



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

March 29, 2021

LICENSEE: Florida Power and Light Company  
FACILITY: Turkey Point Nuclear Generating, Unit Nos. 3 and 4  
SUBJECT: SUMMARY OF PRE-APPLICATION MEETINGS WITH FLORIDA  
POWER AND LIGHT CONCERNING A PROPOSED DIGITAL  
INSTRUMENTATION AND CONTROL UPGRADE ON TURKEY POINT  
UNITS 3 AND 4 (EPID L-2021-LRM-0007)

On December 9, 2020, and January 13, 2021, partially closed Category 1 public meetings were held between the U.S. Nuclear Regulatory Commission (NRC) and representatives of Florida Power and Light Company (the licensee) via teleconference. The purpose of the partially closed meetings was to discuss the licensing process proposed for the Turkey Point Nuclear Generating Unit Nos. 3 and 4 (TP) digital instrumentation and control (DI&C) license amendment request. The meeting notices and agendas, dated December 9, 2020, and January 13, 2021, are available in the Agencywide Documents Access and Management System (ADAMS) at Accession Nos. ML20344A031 and ML20351A205. A list of attendees is provided as Enclosure 1.

The licensee presented information for both meetings which are available in ADAMS. The slides for the public portion of the meetings can be found under ADAMS Accession Nos. ML20338A047 and ML21011A238.

DECEMBER 9, 2020

The licensee discussed the intent to submit a licensing amendment request for a digital upgrade for Turkey Point Units 3 and 4, using the Tricon Platform approved by the NRC in a safety evaluation dated April 12, 2012 (ADAMS Accession No. ML120900890). The licensee proposed submitting the request in the second quarter of calendar year (CY) 2021 and was looking for approval of a license amendment request to support the installation of a digital upgrade at Turkey Point Unit 3 during the spring outage in CY 2023.

The NRC staff questioned the use of precedent licensing activities given the difference in scope of the proposed process protection system (PPS) modification at Turkey Point and the PPS system used by the pilot plant implementing DI&C-ISG-06, "Licensing Process" Rev. 1 dated January 19, 2011 (ADAMS Accession No. ML110140103). Several differences between the previous PPS upgrade and the proposed PPS upgrade for TP were discussed. The scope of system replacement proposed for TP includes coincidence logic functions that were not part of the precedent PPS upgrade. The licensee indicated that some differences were to account for the older original system at TP as compared to the pilot plant. It was noted that the diverse actuation system (DAS) for Tricon was also going to be different from the pilot plant. The licensee explained that the use of a second platform to perform diverse safety functions was not being considered for the TP modification and that no design decisions for a diverse actuation system had yet been made for this project.

The NRC staff indicated that the licensee's proposal appeared to reflect a late stage implementation request vice the ARP approach, which is intended to support an early stage design approach. Additional questions by the NRC staff associated with the scope of the submittal focused on the potential need for commercial dedication of equipment, the independence or lack thereof of non-safety instrumentation on the modified panels, and the potential impact on the heating, ventilation and air conditioning (HVAC system). The NRC staff questioned the impact physical modification activities such as welding on the panels may have on other control room equipment. The licensee indicated the intent to review the NRC staff's observations and make any needed adjustments.

The NRC staff questioned the relationship of this complex request with the submittal of a major change to the technical specifications (TSs) tentatively scheduled for later in CY 2021. It was discussed whether the scope and timing of the DI&C would adversely affect the ability to complete the other request in a timely manner. It was indicated that continued close coordination regarding the scope and timeframe for the submittals was necessary.

The benefit of additional pre-submittal meetings was discussed in supporting the submittal of a good quality licensing request. Topics for future meetings include the review of the table of contents and scope of the submittal, proposed architecture for the system (including the diversity and defense-in-depth (D3) analyses), the DAS, human factors engineering (HFE), the proposed integration of the Vendor Oversight Plan (VOP) into the licensing basis, credit for self-diagnostics, the differences between the Diablo Canyon submittal and the proposed TP submittal, and the appropriateness of the use of DI&C-ISG-06, "Licensing Process," Rev. 2 dated December 21, 2018 (ADAMS Accession No. ML18269A259).

The NRC staff noted that the next pre-submittal meeting was tentatively scheduled for January 13, 2021, and that it would be hosting a Digital Instrumentation and Control workshop in early February 2021.

#### JANUARY 13, 2021

The January 13, 2021 pre-submittal meeting focused on an overview of the VOP including quality assurance activities, the appropriateness of submitting using ISG-06 Rev. 2, and the proposed submittal contents. The licensee indicated a change in the requested approval of the digital upgrade submittal from the spring of 2023 to the fall of 2022, and that they were considering taking a slightly different approach from the plant modification that is currently being evaluated under the alternate review process of ISG-6 Rev. 2.

