



## Turkey Point Unit 3 and Unit 4

# Reactor Protection System Engineered Safety Feature Actuation System Nuclear Instrumentation System Replacements

**Safety System Replacement Project LAR  
NRC 4th Pre-submittal Meeting Telecon**

**April 8, 2021  
CLOSED MEETING**



# Agenda – Closed Portion

- **RPS/ESFAS/NIS Architecture Overview**
- **Human System Interface Overview**
- **Human Factors Engineering Program Plan**
- **Cybersecurity Overview**
- **Technical Specification Surveillance Extension/Reduction**
- **Lifecycle Schedule**

# Overview of New RPS/ESFAS/NIS Architecture

- **Turkey Point 3&4 protection systems include:**
  - Reactor Protection System (RPS)
  - Engineered Safety Features Actuation on System (ESFAS).
  - Nuclear Instrumentation System (NIS)
- **RPS/ESFAS/NIS provide the safety functions listed in Tech Spec Tables 2.2-1 for RPS and Table 3.3-3 for ESFAS.**

# Overview of RPS/ESFAS/NIS Architecture (Scope of Replacement)

# Turkey Point Control Room Layout









# HFE Program Plan

## HFE Program Plan – Doc. 51-9324097, Rev. 0

# HFE Program Plan

## Human Factors Plan Major Elements (NUREG-0711):

# HFE Program Plan

## Guidance of NUREG-0700 Rev 3 and NUREG-0711 Rev 3

# HFE Program Plan

The objectives of the HFE Plan are to:

# HFE Program Plan

## HFE Assessment Process

# HFE Program Plan

## HFE Assessment Work Products and Initial Schedule

**End of HFE Slides**



# Cybersecurity During RPS/ESFAS/NIS Design and Delivery

- **Secure Development and Operational Environment (SDOE)**

# Tech Spec Surveillance Test Extension/Reduction For RPS/ESFAS/NIS LAR – Scope

## Present Status of Turkey Point 3&4

# **Tech Spec Surveillance Test Extension/Reduction For RPS/ESFAS/NIS LAR – Scope**

## **Turkey Point's Plan forward for Surveillance Reduction**

# **Tech Spec Surveillance Test Extension/Reduction For RPS/ESFAS/NIS LAR – Scope**

# Tech Spec Surveillance Test Extension/Reduction For RPS/ESFAS/NIS LAR – Channel Check

# Tech Spec Surveillance Test Extension/Reduction For RPS/ESFAS/NIS LAR – Channel Check

# Tech Spec Surveillance Test Extension/Reduction For RPS/ESFAS/NIS LAR – Channel Check

# **Tech Spec Surveillance Test Extension/Reduction For RPS/ESFAS/NIS LAR – Channel Check**

# **Tech Spec Surveillance Test Extension/Reduction For RPS/ESFAS/NIS LAR – Channel Operational Test**

# Tech Spec Surveillance Test Extension/Reduction For RPS/ESFAS/NIS LAR – Actuation Logic Test

## Actuation Logic Test (ALT)

# Tech Spec Surveillance Test Extension/Reduction For RPS/ESFAS/NIS LAR – Scope and Schedule

**Limiting Condition for Operations (LCO) changes:**

**End of TS Reduction**



## TP 3&4 RPS/ESFAS/NIS Lifecycle Phases

### Lifecycle Phase

### Current Schedule



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# **Questions?**

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