September 22, 2022

L-2022-154
10 CFR 54.17

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
11545 Rockville Pike
One White Flint North
Rockville, MD 20852-2746

St. Lucie Nuclear Plant Units 1 and 2
Dockets 50-335 and 50-389
Renewed Facility Operating Licenses DPR-67 and NPF-16

Subject: Subsequent License Renewal Application Revision 1 - Supplement 4

References:

1. FPL Letter L-2021-192 dated October 12, 2021 – Subsequent License Renewal Application – Revision 1 (ADAMS Accession No. ML21285A107)
2. FPL Letter L-2022-043 dated April 7, 2022 – Subsequent License Renewal Application Revision 1 – Supplement 1 (ADAMS Accession No. ML22097A202)
3. FPL Letter L-2022-044 dated April 13, 2022 – Subsequent License Renewal Application Revision 1 – Supplement 2 (ADAMS Accession No. ML22103A014)
4. FPL Letter L-2022-071 dated May 19, 2022 – Subsequent License Renewal Application Revision 1 – Supplement 3 (ADAMS Accession No. ML22139A083)
5. FPL Letter L-2022-075 dated June 13, 2022 – Subsequent License Renewal Application – Aging Management Requests for Additional Information (RAI) Set 1A Response and Request for Confirmation of Information (RCI) Set 1 Response (ADAMS Accession No. ML22164A802)
6. FPL Letter L-2022-081 dated June 30, 2022 – Subsequent License Renewal Application – Aging Management Requests for Additional Information (RAI) Set 1B Response (ADAMS Accession No. ML22181A147)
7. FPL Letter L-2022-108 dated July 11, 2022 – Subsequent License Renewal Application – Aging Management Requests for Additional Information (RAI) Set 2 Response (ADAMS Accession No. ML22192A078)
8. FPL Letter L-2022-115 dated August 9, 2022 – Subsequent License Renewal Application – Aging Management Requests for Additional Information (RAI) Set 3 Response and Submittal of Superseded Response for One Set 2 RAI and One Supplement 1 Attachment (ADAMS Accession No. ML22221A134)
9. FPL Letter L-2022-143 dated September 8, 2022 – Subsequent License Renewal Application – Aging Management Requests for Additional Information (RAI) Set 1A Response (ADAMS Accession No. ML22251A202)

Florida Power & Light Company (FPL), owner and licensee for St. Lucie Nuclear Plant (PSL) Units 1 and 2, has submitted a revised and supplemented subsequent license renewal application (SLRA) for the Facility Operating Licenses for PSL Units 1 and 2 (References 1-9). The attachment to this letter provides a fourth supplement to the SLRA to correct omissions from Table 19-3 (Appendix A2) and Section B.2.2.1.

The attachment includes associated revisions to the SLRA (Enclosure 3 Attachment 1 of Reference 1, as supplemented and revised by References 2 - 10) denoted by ~~strikethrough~~ (deletion) and/or **bold red underline** (insertion) text. Previous SLRA revisions are denoted by **bold black** text. SLRA table revisions are included as excerpts from each affected table.

Should you have any questions regarding this submittal, please contact me at (561) 304-6256 or William.Maher@fpl.com.

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

Executed on the 22nd day of September 2022.

Sincerely,

William Maher

Digitally signed by William Maher
DN: cn=William Maher, o=Nuclear, ou=Nuclear Licensing Projects, email=william.maher@fpl.com, c=US
Date: 2022.09.22 11:36:32 -04'00'

William D. Maher
Licensing Director - Nuclear Licensing Projects
Florida Power & Light Company

Attachment: Supplement 4: Environmentally-Assisted Fatigue

Cc: Regional Administrator, USNRC, Region II
Senior Resident Inspector, USNRC, St. Lucie Plant
Chief, USNRC, Division of New and Renewed Licenses
Senior Project Manager, USNRC, Division of New and Renewed Licenses
Chief, Bureau of Radiation Control, Florida Department of Health

Environmentally-Assisted Fatigue

Affected SLRA Sections: Table 19-3 (Appendix A2), B.2.2.1

SLRA Page Numbers: A2-65, B-25

Description of Change:

As indicated in the response to RAI 4.3.3-2 (ADAMS Accession No. ML22181A147), the PSL Unit 2 spray nozzle transient (also called the spray nozzle transient 17A/B/C) was intended to be included in the St. Lucie Units 1 and 2 Fatigue Monitoring Program and counted during the SPEO. However, this requirement was inadvertently omitted from the revision to SLRA Table 19-3, Item No. 1 of Appendix A2 and Section B.2.2.1. This supplemental response revises SLRA Table 19.3 of Appendix A2 and Enhancement 2 of SLRA Section B.2.2.1 to reflect this SPEO cycle counting requirement.

In addition to the SLRA revisions discussed above, the revised SLRA Table 19.3 of Appendix A2 and enhancement table of SLRA Section B.2.2.1 below include the revisions associated with Attachment 11 of Reference 1, Attachment 10 of Reference 2, Attachments 3 and 4 of Reference 3, and Attachment 5 of Reference 4.

