



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

July 30, 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 - REQUEST FOR ADDITIONAL INFORMATION ON LICENSE AMENDMENT REQUEST TO ADOPT NATIONAL FIRE PROTECTION ASSOCIATION STANDARD 805, "PERFORMANCE-BASED STANDARD FOR FIRE PROTECTION FOR LIGHT WATER REACTOR ELECTRIC GENERATING PLANTS" (TAC NOS. MF1373 AND MF1374)

Dear Mr. Nazar:

By letter dated March 22, 2013, as supplemented by letters dated June 14, 2013, and February 24, March 25, April 25, July 14, August 27, September 10, October 10, 2014, March 10, April 1, and April 20, 2015, Florida Power & Light Company (the licensee, FPL) submitted a license amendment request (LAR) for the St. Lucie Plant, Unit Nos. 1 and 2 (St. Lucie). The proposed amendment requested approval to transition the fire protection licensing basis from Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.48(b) to 10 CFR 50.48(c), National Fire Protection Association [NFPA] Standard 805, "Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants."

The U.S. Nuclear Regulatory Commission (NRC) staff reviewed the information provided by the licensee and participated in an audit at St. Lucie the week of November 18, 2013. By correspondence dated June 7 and December 26, 2013, the NRC staff requested additional information. By letters dated June 14, 2013, and February 24, March 25, April 25, July 14, August 27, September 10, and October 10, 2014, the licensee responded to the staff's requests for additional information (RAI).

At FPL's request, a conference call was held on June 29, 2015, to provide the NRC staff information regarding the status and contents of FPL's next planned NFPA 805 LAR submittal. The NRC staff determined that additional information would be needed in the submittal to complete the review. A draft Probabilistic Risk Assessment (PRA) RAI S01 was e-mailed to the licensee on July 8, 2015, and discussed during a clarification call between the NRC and licensee on July 15, 2015. Mr. William Cross of FPL followed up with a July 16, 2015, e-mail stating that FPL will provide written response to the RAI by not later than August 21, 2015. The enclosure to this letter contains the NRC staff's PRA RAI S01.

M. Nazar

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If you have any questions, please contact me at (301) 415-1447 or farideh.saba@nrc.gov.

Sincerely,

A handwritten signature in black ink, reading "Farideh E. Saba". The signature is written in a cursive, flowing style.

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

Enclosure:
Request for Additional Information

Docket Nos. 50-335 and 50-389

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REQUEST FOR ADDITIONAL INFORMATION
LICENSE AMENDMENT REQUEST TO ADOPT
NATIONAL FIRE PROTECTION ASSOCIATION STANDARD 805,
"PERFORMANCE-BASED STANDARD FOR FIRE PROTECTION
FOR LIGHT WATER REACTOR ELECTRIC GENERATING PLANTS"
FLORIDA POWER AND LIGHT COMPANY
ST. LUCIE PLANT, UNIT NOS. 1 AND 2
DOCKET NOS. 50-335 AND 50-389

By letter dated March 22, 2013 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML13088A173), as supplemented by letters dated June 14, 2013, and February 24, March 25, April 25, July 14, August 27, September 10, October 10, 2014, March 10, April 1, and April 20, 2015 (ADAMS Accession Nos. ML13170A156, ML14070A097, ML14114A458, ML14135A395, ML14198A087, ML14253A216, ML14259A373, ML14296A435, ML15091A628, ML15103A242 and ML15119A025, respectively), Florida Power and Light Company (the licensee) submitted a license amendment request (LAR) for the St. Lucie Plant, Unit Nos. 1 and 2 (St. Lucie). The proposed amendment requested approval to transition the fire protection licensing basis from Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.48(b) to 10 CFR 50.48(c), National Fire Protection Association Standard 805, "Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants."

The U.S. Nuclear Regulatory Commission staff reviewed the information provided by the licensee and determined that it needs additional information for the following Probabilistic Risk Assessment (PRA) Request for Additional Information (RAI) to complete the review.

PRA RAI S01

During a conference call on June 29, 2015, the licensee stated that some newly identified variances from deterministic requirements and lack of breaker coordination failures will be added to the LAR and incorporated into an updated PRA. No other changes to the LAR or the PRA were identified. The licensee further stated that they intend to submit revised Attachments C, G, S, and W. After a review of the previously submitted information, the NRC staff has concluded that the following information is also needed to complete the review of the updated PRA.

- a) Verify the validity of all entries in the table that was provided in the response to PRA RAI 21.b (letter dated October 10, 2014) that summarizes how PRA method issues have been addressed. If any entries change for the updated PRA, submit a new table together with a red-line strike-out version identifying the changes.

Enclosure

- b) Summarize all changes made to the PRA.
- c) The response to PRA 11.m.01.01 (letter dated April 1, 2015) provided the increases in core damage frequency (CDF), Δ CDF, large early release frequency (LERF), and Δ LERF arising from using the high energy arcing fault (HEAF) nonsuppression probability (NSP) instead of the electrical panel NSP. The HEAF NSP was not included in the current Appendix W results. Has the HEAF NSP been incorporated into the updated PRA? If not, provide the CDF, Δ CDF, LERF, and Δ LERF arising from using the HEAF NSP instead of the electrical panel NSP in addition to the new Attachment W.
- d) PRA RAI 19.01 noted that fire initiating event frequencies from Supplement 1 to NUREG/CR-6850 were used. Supplement 1 directs that the use of the Supplement 1 frequencies should be accompanied by a sensitivity study using the frequencies provided in Table 6-1 of NUREG/CR-6850. The response to PRA RAI 19.01 (letter dated April 1, 2015) states that the risk increase estimates in the previous sensitivity study exceeded the acceptance guidelines for some fire areas but that these increases are offset by the risk reduction associated with risk-reduction modifications. Please re-evaluate this sensitivity study with the updated PRA. If the new sensitivity risk results could exceed the acceptance guidelines (i.e., affect the decision being made) even with the risk reductions, discuss additional defense-in-depth measures that can be applied to scenarios within those fire areas that result in the acceptance guidelines being exceeded.

M. Nazar

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If you have any questions, please contact me at (301) 415-1447 or farideh.saba@nrc.gov.

Sincerely,

/RA/

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

Enclosure:
Request for Additional Information

Docket Nos. 50-335 and 50-389

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