

Annual Assessment Meeting for 2023

Reactor Oversight Process

Nuclear Regulatory Commission Region I

May 16, 2024





- Opening Remarks
- 2023 Millstone Reactor Oversight Process (ROP) Assessment Summary
- Other NEAC Items of Interest
 - Security Special Inspection & Engineering Inspection Changes
 - U.S. Government Accountability Office (GAO) Audit
 - 2023 Millstone Finding Summary
 - Power History and Performance Indicators
 - Licensee Event Reports
- Q&A





Overall Assessment

Millstone Units 2 and 3 operated safely in 2023 and continue to do so today







Three full-time residents assigned to Millstone



Justin Fuller
Senior Resident



Dominic Antonangeli Resident Inspector

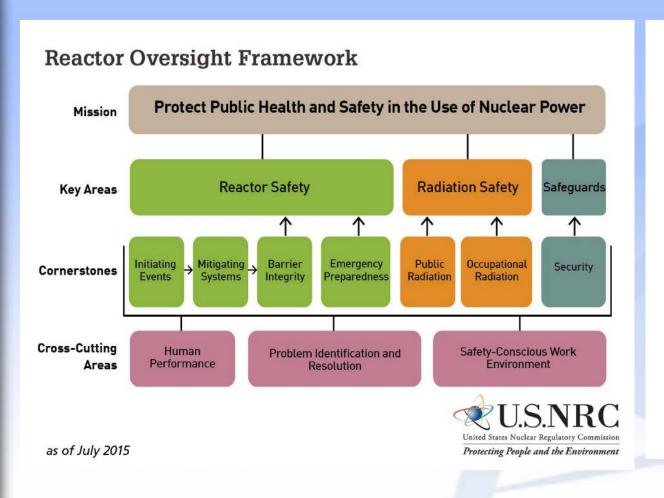


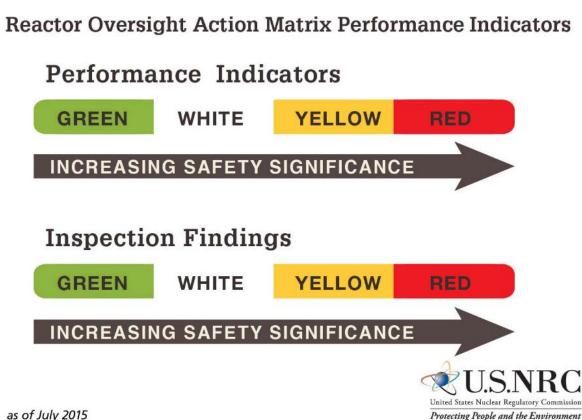
Earl BousquetResident Inspector

- Inspectors have unfettered access to all areas of the site
- Technical specialists conduct additional inspections



Reactor Oversight Process







Action Matrix Concept

Licensee Response Response Degraded Performance Multiple/Repetitive Degraded Cornerstone Unacceptable Performance



Increasing Safety Significance

Increasing NRC Inspection Efforts

Increasing NRC/Licensee Management Involvement

Increasing Regulatory Actions

Millstone Units 2 & 3 2023 Assessment Summary

- Operated safely and in a manner that preserved the public health and safety and protected the environment
- Licensee Response Column
- 9063 hours of inspection and related activities
- Green Performance Indicators
- 19 Green Findings
 - Initiating Events = 2; Mitigating Systems = 11; Security = 6)
- 1 Apparent Violation (Security) Final Significance Determination is in process



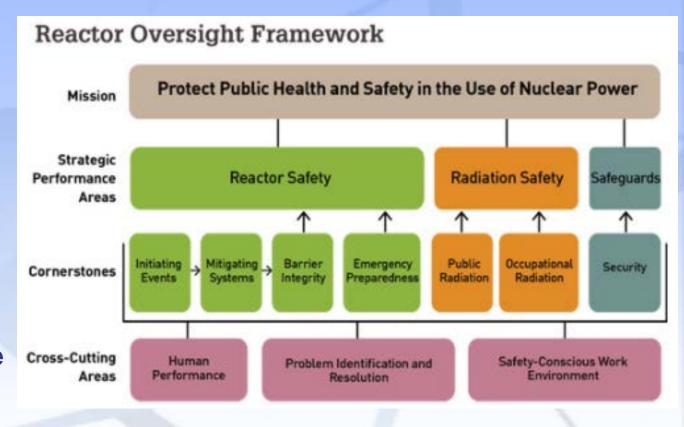
Safety Conscious Work Environment (SCWE)