References:

1. FPL Letter L-2022-043 dated April 7, 2022 – Subsequent License Renewal Application Revision 1 **–** Supplement 1 (ADAMS Accession No. ML22097A202)

2. FPL Letter L-2022-075 dated June 13, 2022 – Subsequent License Renewal Application **–** Aging Management Requests for Additional Information (RAI) Set 1A Response (ADAMS Accession No. ML22164A802)

3. FPL Letter L-2022-081 dated June 30, 2022 – Subsequent License Renewal Application **–** Aging Management Requests for Additional Information (RAI) Set 1B Response (ADAMS Accession No. ML22181A147)

4. FPL Letter L-2022-108 dated July 11, 2022 – Subsequent License Renewal Application **–** Aging Management Requests for Additional Information (RAI) Set 2 Response (ADAMS Accession No. ML22192A078)

Associated SLRA Revisions:

SLRA Appendix A2, Section 19.4, commitment No. 1 of Table 19-3 on page A2-65, as updated by Attachment 11 to ADAMS Accession No. ML22097A202, Attachments 3 and 4 to ADAMS Accession No. ML22181A147, and Attachment 5 to ADAMS Accession No. ML22192A078, is revised as follows:

19.4 Subsequent License Renewal (SLR) Commitments List

Table 19-3
List of Unit 2 SLR Commitments and Implementation Schedule

No.	Aging Management Program or Activity (Section)	NUREG-2191 Section	Commitment	Implementation Schedule
1	Fatigue Monitoring (19.2.1.1)	X.M1	Continue the existing PSL Fatigue Monitoring AMP, including enhancement to: a) Update the AMP governing procedure to take action to revise the affected St. Lucie Unit 2 Class 1 piping fatigue analyses before 80-year plant design cycle limits are exceeded, and identify any new break locations (CUF > 0.1) requiring evaluation for impact on essential SSCs, including evaluation for associated dynamic affects (jet impingement, reactive forces and pipe whip, compartment pressure and environmental conditions), as required. b) Update the plant procedure to monitor chemistry parameters that provide inputs to F_{en} factors used in CUF_{en} calculations. c) Update the plant procedure to identify and require monitoring of the 80-year projected plant transients that are utilized as inputs to CUF_{en} calculations. These transients include: • The plant loading/unloading transient, the 10 percent step load increase/decrease transient, and the cold feedwater following hot standby transient. • The primary coolant pump starting/stopping transient. • The auxiliary spray at power 1, auxiliary spray at power 2, and main spray term in cooldown transients. • **The pressurizer spray nozzle transient (also called the spray nozzle transient 17A/B/C).**	No later than 6 months prior to the SPEO, i.e.: PSL2: 10/06/2042

Table 19-3
List of Unit 2 SLR Commitments and Implementation Schedule

No.	Aging Management Program or Activity (Section)	NUREG-2191 Section	Commitment	Implementation Schedule
			d) Update the plant procedure to monitor and track the following transients during the SPEO: • Loss of charging • Loss of letdown • Loss of regenerative heat exchanger (short-term) • Loss of regenerative heat exchanger (long-term) e) Update the plant procedure to identify the corrective action options to take if component specific fatigue limits are approached.	

SLRA Section B.2.2.1, page B-25, as updated by Attachment 11 to ADAMS Accession No. ML22097A202, Attachment 10 to ADAMS Accession No. ML22164A802, and Attachments 3 and 4 to ADAMS Accession No. ML22181A147, is revised as follows:

Enhancements

The PSL Fatigue Monitoring AMP will be enhanced as follows, for alignment with NUREG-2191. The enhancements are to be implemented no later than 6 months prior to entering the SPEO.

Element Affected	Enhancement
1. Scope of Program	Update the AMP governing procedure to take action to revise the affected St. Lucie Unit 2 Class 1 piping fatigue analyses before 80-year plant design cycle limits are exceeded, and identify any new break locations (CUF > 0.1) requiring evaluation for impact on essential SSCs, including evaluation for associated dynamic affects (jet impingement, reactive forces and pipe whip, compartment pressure and environmental conditions), as required.
3. Parameters Monitored or Inspected	Update the AMP governing procedure to monitor the chemistry parameters that provide inputs to F_{en} factors used in CUF_{en} calculations. This chemistry parameter includes reactor coolant dissolved oxygen which is controlled and tracked in accordance with the PSL Water Chemistry (Section B.2.3.2) AMP.
3. Parameters Monitored or Inspected	Update the AMP governing procedure to identify and require monitoring of the 80-year plant design cycles, or projected cycles that are utilized as inputs to component CUF_{en} calculations, as applicable. **These transients include:** • **The plant loading/unloading transient, the 10 percent step load increase/decrease transient, and the cold feedwater following hot standby transient.** • **The primary coolant pump starting/stopping transient.** • **The auxiliary spray at power 1, auxiliary spray at power 2, and main spray term in cooldown transients.** • **The pressurizer spray nozzle transient (also called the spray nozzle transient 17A/B/C).**
3. Parameters Monitored or Inspected	Update the plant procedure to monitor and track the **following** transient**s** during the SPEO**:** • **Loss of charging** • **Loss of letdown** • **Loss of regenerative heat exchanger (short-term)** • **Loss of regenerative heat exchanger (long-term)**

Element Affected	Enhancement
5. Monitoring and Trending	Update the AMP governing procedure to identify the corrective action options if the values assumed for fatigue parameters are approached, transient severities exceed the design or assumed severities, transient counts exceed the design or

Associated Enclosures:

None.