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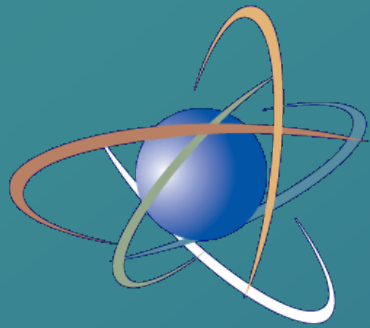
UNITED STATES NUCLEAR REGULATORY COMMISSION

Protecting People and the Environment

Welcome!

The meeting will begin shortly.

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Grand Gulf Nuclear Station (GGNS)

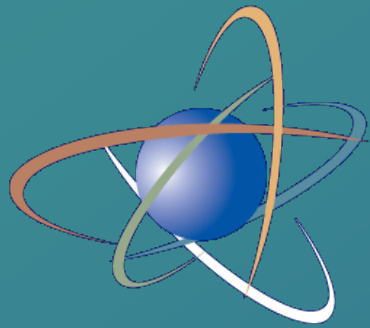
Supplemental Inspection Public Exit and Regulatory Performance Meeting

U.S Nuclear Regulatory Commission – Region IV

October 4, 2021

Agenda

- Opening Remarks and Introductions
- Overview of Reactor Oversight Process
- Discussion of Yellow Performance Indicator
- Supplemental Inspection Objectives and Scope
- Supplemental Inspection Results
- Entergy Response
- NRC Closing Comments
- Q&A



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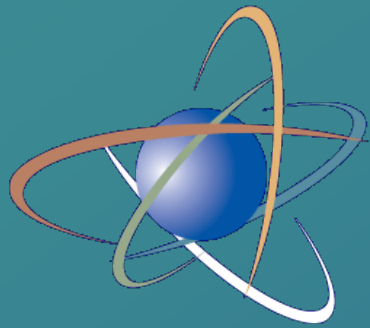
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Facilitator

Patricia Vossmar

Senior Reactor Inspector, Region IV



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95002 Team Leader / Presenter

April Nguyen

Senior Resident Inspector, Region III

NRC Representatives



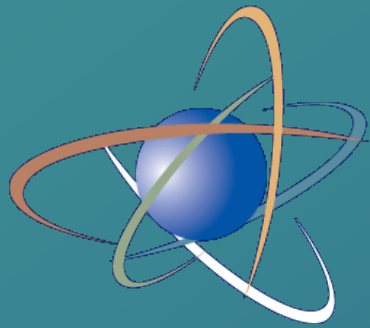
Scott Morris
Regional
Administrator,
Region IV



Michael Hay
Deputy Director,
Division of
Reactor Projects



Jason Kozal
Chief,
Projects
Branch C



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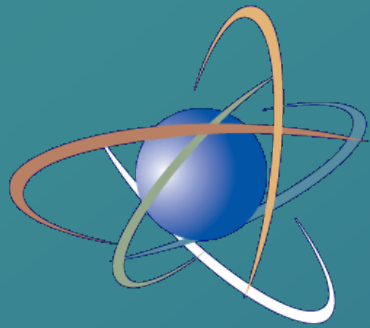
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Grand Gulf Nuclear Station Introductions

Bob Franssen

GGNS Site Vice President,
Entergy Operations Inc.



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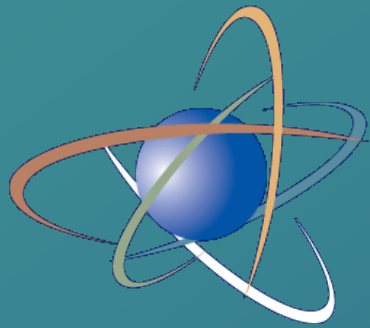
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NRC Opening Remarks



Scott Morris

Regional Administrator, Region IV



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Grand Gulf Nuclear Station

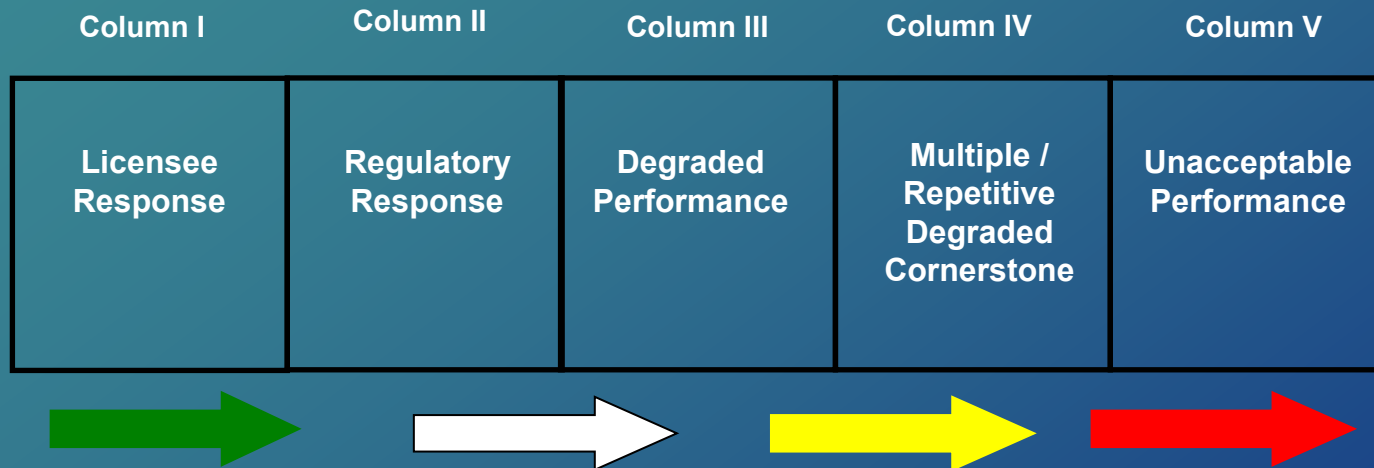
95002 Exit and Regulatory
Performance Meeting