The difference in the scope and intent of DI&C-ISG-06, Rev. 1 and ISG-06, Rev. 2 was discussed. The NRC requested that the licensee include a specific list of each deviation from the guidance that is referenced. Additionally, the NRC indicated the need to coordinate the format for sensitive information and any implementation activities that may need to be included. The NRC offered that the ARP focused on vendor oversight, which may allow for streamlining in some areas. The result was an idealized schedule, which should be supported by a robust design. The current pilot deviated to a degree from the ARP, which suggests that additional review in the areas of design and testing may be necessary if the precedents are followed. While the proposed schedule appears feasible, the NRC staff indicated a concern for the ability to meet the revised schedule, considering the precedent and proposed deviations from ISG-06 review guidance.

The NRC staff offered questions regarding the timing for various development steps in the DI&C upgrade. The licensee indicated that the information was still forthcoming. The licensee indicated they had not completed a D3 analysis. The outcome of that activity will be used to complete the design of any diverse actuation systems that may be needed to support the upgrade. The NRC staff also questioned the timing of a request by the licensee concerning the credit of self-diagnostics and reduction of certain instrumentation and control (I&C) TS surveillance requirements.

The NRC indicated a concern with the ability to support the reduced schedule given the increase in scope that arises from differences between the proposed TP PPS design and the PPS design of the previous pilot plant review. There is also concern over review of TS changes that are related but not necessary for implementation of the DI&C modification. It was indicated that the proper review of the surveillance changes would be the focus of a future pre-submittal meeting. The NRC staff asked about the schedule for factory acceptance testing (FAT). The licensee indicated that a status on the schedule will be provided at a future meeting.

The NRC staff offered insights of some lessons learned from the ISG-06 Rev. 2 pilot review. It was relayed that an increase level of detail in the VOP on what is being specified would support a more efficient review. The licensee indicated that they will follow-up with their vendor regarding the level of detail needed. The NRC staff questioned when the licensee would finalize the schedule for the third-party review. The licensee indicated that the decision was still 4 to 6 weeks out. Additionally, the timing for vendor to release the system to the licensee was requested.

The difference between the platforms used by the ISG-06 Rev. 2 pilot plant and TP were discussed. The NRC noted that the scope of the quality assurance plan review and approvals for the topical reports differed, which may result in additional review activities by the NRC staff. Additional discussions were held regarding the safety-related to non-safety related interface. It was determined that additional discussions regarding expectations regarding non-safety interfaces as discussed in the applicable revision of Regulatory Guide (RG) 1.97, "Criteria for Accident Monitoring Instrumentation for Nuclear Power Plants," (ADAMS Accession No. ML13350A295) will be provided at a future meeting.

The benefit of additional pre-submittal meetings was discussed in supporting the submittal of a good quality licensing request. Topics for future meetings included the schedule for hardware qualification activities, the schedule for FAT, appropriate schedule for the submittal of a reduction in I&C surveillance testing, the scope of the information provided related to the VOP, human-system interface, the RG 1.97 Type A interface, and the affect the change may have on the responses times in the accident analyses, with a specific focus on the emergency diesel generators.

One member of the public was in attendance during the December 9, 2020. No Public Meeting Feedback forms or comments were received.

Please direct any inquiries to me at 301-415-2315, or [Eva.Brown@nrc.gov](mailto:Eva.Brown@nrc.gov).

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Plant Licensing Branch II-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos.: 50-250 and 50-251

Enclosure: List of Attendees

cc: Listserv

SUMMARY OF PRE-APPLICATION MEETING WITH  
NEXTERA-FLORIDA POWER AND LIGHT  
TO DISCUSS PENDING SUBMITTALS  
RELATED TO DIGITAL INSTRUMENTATION AND CONTROLS AND  
IMPROVED STANDARD TECHNICAL SPECIFICATIONS  
DECEMBER 9, 2020 AND JANUARY 13, 2021

Nuclear Regulatory Commission

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Jeanne Johnston  
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Undine Shoop  
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Richard Stattel  
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Deanna Zhang  
Jack Zhao  
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Rolls-Royce

William Rosko\*\*

Framatome

Ron Legrand  
Ted Quinn  
Jerry Mauck  
Ron Jarrett  
Rick Turk  
Bill Hannaman  
Brian Haynes

\* December 9<sup>th</sup> only

\*\* January 13<sup>th</sup> only

SUBJECT: SUMMARY OF PRE-APPLICATION MEETINGS WITH FLORIDA POWER AND LIGHT CONCERNING A PROPOSED DIGITAL INSTRUMENTATION AND CONTROL UPGRADE, ON TURKEY POINT UNITS 3 AND 4 (EPID L-2021-LRM-0007) DATE MARCH 29, 2021

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**ADAMS Accession Nos.** Meeting Summary ML21054A001 \*via e-mail

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NAME	EBrown*	RButler*	DWrona
DATE	03/01/21	2/25/21	3/29/21

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