



Turkey Point Unit 3 and Unit 4

License Amendment Request: Revise Fire Protection Program in Support of Reactor Coolant Pump Seal Replacement Project

May 24, 2022

CLOSED SESSION

Agenda –Closed Session

- **Purpose**
- **Approach to Address Fire Risk Increase**
- **PRA Risk Increase Between Current and New RCP Seals**
- **Data Supporting RCP Seal Failure Model**
- **Schedule**
- **Questions and Comments**

Purpose

- **Gain agreement for licensing approach for post NFPA 805 transition LAR**
- **Request NRC input regarding review schedule**
 - Additional information provided re: risk analysis
 - Discuss support for NRC review

Approach to Address Fire Risk Increase

- Approach is to re-establish baseline risk associated with NFPA 805 transition and transition change in risk
 - Current RCP seal change is an evolution of the required NFPA 805 RCP seal modification
 - Flowserve NX seal was an NFPA 805 required modification
 - Due to operational concerns, another seal type needs to be pursued that meets NFPA 805 requirements and operational considerations

Approach to Address Fire Risk Increase

- The NFPA 805 LAR evaluated the change in fire risk as a combined change request
 - The increase in risk associated with retained Variances from Deterministic Requirements (VFDRs) was offset by the reduction in risk associated with modifications not required for deterministic compliance
 - A similar approach will be used for the RCP seal modification LAR considering total NFPA 805 delta risk and the risk offsets addressed in the NFPA 805 LAR

- Use 2016 NRC guidance for changes to NFPA 805 license conditions (ML16015A416)
 - Although Turkey Point has completed transition, the guidance is helpful for LAR content
 - Using Option B from the NRC guidance

PRA Risk Increase Between Current and New RCP Seals

- Reason for Risk Increase

- Seal failure data is based on evaluation of potential failure modes, operational experience and testing

- System time window for RCP trip for total loss of seal cooling is [] than with the current seal

- [] 20 minutes for current seal

- To be addressed in updated Human Reliability Analysis

PRA Risk Increase Between Current and New RCP Seals

- Updated guidance used in this application that was not part of the original Turkey Point NFPA 805 LAR

PRA Risk Increase Between Current and New RCP Seals

- PRA modeling refinements for this application to provide more realistic risk characterization

PRA Risk Increase Between Current and New RCP Seals

- No PRA upgrades or new methods are currently anticipated

Data Supporting RCP Seal Failure Model

- **Testing**

- Testing of the PSDS included actuation of the PSDS and testing of the seals ability to remain sealed after actuation

- **Methods Used**

- **Operating Experience**

- The Framatome PSDS is currently installed at one US site and multiple international sites.

Schedule

- **LAR submittal scheduled for Summer 2022**
- **Installation scheduled for U4 fall 2023 outage**
- **Support for NRC review**
 - Portal for information availability
 - Audit support
 - Additional meetings as needed to discuss proprietary information



Questions and Comments

