



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

January 5, 2018

FPL submitted the Subsequent License Renewal Application on January 30, 2018 (ADAMS Package Accession No. ML18037A812) therefore, it is no longer necessary to withhold as proprietary.

LICENSEE: Florida Power & Light Company  
FACILITY: Turkey Point Nuclear Generating Units 3 and 4  
SUBJECT: SUMMARY OF CLOSED PRE-APPLICATION TELECONFERENCE HELD ON NOVEMBER 6, 2017, BETWEEN THE U.S. NUCLEAR REGULATORY COMMISSION STAFF AND FLORIDA POWER & LIGHT COMPANY REPRESENTATIVES TO DISCUSS MRP-227, REACTOR VESSEL INTERNALS, NEUTRON FLUENCE CALCULATIONS AND ENVIRONMENTALLY ASSISTED FATIGUE ASSOCIATED WITH THE TURKEY POINT NUCLEAR GENERATING UNITS 3 AND 4, SUBSEQUENT LICENSE RENEWAL APPLICATION

On November 6, 2017, the U.S. Nuclear Regulatory Commission (NRC) staff met with representatives of Florida Power & Light Company in a closed teleconference to discuss the subsequent license renewal application for the Turkey Point Nuclear Generating Units 3 and 4, specifically MRP-227, reactor vessel internals, neutron fluence calculations and environmentally assisted fatigue. The proprietary meeting agenda can be found at the NRC's Agencywide Documents and Access Management System Accession No. ML17320A184, a list of attendees is provided in Enclosure 1, and a summary of the meeting is provided in Enclosure 2.

Sincerely,

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Lois M. James, Project Manager  
License Renewal Project Branch  
Division of Materials and License Renewal  
Office of Nuclear Reactor Regulation

Docket Nos.: 50-250 and 50-251

Enclosures:

1. Attendance List
2. Meeting Summary

cc w/encls: See next page

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ML18081A239

ADAMS Accession No.: ~~ML17360A239~~

\*Concurrence via email

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CLOSED TELECON  
BETWEEN THE NRC STAFF AND FLORIDA POWER & LIGHT COMPANY  
TURKEY POINT NUCLEAR GENERATING UNITS 3 AND 4  
SUBSEQUENT LICENSE RENEWAL APPLICATION – MRP-227, REACTOR VESSEL  
INTERNALS, NEUTRON FLUENCE CALCULATIONS AND ENVIRONMENTALLY ASSISTED  
FATIGUE  
TELECONFERENCE

MEETING ATTENDANCE LIST  
NOVEMBER 6, 2017

PARTICIPANTS

AFFILIATIONS

David Alley	U.S. Nuclear Regulatory Commission (NRC)
Joseph Donoghue	NRC
Carolyn Fairbanks	NRC
Allen Hiser	NRC
Lois James	NRC
Bob Lukes	NRC
James Medoff	NRC
Seung Min	NRC
Benjamin Parks	NRC
Jeffrey Poehler	NRC
Dave Rudland	NRC
Steve Ruffin	NRC
Christopher Sydnor	NRC
On Yee	NRC
Scott Boggs	Florida Power & Light Co. (FPL)
Ray Burski	FPL
Steve Franzone	FPL
Paul Jacobs	FPL
Mark Joseph	FPL
William Maher	FPL
Jay Polavarapu	FPL
Dave Gerber	SIA
Stephen Hale	Enercon
J R Hoffman	Enercon
James V. Wicks	Enercon

CLOSED TELECON  
BETWEEN THE NRC STAFF AND FLORIDA POWER & LIGHT COMPANY  
TURKEY POINT NUCLEAR GENERATING UNITS 3 AND 4  
SUBSEQUENT LICENSE RENEWAL APPLICATION – MRP-227, REACTOR VESSEL  
INTERNALS, NEUTRON FLUENCE CALCULATIONS AND ENVIRONMENTALLY ASSISTED  
FATIGUE

TELECONFERENCE SUMMARY  
NOVEMBER 6, 2017

On May 17, 2017, Florida Power & Light Company (FPL or the applicant) submitted a Notice of Intent (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML17142A036 (non-public, proprietary) and ML17139D442 (public, non-proprietary)) to submit a subsequent license renewal application (SLRA) for Turkey Point Nuclear Generating Unit Nos. 3 and 4 (Turkey Point). This Notice of Intent was submitted as proprietary information. On May 25, 2017, the U.S. Nuclear Regulatory Commission (NRC) staff issued its approval of FPL's request for withholding information from public disclosure (ADAMS Accession Nos. ML17096A477 (non-public, proprietary) and ML17139D441 (public, non-proprietary)).

