regulatory Commission, letter to Ms. Susan Perkins-Grew, Nuclear Energy Institute, "U.S. Nuclear Regulatory Commission Review and Endorsement of NEI 99-01, Revision 6, dated November, 2012 (TAC No. D92368)," dated March 28, 2013 (ADAMS Accession No. ML12346A463).
5. U.S. Nuclear Regulatory Commission, Generic Letter 79-50, "Emergency Plans Submittal Dates," dated October 10, 1979 (ADAMS Accession No. ML031320278).
6. U.S. Nuclear Regulatory Commission and Federal Emergency Management Agency, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," NUREG-0654/FEMA-REP-1, Revision 1, dated November 1980 (ADAMS Accession No. ML040420012).

7. U.S. Nuclear Regulatory Commission, "Emergency Planning and Preparedness for Nuclear Power Reactors," Regulatory Guide 1.101, Revision 2, October 31, 1981 (ADAMS Accession No. ML090440294), Revision 3, August 31, 1992 (ADAMS Accession No. ML003740302), and Revision 4, dated July 31, 2003 (ADAMS Accession No. ML032020276).
8. U.S. Nuclear Regulatory Commission, Regulatory Issue Summary 2003-18, "Use of NEI-99-01, 'Methodology for Development of Emergency Action Levels,' Revision 4, dated January 2003," dated October 8, 2003, including Supplement 1 dated July 13, 2004, and Supplement 2 dated December 12, 2005 (ADAMS Accession Nos. ML032580518, ML041550395, and ML051450482, respectively).

Principal Contributor: Raymond Hoffman, NSIR

Date: March 26, 2018

SUBJECT: ST. LUCIE PLANT, UNIT NOS. 1 AND 2 - ISSUANCE OF AMENDMENTS REGARDING THE UNUSUAL EVENT FIRE RELATED EMERGENCY ACTION LEVEL SCHEME (EPID L-2018-LLA-0016) DATED MARCH 26, 2018

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**ADAMS Accession No. ML18046A712**

\*by e-mail

\*\*by memorandum

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