



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 3rd Pre-submittal Meeting Telecon**

**February 18, 2021
OPEN MEETING**

FRAMATOME INC. PROPRIETARY

**Proprietary information statement has been removed
in this redacted file.**

Agenda – Open and Closed Portions

- **Action Items From Jan 13th Presubmittal Meeting**
 - **Followup on VOP and NQA-1-2015 – Open Portion**
- **Architecture Overview – Closed Portion**
- **D3 Overview and DAS – Closed Portion**
- **Life Cycle Phase and Testing Schedule thru Implementation – Closed Portion**
- **EQ Scope and Schedule – Closed Portion**
- **Next Presubmittal Meeting Content and Schedule – Open Portion**

Non-proprietary information suitable for public disclosure

Introductions – Project Team

- **FPL Nuclear Licensing**
 - Steve Catron – Licensing Fleet Manager
 - Jarrett Mack – Fleet Licensing Lead
 - David Stoia – Turkey Point Site Licensing Lead
 - Bill Maher – Improved Technical Specification Project Director
- **FPL Nuclear Engineering**
 - Brian Dunn – Fleet Design Director
 - Phil Barnes – Design Engineering Manager
 - Wes Frewin – Fleet Digital Design Supervisor
 - Warren Busch – Project Engineer
- **FPL Nuclear Oversight**
 - Faith Banks – Nuclear Oversight & Assessment Director
- **FPL Fuels Engineering**
 - Emilio Fuentes
 - Phil Tiemann
- **Framatome**
 - Ron Legrand – Project Manager
 - Brian Haynes – Licensing Lead
 - Taha Abdelnaeem --- Engineering Lead
 - Ted Quinn – Licensing Engineer
 - Jerry Mauck – Licensing Engineer
 - Ron Jarrett – Licensing Engineer
 - Rick Turk – Licensing Engineer (HFE)
 - Bill Hannaman – Licensing Engineer (HFE)
 - Mike Howard – Safety Analysis Lead (Chapter 14)

Open Items from January 13th Open Meeting

- **Lessons learned from NRC workshop Feb 10th – upcoming slide in open portion**
- **LAR Presentation (future meeting)**
 - Method of PSAI info presentation
 - Tech Spec Extension/Reduction structure - compartmentalized
 - LAR commitments
- **Life Cycle Phase and Testing Schedule – closed meeting**
- **EQ scope and schedule – closed meeting**
- **Establishment of e-reading room at the time of the LAR submittal based on lessons learned in the Feb 10th NRC ARP Workshop**

Vendor Oversight Plan Status Update

- **Procedures Applicable to Oversight Activities**
 - Summary of FPL procedures for oversight activities provided in a separate document
- **Status Update**
 - Quality Assurance Audit Plan
 - QA plan for project audit and surveillance in process
 - Cyber Security Validation Plan
 - Plan for validation of project specific Secure Development Environment in process
 - HFE Program Plan
 - Submitted -internal FPL and INL review in progress
 - Program Document Reviews
 - Comment Resolution Cycle on Framatome documents nearing completions on:
 - Software Configuration Management Plan
 - Software Verification & Validation Plan

Vendor Oversight Plan Status Update (2)

- **Status Update (continued)**

- Production Schedule Requirements Phase Oversight Reviews
 - RPS/ESFAS/NIS System Requirements Specification in comment resolution phase
- FPL Technical Design Review Team Established
 - 4 experienced design engineers independent of Framatome, not directly linked to document production schedule
 - NUREG CR-6680, Review Templates for Computer-Based Reactor Protection Systems (ML003745748) used as a guideline
 - IEEE 603 and 7-4.3.2 compliance, redundancy, independence, and isolation in implementation documents
 - Focus on architecture, wiring, system and software requirements, critical hardware and software design documents

- **Third Party Review**

- Sargent & Lundy, Risk review of project implementation

NQA-1 2015 Part II, Subpart 2.7, QA for Computer Software for Nuclear Facility Applications

- **FPL Quality Assurance Implementation**
 - FPL Quality Assurance Topical Report (FPL-1) committed to NQA-1-1994, Subpart 2.7 and Supplement 11S-2
 - NUPIC Audit Checklist (Doc 7) references NQA-1 1994, Subpart 2.7 and supplement 11S-2 as basis.
 - Audit Plan will address any differences to NQA-1 2015 and Reg Guide 1.28 rev 5 clarifications and regulator positions
- **FPL Vendor Oversight of Framatome activities for NQA-1 2015 requirements includes oversight validation of all testing activities**
- **FPL Installation, Operation and Maintenance, Retirement**
 - Issue a Software Configuration Management Plan for project implementation in FPL programs and procedures
- **Framatome – Compliant to NQA-1 2015 and Previous Versions**

Lessons Learned from Feb 10 NRC ISG-06 Workshop

- **Better clarity on what the VOP content and NRC inspections are – additional guidance from new IP 35017**
- **Importance and guidance of pre-submittal meetings exchange and clarifications on NRC expectations for LAR format and substance**
- **E-room best practices – documented changes can occur and be maintained as living documents after agreement with NRC**

Future Pre-submittal Recommended Meeting Agenda Items

- **Follow-up on Open Items**
- **Human System Interface (HSI) Overview**
- **LAR Presentation (future meeting)**
 - Method of PSAI info presentation
 - Tech Spec Extension/Reduction structure - compartmentalized
 - LAR commitments

Thank you!

Questions/Comments?

Action Items and Follow-Up

Acronym List

Alternate Review Process	ARP
Anticipated Transient Without Scram	ATWS
Diverse Actuation System	DAS
Defense-In-Depth and Diversity Evaluation	D3
Design Change Process	DCP
Equipment Qualification	EQ
Engineered Safety Features Actuation System	ESFAS
Factory Acceptance Test	FAT
Florida Power and Light	FPL
Framatome USA	Framatome
Human Factors Engineering	HFE
Human System Interface	HSI
Hardware Validation Test	HVT
Independent Verification and Validation	IV&V
Institute of Electrical and Electronic Engineers	IEEE
Improved Standard Technical Specifications	ITS
Interim Staff Guidance	ISG
License Amendment Request	LAR

Acronym List

Main Steam Isolation Valve	MSIV
Nuclear Instrumentation System	NIS
Nuclear Procurement Issues Corporation	NUPIC
Postulated Initiating Event (UFSAR Chapter 14)	PIE
Priority Logic Module	PLM
Plant Specific Action Item	PSAI
Reactor Protection System	RPS
Safety Evaluation Report	SER
Steam Generator Tube Rupture	SGTR
Safety Video Display Unit	SVDU
Standard Review Plan	SRP
Software Common Cause Failure	SWCCF
Software Validation Test	SVT
Technical Specifications	Tech Spec
Tricon PLC	Tricon
Turkey Point Nuclear Plant Units 3 & 4	T.P. 3&4
United States Nuclear Regulator Commission	NRC
Updated Final Safety Analysis Report	UFSAR
Vendor Oversight Plan	VOP