Cross-Cutting Aspects

- No Human Performance Concerns
- 2022 Problem Identification and Resolution (PI&R) Inspection
 - 2024 Biennial PI&R is in progress
- No SCWE concerns

Allegations

- 3 allegations in 2023 (National Avg. = 3.6)
- Resident inspectors and regional staff are highly accessible and take all allegation matters seriously





Connecticut Nuclear Energy Advisory Council ITEMS OF INTEREST



Security & Engineering Inspections

- Special Inspection November 16, 2023 (ML24010A182)
 - Choice Letter Issued April 25, 2024 (ML24116A045)
 - Dominion Accepted the Finding and Apparent Violation on May 2, 2024 (ML24123A204)
 - Final significance determination is in progress
- IP 71111.21M: Comprehensive Engineering Team Inspection (CETI) Changes
 - CETI is the latest iteration of engineering team inspections that began in 1985 as safety system functional inspections
 - Improvements made over time based on Operating Experience, Industry Events, and PRA
 - IP 71111.21M Incorporates Design Basis Assurance Inspection (TEAM), 50.59
 Inspection, and Heat Exchanger / Heat Sink Inspection



GAO Audit on Nuclear Power Plant Climate Resilience

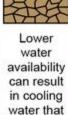
- GAO-24-106326 https://www.gao.gov/products/gao-24-106326
- 3 recommendations for the NRC

Examples of Natural Hazards that May Pose Risks to Nuclear Power Plants



impair cooling systems and degrade or damage equipment.

Drought



is too hot and reduce its supply.

Wildfires



Fires can damage parts of the electricity grid and obstruct plant access.

Flooding



Water Storm surge inundation can cause can damage flood cooling impacts, and high winds systems and parts can damage of the fuel parts of the cycle. plant or the electricity

Sea level Hurricanes



grid.

Rising mean sea level adds to overall storm surges and flood levels. worsening flood impacts.

rise

Extreme cold weather



Unusually cold weather can cause icing or freezing of parts of plants or the electricity grid.

Sources: Nuclear Regulatory Commission documents; summary of literature; GAO (icons), | GAO-24-106326



- 13 Green Findings in 2023
 - 9 NRC-Identified GREEN Findings
 - 4 Self-Revealed GREEN Findings
- Unit 3 Service Water Through-Wall Leak
 - NCV 05000423/2023001-01, Through-Wall Leak on Unit 3 Service Water Piping
- Unit 2 Service Water Pipe Tunnel (Infrequently Accessed Area)
 - NCV 05000336/2023002-01, Failure to Perform General Condition Monitoring Inspections and System Engineering Walkdowns of Portions of the Safety-Related Service Water System in Accordance with Documented Procedures

Millstone Power History & Unplanned Downpower Performance Indicator - 2023



Date	Unit	Impact – Unplanned Power Change <i>(Power Change > 20%)</i>	Cause
February 14, 2023	2	100% to 34%	Feedwater heater tube leak
May 30, 2023	3	Automatic Trip (Unplanned Scram)	Ground on Main Generator Output Breaker
September 20, 2023	2	92% to 61%	Circ Pump Motor Issues
December 2, 2023	3	56% to 16%	Condenser Tube Leak
December 18, 2023	3	82% to 55%	Circ Water Traveling Screen
January 8, 2024	3	Manual – Controlled Shutdown	Unisolable Main Feedwater Leak

Millstone Licensee Event Reports - 2023

Event Date	Unit	Topic	Status
October 6, 2022	3	Emergency Core Cooling System Gas Void	Closed
May 9, 2023	2	Service Water Pipe Leak	Open – Review In Progress
May 30, 2023	3	Unit 3 Trip	Open – Review In Progress
July 6, 2023	2	Auxiliary Feedwater Check Valve	Closed
September 4, 2023	3	Auxiliary Feedwater Flow Control Valve	Open – Review In Progress
October 11, 2023	3	Reactor Coolant System Temperature Detector	Open – Review In Progress
October 20, 2023	3	Reactor Coolant System Isolation Valve Leakage	Open
November 8, 2023	Common	Security Event	Open
December 10, 2023	3	Oil Leakage from Containment Recirculation System Pump	Open



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Questions and Answers







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