

# **VEGP Unit 4 Potential LAR for Prior To Initial Criticality**



- Proactively Implement Unit 3 Lessons Learned
  - Unit 3 Post Fuel Load Technical Specifications Amendments
    - » Amendment 189: Emergency LAR for ADS Stage-4 Supports
    - » Amendment 190: Exigent LAR for IRWST Injection Valve Repair
- Anticipate Appropriate Unit 4 Flexibility
  - Establish Safety Basis Applicable Prior to Initial Criticality
  - Submit LAR to Allow Timely Review

- Unit 3 Emergency LAR for ADS Stage-4 Supports
  - ADS Stage-4 Not Required for Safety Prior to Criticality
    - » Exceptions Applicable to MODES 4, 5, & 6
    - » Safety Based On:
      - No Criticality
      - No Core Decay Heat

# Lessons Learned

- Unit 3 Exigent LAR for IRWST Injection Valve Repair
  - IRWST & ADS Stage-4 Not Required for Safety
    - » Exceptions Applicable to MODES 5 & 6
    - » Safety Based On:
      - No Decay Heat
      - No Fission Products (No Radiological Consequences)
      - Core Remains Submerged with Borated Water -- Low Evaporative Losses (< 200°F)
      - Inadvertent Boron Dilution Prevented

## Unit 4 Potential LAR – Reason For Request

- Expand Flexibility Beyond IRWST and ADS Stage-4
  - Minimizes the Potential for Subsequent Emergency & Exigent LARs
  - Enhance Startup Testing Efficiency
  - Establish Appropriate Safety Basis for Operation Prior to Criticality

# Unit 4 Potential LAR – Safety Basis

- Establish Appropriate Safety Basis for Prior to Initial Criticality
  - Technical Specification Requirements Considerations:
    - » No Exclusions for Core Reactivity Protections
    - » No Exclusions for Reactor Vessel Integrity Protections
    - » No Exclusions for MODE 3 (Based on Steamline Break Potential for Criticality)
    - » MODE 5 & 6 Exclusions Similar to Previous Amendments – Based On:
      - No Core Decay Heat
      - No Core Fission Products (No Radiological Consequences)
      - Core Remains Submerged with Borated Water
      - Inadvertent Boron Dilution Prevented

## Unit 4 Potential LAR – Approach

- Modify Current COL Condition for TS Effectiveness Timing
  - Current Timing 52.103(g) Finding
  - Proposed Timing in Two Groups
    - » Portions Related to Reactivity & Vessel Integrity at 52.103(g) Finding
    - » Portions Related other TS:
      - While Operating in MODE 3
      - Prior to Initial Criticality
- Modify TS LCO 3.0.7 to Acknowledge COL Exceptions
  - LCO 3.0.7 is Designed to Address TS Exceptions
  - LCO 3.0.7 Avoids Potential Conflicting Requirements

## Unit 4 Potential LAR – Approach

- Revising COL Condition Defining TS Effective Timing
  - Currently Established Mechanism Defining When TS Are Effective
  - Providing COL Staged Effectiveness vs TS Notes
    - » Minimizes TS Presentation Impacts to Operators
    - » Avoids Additional Complexity if Numerous Notes Added
- Revising LCO 3.0.7
  - Consistent Application of Special Operational Requirement Exceptions
  - Recognizes the Tie Between COL Condition and TS Effectiveness



# Unit 4 Potential LAR – Approach

- Tentative COL Condition 2.D(9) Changes:

The technical specifications in Appendix A to this license listed below become effective upon a Commission finding that the acceptance criteria in this license (ITAAC) are met in accordance with 10 CFR 52.103(g). The remainder of the technical specifications in Appendix A to this license become effective while operating in plant operational Mode 3 (Hot Standby) and become fully effective at initial criticality of the reactor core.

- *{{list TBD}}*

# Unit 4 Potential LAR – Approach

- Tentative LCO 3.0.7 Changes:

Test Exception LCOs 3.1.8 and 3.1.10 allow specified Technical Specification (TS) requirements to be changed to permit performance of special tests and operations. Unless otherwise specified, all other TS requirements remain unchanged. Compliance with Test Exception LCOs is optional. When a Test Exception LCO is desired to be met but is not met, the ACTIONS of the Test Exception LCO shall be met. When a Test Exception LCO is not desired to be met, entry into a MODE or other specified condition in the Applicability shall be made in accordance with the other applicable Specifications.

For Unit 4 only, Combined License Condition 2.D(9) provides the milestone effectiveness for specified TS requirements. Compliance with TS requirements that become effective while operating in MODE 3 and become fully effective at initial criticality of the reactor core, in accordance with the COL Condition, is optional prior to operation in MODE 3.

# Summary

- Minimize Potential for Future Emergency / Exigent LAR
- Establish Safety Basis for Prior to Criticality
- Revise COL Condition Defining TS Effective Timing
- Revise LCO 3.0.7 Recognizes the COL Condition Tie