



Enclosure 2 contains ~~Security Related information - Withhold under 10 CFR 2.390.~~
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October 10, 2014

L-2014-314
10 CFR 50.90

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555-0001

Re: St. Lucie Units 1 and 2
Docket Nos. 50-335 and 50-389
Response to Request for Additional Information Regarding License Amendment Request for Transition to 10 CFR 50.48(c) - NFPA 805 Performance-Based Standard for Fire Protection for Light Water Reactor Generating Plants (2001 Edition)

References:

1. FPL letter L-2013-099 dated March 22, 2013: Transition to 10 CFR 50.48(c) -NFPA 805 Performance-Based Standard for Fire Protection for Light Water Reactor Generating Plants (2001 Edition)
2. NRC letter dated December 26, 2013: Request for Additional Information on License Amendment Request to Adopt National Fire Protection Association Standard 805 Performance-Based Standard for Fire Protection (TAC Nos. MF 1373 and MF 1374)
3. FPL letter L-2014-056 dated February 24, 2014: 60-Day Response to Request for Additional Information Regarding License Amendment Request for Transition to 10 CFR 50.48(c) - NFPA 805
4. FPL letter L-2014-083 dated March 25, 2014: 90-Day Response to Request for Additional Information Regarding License Amendment Request for Transition to 10 CFR 50.48(c) - NFPA 805
5. FPL letter L-2014-109 dated April 25, 2014: 120-Day Response to Request for Additional Information Regarding License Amendment Request for Transition to 10 CFR 50.48(c) - NFPA 805
6. FPL letter L-2014-203 dated July 14, 2014: Response to Request for Additional Information Regarding License Amendment Request for Transition to 10 CFR 50.48(c) - NFPA 805
7. FPL letter L-2014-270 dated August 27, 2014: Response to Request for Additional Information Regarding License Amendment Request for Transition to 10 CFR 50.48(c) - NFPA 805
8. NRC letter dated September 8, 2014: St. Lucie Plant, Units 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 (TAC Nos. MF1373 and MF1374)

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NRR

Per Reference 1 above, Florida Power and Light Company (FPL) requested an amendment to the Renewed Facility Operating License (RFOL) for St. Lucie Units 1 and 2. The License Amendment Request (LAR) will enable FPL to adopt a new fire protection licensing basis which complies with the requirements in 10 CFR 50.48(a) and (c) and the guidance in Revision 1 of Regulatory Guide (RG) 1.205.

Per References 3, 4, 5, 6 and 7 FPL responded to specific NRC requests for additional information to clarify aspects of the LAR submittal. By letter dated September 8, 2014 (Reference 8), the NRC Staff requested additional information regarding the LAR. The requests were divided into two groups. The enclosures to this letter provide the detailed response to the requests for additional information in the second group.

The information provided in this submittal does not impact the 10 CFR 50.92 evaluation of "No Significant Hazards Consideration" previously provided in FPL letter L-2013-099.

This letter makes new commitments and changes existing commitments. The commitment revisions are included in Enclosure 2 with PRA RAI 01.g.01 as mark-ups to Attachment S, Table S-1, Plant Modifications Committed.

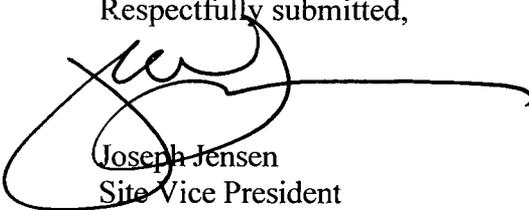
FPL requests that Enclosure 2 to this letter, which contains security-related information, be withheld from public disclosure in accordance with 10 CFR 2.390. Upon removal of Enclosure 2, this document is decontrolled.

Should you have any questions regarding this application, please contact Mr. Eric Katzman, Licensing Manager, at 772-467-7734.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on October 10, 2014.