NRC Mission Statement

The NRC licenses and regulates the nation's civilian use of radioactive materials to provide reasonable assurance of adequate protection of public health and safety and to promote the common defense and security and to protect the environment.

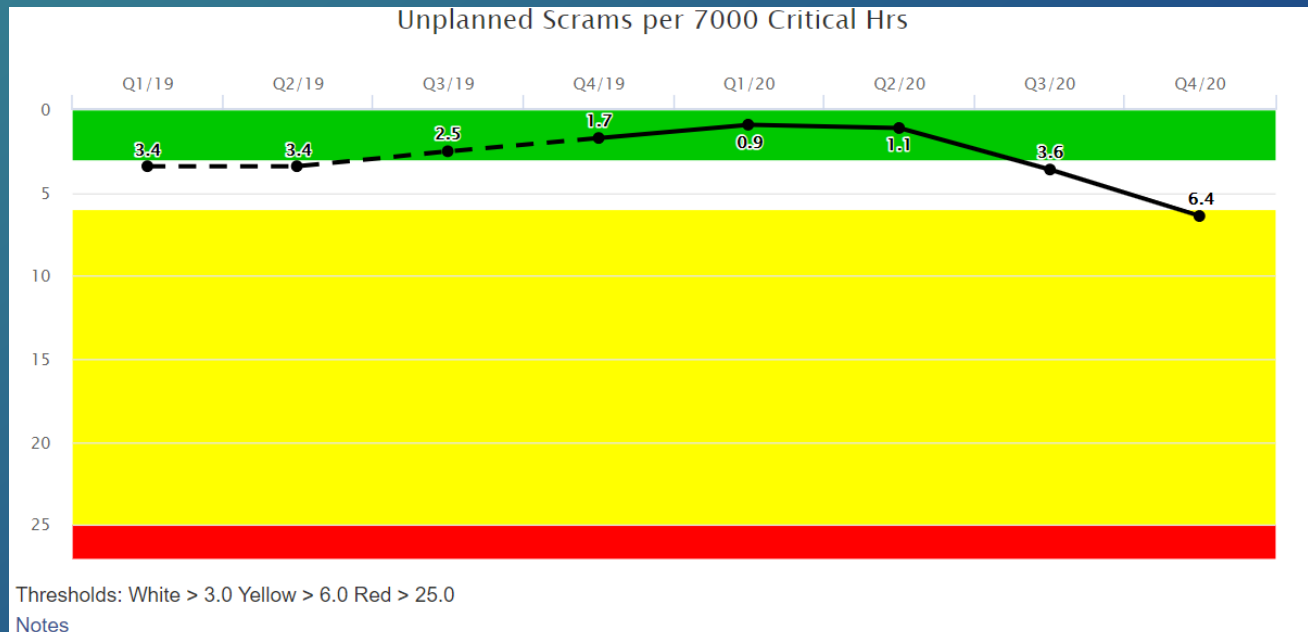
NRC Reactor Oversight Process (ROP)



- NRC Action Matrix
- Licensee Response column is baseline inspection (issues of very low safety significance)
- Increase in number of findings or performance indicators of significance moves licensee to the right in the matrix
- Moving to the right leads to increased NRC Oversight (Supplemental Inspections, higher level engagement with plant management)

2020 Yellow Performance Indicator

- May 25, 2020 scram – Turbine Overspeed Trip
- August 8, 2020 manual scram – Turbine Control Valve Degraded Operation
- August 24, 2020 scram – Reactor Feedwater Pump Trip
- November 6, 2020 scram – Turbine Trip due to Low Generator Cooling Water Flow
- December 11, 2020 scram – Improper Control of Generator Cooling Water



95002 Inspection - Objectives

- Ensure root and contributing causes of performance issues are understood.
- Independently assess and ensure extent-of-condition and extent-of-cause are identified.
- Ensure completed corrective actions to address and preclude repetition of performance issues are timely/effective.
- Ensure planned corrective actions to preclude repetition direct timely and effective actions.
- Independently determine if safety culture traits caused or significantly contributed to the performance issues.