On November 6, 2017, the NRC staff participated in a pre-application, closed teleconference with FPL to discuss the content of the Turkey Point SLRA, specifically MRP-227, "Materials Reliability Program: Pressurized Water Reactor Internals Inspection and Evaluation Guidelines," reactor vessel internals (RVI), neutron fluence calculations and environmentally assisted fatigue (EAF). The proprietary meeting notice was issued on October 23, 2017 (ADAMS Accession No. ML17296A527).

The applicant began the discussion by explaining that the RVI aging management program (AMP) was developed in accordance with NRC guidance in NUREG-2191, "Generic Aging Lessons Learned for Subsequent License Renewal (GALL-SLR) Report," and NUREG-2192, "Standard Review Plan for Review of Subsequent License Renewal Applications for Nuclear Power Plants." Further, the applicant stated it performed a gap analysis for 60 – 80 years of operation. The main change since the September 6, 2017, meeting (proprietary summary can be found at ADAMS Accession No. ML17348B319) is that the applicant obtained industry generic 80-year neutron fluence data for RVIs. The applicant also indicated that the degradation mechanisms have not changed. Further, the applicant indicated that it did additional screening for fatigue and irradiation-assisted degradation and some additional components have screened in for these degradation mechanisms during the subsequent license renewal (SLR) aging management.

The NRC staff asked if FPL used the staff-approved revision of Material Reliability Program (MRP)-175, "PWR Internals Material Aging Degradation Mechanism Screening and Threshold Values," or the revision that is under development. The applicant stated that it used the NRC staff-approved revision of MRP-175. The applicant stated that Revision 1 to MRP-175 had just been issued and was overly conservative for fatigue screening.

The NRC staff pointed out that there is interim guidance regarding baffle bolts and guide cards. The applicant stated (1) they have performed the required 20 percent sample inspections of the guide cards and have plans to perform 100 percent sample inspections in the future, and (2) they have met the current inspection baffle bolts guidance. The applicant explained that they have not included this guidance in their AMP because the guidance is in flux, however, FPL will capture the final guidance in its AMPs. The NRC staff stated that the information regarding the interim guidance should at least be discussed in the operating experience section of the AMP.

Regarding neutron fluence calculations based on experience from NRC staff review of recent license renewal applications, the applicant explained that Turkey Point's current licensing basis uses WCAP-14040-A, Rev. 4, "Methodology Used to Develop Cold Overpressure Mitigating System Setpoints and RCS Heatup and Cooldown Limit Curves," in its neutron fluence calculations. This same methodology will be use through the time limited aging analysis. The applicant further explained that the Neutron Fluence Monitoring AMP (GALL-SLR AMP X.M2) follows the GALL-SLR Report. The neutron fluence calculations were updated for Turkey Point's extended power uprate (EPU) which was submitted in 2010 (ADAMS Accession No. ML103560167). The NRC staff's safety evaluation for the EPU can be found at ADAMS Accession No. ML11293A359.

Regarding EAF, the applicant stated that they used NURG-6260, "Application of NUREG/CR-5999 Interim Fatigue Curves to Selected Nuclear Power Plant Components, and added all of the ASME components with cumulative use fatigue (CUF) values to identify components with environmental CUF ( $CUF_{EN}$ ) values greater than 1. The applicant identified 12 components with  $CUF_{EN}$  values greater than 1 and completed analyses to reduce the  $CUF_{EN}$  values. The applicant stated that they reduced the  $CUF_{EN}$  values for six of the components to less than one. For the remaining six components with  $CUF_{EN}$  values that remained greater than one, the applicant state that the SLRA will demonstrate that effects of aging on the intended functions of the will be adequately managed for the period of extended operation in accordance with Title 10 of the *Code of Federal Regulations* Section 54.21(c)(1)(iii):

Based on a question from the NRC staff, the applicant stated that they updated the CUFs for each component, they did not bin the components and then update the CUFs. The applicant stated that the methodology for how this was completed is described in the SLRA.

The NRC staff ended the meeting by stating that, while the teleconference was a good discussion, the staff reserves judgement on the application until it is submitted by FPL.