Respectfully submitted,



Joseph Jensen
Site Vice President
St. Lucie Plant

JJ/rcs

Enclosures: 1. St. Lucie Units 1 and 2 NFPA 805 LAR RAI Response
2. St. Lucie Units 1 and 2 NFPA 805 LAR RAI Response - Withheld
from Public Disclosure

cc: Ms. Cindy Becker, Florida Department of Health
USNRC Regional Administrator, Region II
USNRC Senior Resident Inspector, St. Lucie Units 1 and 2

Enclosure 1
St. Lucie Units 1 and 2 NFPA 805 LAR RAI Response

Response to Request for Additional Information Regarding License Amendment Request
for Transition to 10 CFR 50.48(c) - NFPA 805 Performance-Based Standard for Fire Protection
for Light Water Reactor Generating Plants (2001 Edition)

PSL PRA RAI 02.b.01

PSL PRA RAI 12.01

PSL PRA RAI 02.b.01

In a letter dated March 25, 2014, (ADAMS Accession Number ML14114A459), the licensee responded to PRA RAI 02.b indicating that the Bin 4 frequency is apportioned by the number of main control board (MCB) panels. If so, provide updated risk results as part of the aggregate change-in-risk analysis requested in PRA RAI 21, applying the full Bin 4 frequency to each MCB scenario postulated per the methodology in Appendix L of NUREG/CR-6850.

RESPONSE:

The results submitted with the first round 120 day RAIs, FPL to NRC Letter L-2014-109, dated April 25, 2014, provides results which are based on a revision to the control room analysis to address various RAIs. That update includes the change in main control board ignition frequency to reflect the total Bin 4 frequency for each main control board scenario. Therefore, the results specified in the above referenced letter are based on application of the full Bin 4 frequency to each MCB scenario.

PSL PRA RAI 12.01

In the letter dated February 24, 2014, the licensee's response to PRA RAI 12 confirmed that the conservative estimates of the risk associated with operator action dependencies can result in the failure to credit systems otherwise available to the compliant plant and, thus, produce an artificially conservative compliant plant risk that could be equivalent to, or even greater than, the post-transition plant risk, even in those fire areas without risk-reduction modifications. In an attempt to demonstrate that the resulting nonconservatism has an "exceedingly small" or no impact to delta risk for all fire areas, the response draws upon an example scenario that has negligible risk significance (at approximately $3.3E-09$ /year) and is in a fire area that only contributes about 0.15 percent and 0.3 percent to the total fire CDF and total Δ CDF, respectively. Additionally, the conclusions drawn from the licensee's review of the example cutsets provided do not fully address all conservatisms in the compliant plant associated with operator action dependencies that result in nonconservative delta risk estimates. For example, Cutset No. 1 demonstrates that actions represented by logic model labels CHFPRCTRP and NHFPMANUALR, while they appear to have medium dependency in the post-transition plant, are more conservatively assumed to be completely dependent in the compliant plant. Additionally, Cutset No. 3 shows that the long-term action logic model label JHFPSDCS to initiate shutdown cooling is very conservatively considered in the compliant plant to be completely dependent upon the early action logic model label CHFPRCTRP to trip the reactor coolant pumps on loss of Circulating Cooling Water.

Given that conservatisms in the compliant plant were not shown to be justifiably insignificant, resolve the nonconservatisms in delta risk associated with operator action dependencies for all fire areas, and incorporate this resolution into the integrated analysis requested in PRA RAI 21.

RESPONSE:

The non-conservatism in delta risk introduced by the use of the human reliability analysis (HRA) variant case dependencies for the compliant case are not considered significant. Elimination of these non-conservatisms would require a separate review and development of compliant case human error probability (HEP) dependencies. Development of joint HEPs specifically for the compliant case would require a significant effort which is not likely to result in a significant reduction in the compliant case risk.

The Joint HEP (JHEP) values applied for all combinations were the same for both the variant case and compliant case. The negative delta is related to a compliant case which results in a different JHEP value due to a different combination of HEPs in the compliant case than those in the variant case. A review of cutsets for the compliant case versus the variant case was performed to identify those scenarios for which a JHEP (combination event) was present in the compliant case but not in the variant case. When all such cutsets were summed, the total risk was less than 2.2E-07 (CDF). The impact of using compliant case HEPs, which differ from those found in the variant case, represents less than 2% of the delta risk.

The risk offsets associated with non-VFDR modifications more than offset this potential non-conservatism. Therefore, the minor non-conservatism associated with the use of the variant case JHEPs for the compliant case is more than offset by other conservatisms in the quantification of the compliant case.

Since this issue is applicable to the compliant case and not the variant case it will not impact the post transition baseline risk. Post transition change evaluations will be evaluated on a case by case basis and are not impacted by the methodology used for the development of the NFPA 805 transition compliant case. The change evaluation risk will be based on the "post transition" modified plant configuration evaluated against the baseline risk at the time of evaluation of the applicable change.