



L-2015-125  
10 CFR 52.3

April 16, 2015

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

Re: Florida Power & Light Company  
Proposed Turkey Point Units 6 and 7  
Docket Nos. 52-040 and 52-041  
Response and Response Schedule to NRC Request for Additional Information  
Letter No. 083 (eRAI 7815) SRP Section 03.08.05 – Foundations

Reference:

1. NRC Letter to FPL dated March 17, 2015 Request for Additional Information Letter No. 083 Related to SRP Section 03.08.05 – Foundations for the Turkey Point Nuclear Plant Units 6 and 7 Combined License Application

Florida Power & Light Company (FPL) provides, as an attachment to this letter, its responses to the Nuclear Regulatory Commission's (NRC) request for additional information (RAI) 03.08.05-4 provided in the referenced letter. The attachment identifies changes that will be made in a future revision of the Turkey Point Units 6 and 7 Combined License Application (if applicable).

Additionally, the NRC requested FPL to respond to the RAIs within 30 days of the date of the referenced letter. If FPL was unable to provide a response within 30 days, NRC requested FPL to provide a schedule to provide the responses. The response to RAI 03.08.05-3 is scheduled to be provided by April 30, 2015.

If you have any questions, or need additional information, please contact me at 561-691-7490.

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

Executed on April 16, 2015.

Sincerely,

William Maher  
Licensing Director – New Nuclear Projects  
WDM/RFB

Attachment: FPL Response to NRC RAI No. 03.08.05-4 (eRAI 7815)

DOGT  
NRO

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cc:

PTN 6 & 7 Project Manager, AP1000 Projects Branch 1, USNRC DNRL/NRO  
Regional Administrator, Region II, USNRC  
Senior Resident Inspector, USNRC, Turkey Point Plant 3 & 4

**NRC RAI Letter No. PTN-RAI-LTR-083**

**SRP Section: 03.08.05-4 – Foundations**

Questions from Structural Engineering Branch 1 (AP1000/EPR Projects) (SEB1)

**NRC RAI Number: 03.08.05-4 (eRAI 7815)**

SRP Section 3.8.5 requires confirmation that the Nuclear Island (NI) remains stable under design basis demands. AP1000 DCD Section 3.4.1.1.1.1, "Waterproofing," states that the waterproofing membrane between the mudmat must provide adequate shear to transfer forces due to seismic loading and that this function is a seismic Category I. The DCD also provides a requirement for the COL applicant to demonstrate that the coefficient of friction (COF) for the waterproofing membrane to be used beneath NI is equal to or greater than 0.55. The staff reviewed Section 14.3.3.4, "Waterproofing Membrane ITAAC," of the FSAR, and noticed that the applicant provided a brief description of the Waterproofing Membrane ITAAC. The applicant stated that, "Site-specific ITAAC for the waterproof membrane will be developed to verify by testing that the mudmat-waterproofing-mudmat interface beneath the Nuclear Island basemat has a minimum coefficient of friction to resist sliding of 0.55." To ensure that the COF of 0.55 is met, the applicant is requested to provide in Appendix B to Part 10 of the FSAR an ITAAC table that describes the design commitment; the inspection, testing or analyses to be performed; and the as-built design criteria of the waterproofing membrane.

**FPL RESPONSE:**

A site-specific ITAAC table describing the design commitment, the inspection, testing, or analyses, and the acceptance criteria for the as-built waterproof membrane to be used beneath the Nuclear Island (NI) basemat will be included in Appendix B to COLA Part 10. Completion of this ITAAC will ensure that the waterproof membrane placed between the mudmats has a minimum coefficient of friction (COF) of 0.55, as discussed in DCD Subsection 3.4.1.1.1.1 and FSAR Subsection 14.3.3.4.

This response is PLANT SPECIFIC.

**References:**

None

**ASSOCIATED COLA REVISIONS:**

The title and text of FSAR Subsection 14.3.3.4 will be revised as follows in a future COLA revision:

**14.3.3.4 Waterproofing Membrane ITAAC**

**The design of the waterproof membrane to be placed between the mudmats beneath the nuclear island basemat is described in DCD Subsection 3.4.1.1.1.1. Site-specific Waterproof Membrane ITAAC for the waterproof membrane will be have been developed to verify by testing address verification that the mudmat-waterproofing-mudmat interface beneath the nuclear island basemat has a minimum coefficient of friction to resist sliding of 0.55.**

The following new non-system based site-specific ITAAC will be included in Appendix B to Part 10 in a future COLA revision:

The following text will be added in COLA Part 10, Appendix B, after the discussion on the Piping Design ITAAC:

**Waterproof Membrane ITAAC**

**The ITAAC for Waterproof Membrane are included in attached Table 3.8-4.**

A new Table 3.8.4 in COLA Part 10, Appendix B, will be added after Table 3.8-3:

**Table 3.8-4  
Waterproof Membrane (Sheet 1 of 1)**

<b>Design Commitment</b>	<b>Inspections, Tests, Analyses</b>	<b>Acceptance Criteria</b>
<b>The friction coefficient to resist sliding is <math>\geq 0.55</math>.</b>	<b>Testing will be performed to confirm that the mudmat-waterproofing-mudmat interface beneath the Nuclear Island basemat has a coefficient of friction to resist sliding of <math>\geq 0.55</math>.</b>	<b>A report exists and documents that the as-built waterproof system (mudmat-waterproofing-mudmat interface) has a coefficient of friction of <math>\geq 0.55</math> as demonstrated through material qualification testing.</b>

**ASSOCIATED ENCLOSURES:**

None