95002 Inspection – Team

- Senior Resident Inspector (Lead)
- 3 Senior Resident Inspectors
- 1 Resident Inspector
- 1 Operations Engineer
- 1 Reactor Engineer (observer)
- 3 Safety Culture Experts



95002 Inspection - Conduct

- Dates: August 23 – September 17, 2021
- Onsite Inspection: Plant Tours, Interviews, Observations, Verification of corrective actions
- Document Reviews
- Independent review of Root Cause Evaluations
- Related issue review: Independent Extent of Cause and Extent of Condition sampling
- Independent Safety Culture Review (IP 40100)
 - Focus Group and individual Management interviews
 - Review of third-party safety culture assessment

Common Cause Assessment for Degraded Cornerstone

- Four of the Five Scrams were the result of modifications made to the Turbine Control System (TCS).
- The common root cause was *Engineering Leadership did not fully align the organization around roles and responsibilities for the TCS modification missing an opportunity to provide greater rigor to the design change.*
- The key corrective action to preclude repetition (CAPR) was *to develop and implement a Roles and Responsibility Matrix to establish, communicate, and track specific requirements for each participating individual through each portion of the modification process.*

Licensee Key Corrective Actions

- Created Requirement to Construct Risk Analysis Tables for Engineering Changes
- Created Specific Methods to Verify Critical Procurement Characteristics
- Implemented an Oversight Plan for Supplemental Engineering
- Performed a Turbine Control System vulnerability study to determine if the underlying causes of recent TCS failures extended to other components in the system
- Reinforced Standards and Expectations in the Corrective Action Program to Ensure Timely and Effective Evaluation and Resolution of Issues
- Improved Behaviors by Focusing on Questioning Attitude, Leadership Engagement, Excellent Standards, Risk Recognition and Mitigation, and Ownership of Issues

95002 Inspection - Results

- Inspection Objectives Met
- Four General Weaknesses
- Green Violation – Criterion XVI for Recurring Engineering Issues that led to the Yellow PI
- Green Violation – Operator Error that led to December 11th Scram
- Green Finding with Three Examples – Engineering Design Issues that led to 3 Scrams

95002 Inspection – Results cont'd

- Four General Weaknesses
 - Ineffective corrective actions to preclude repetition of Scrams
 - Missed opportunities to effectively use Operating Experience to mitigate/prevent events
 - Narrow scope for extent-of-condition and extent-of-cause reviews
 - Gap of risk awareness in application of CAPRs

95002 Inspection Results

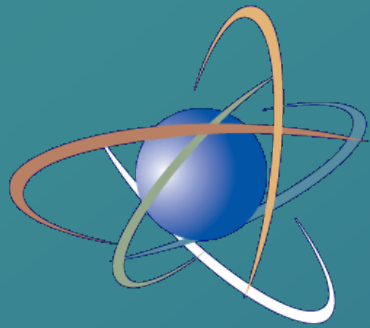
– Safety Culture

- The station, overall, exhibited signs of a positive Safety Conscious Work Environment.
- The team independently identified a few safety culture traits that could have contributed to the performance issues.
- Consistent and persistent messaging will help to ensure Nuclear Safety Culture plays a role in all day-to-day activities that take place on-site.



95002 Inspection – Summary

- The Team determined that the licensee's problem identification, causal analysis, and corrective actions sufficiently addressed the performance issues that led to the Yellow performance indicator.
- Several Weaknesses and Observations were provided to the licensee to ensure sustainable improvements in performance.
- Future inspections planned to review not-yet-completed corrective actions and effectiveness of CAPRs.



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Grand Gulf Nuclear Station Response

Bob Franssen

**GGNS Site Vice President,
Entergy Operations Inc.**

Action Matrix – Next Steps

- Perform Onsite 95002 Inspection
 - Complete and Objectives Met
- Conduct Public Performance Assessment Meeting
 - Completed Tonight
- Assess Colors of Current Performance Indicators and Inspection Findings
 - Will be Green in 3Q2021 Once Finalized
- Issue 95002 Inspection Report and Follow-up Assessment Letter
 - within 45 days

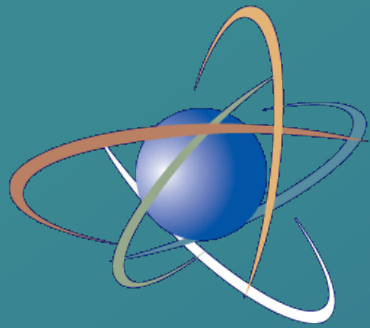
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 - (800) 695-7403
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- General information or questions
 - www.nrc.gov
 - Select “What We Do” for Public Affairs



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NRC Closing Remarks



Scott Morris

Regional Administrator, Region IV

Q & A

Members of the public are invited to participate in this meeting after the formal presentation. Signal the phone bridge moderator by pressing *1 if you want to ask a question.

If we were not able to answer your question, submit an E-mail to the NRC to

Patricia.Vossmar@nrc.gov or
Jason.Kozal@nrc.gov.



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