

NUCLEAR ENERGY ADVISORY COUNCIL
April 30, 2025 6:00 PM
Waterford Town Hall

MINUTES

Members Present:

Rep Kevin Ryan, Chair
Alternate Chair Mr. Jeffrey Semancik representing DEEP Commissioner Dykes
Mr. James Sherrard
Mr. R. Woolrich
Mr. Bill Sheehan
Sen Cathy Osten
Mr. Craig Salonia
Mr. A. Jordan
Mr. John McGunnigle
Mr. Michael Quinn

Members not present:

Rep Anthony Nolan

1. Call to Order of Meeting

The Council's Alternate Chair called the meeting to order at 6:00.

2. NRC Reactor Oversight Program/Millstone End of Cycle Report – Briefing on Millstone Power Station Annual Assessment by US Nuclear Regulatory Commission (NRC): Matt Young, Chief, Projects Branch 2, Division of Operating Reactor Safety; Justin Fuller, Senior Resident Inspector; E. Bousquet, Resident Inspector; Dominic Antonangeli, Resident Inspector.

- a. Mr. Young introduced himself and discussed his experience. He noted that the NRC has three fulltime resident inspectors (RIs) with unfettered access to all areas of Millstone Power Station. These RI's conduct the baseline inspections and supplements them with technical specialists from the Region 1 office in King of Prussia, PA and from NRC Headquarters in Bethesda, MD.
- b. Senior Resident Inspector (SRI) Mr. Fuller and Resident Inspectors (RIs) Mr. Antonangeli and Mr. Bosquet introduced themselves and stated their experience and education.
- c. Mr. Antonangeli briefed the Council on overall NRC assessment of performance related to Dominion Energy's operation of Millstone in 2024. He stated that both Millstone Units 2 and 3 operated safely and securely, protected public health and safety, and protected the environment throughout 2024 and continues to do so. He reviewed the NRC's Reactor Oversight Process (ROP) emphasizing that there are multiple inputs to the assessment process including inspector inputs and findings, regional specialist inspectors, project manager

input and performance indicators. The goal of the ROP is to catch low safety significance issues early and correct them. In 2024, Millstone Units 2 and 3 operated in the Licensee Response Column of the Regulatory Response Matrix except for one period in 2024, from April 11 to July 11, when the station was in the Regulatory Response column due to a Greater than Green (GTG) security finding which was resolved by the licensee and verified by the NRC. Based upon NRC's assessment, both Millstone Units 2 and 3 are now operating in the Licensee Response Column of the Regulatory Response Matrix (the highest level of performance) and will therefore remain under baseline inspection.

- d. Mr. Antonangeli discussed overall indicator and inspection results at Millstone. The NRC conducted 9,495 hours of inspection activities at Millstone in 2024. The NRC identified 16 inspection findings in 2024. Eleven (11) were of very low safety significance (Green). There were also 4 Severity Level IV violations under traditional enforcement discretion. One security violation identified in 2024 was classified as GTG and greater than severity level IV. All performance indicators (PIs) are Green. The NRC did not identify any cross-cutting issues. This included a biennial Problem Identification and Resolution (PI&R) inspection in which the NRC evaluates Safety Conscious Work Environment (SCWE). The NRC received three (3) allegations in 2024 consistent with the national average.
 - i. Mr. Sheehan asked if any of the allegations were valid. Mr. Fuller stated the NRC determined all the violations were "not substantiated." He noted that the number of violations tended to indicate a healthy program. If there were no allegations, he stated he would be concerned that workers were afraid to bring up issues. Too many would indicate Dominion's program was not being used. NRC believes that Millstone has a healthy Employee Concerns Program.
- 3. NRC staff addressed specific topics previously provided to the NRC by the Council.
 - a. Repeat Failure such as Reactor Coolant Pump (RCP) seals – Mr. Antonangeli discussed how the NRC uses the PI&R inspection process to evaluate how the licensee addresses issues whenever they note declining performance in an area. The NRC PI&R inspection team targets areas where RI's have questions. With respect to RCP seals, the NRC has reviewed licensee actions in three different PI&R inspection.
 - b. GTG Security Cornerstone - Mr. Antonangeli noted that the NRC conducted a follow-up reactive inspection using their procedure (95001) with a team of security experts from NRC regional office. The NRC noted that the licensee took appropriate actions to prevent recurrence, but could not publicly comment on specifics in a public meeting as security information is protected from disclosure.
 - c. Millstone Unit 2 Condensate Storage Tank (CST) Trench Aging Management – Mr. Fuller discussed the state of licensee actions to conduct inspections required under their aging management program. He noted that in 2023 NRC issued a finding related to the Unit 2 service water pipe trench in which the licensee had become complacent with the state of corrosion on pipe supports. As an extent

of condition, the NRC identified that the licensee had failed to inspect the CST pipe trench as a baseline for the period of extended operations because the licensee had incorrectly changed the work order. When this was identified, the licensee made efforts to conduct a remote camera inspection of the trench through an opening but was unable to navigate to complete the inspection. In order to gain full access, Dominion would have to move several heavy (greater than 5000 pounds) concrete blocks covering the safety related auxiliary feedwater piping. Dominion concluded the risk of conducting the inspection on-line was too risk significant. As a result, they planned and conducted the inspection at the first acceptable opportunity when auxiliary feedwater was not required during the refueling outage. The inspection was completed during the fall 2024 refueling outage. The piping was determined to be in excellent condition. The pipe supports required repair of some degradation and restoration to full design compliance.

- i. Mr. Sheehan asked if the licensee could use cameras internal to the pipes. Mr. Fuller responded that the concern is external corrosion. The licensee used other measures to verify the pipe was not leaking which was part of the justification to access the area in the refueling outage. He noted that both units use cameras extensively for internal pipe inspections, especially in service water. Mr. Young added that NRC Region 1 staff also followed the issue and conducted an independent risk assessment to ensure it was safe to wait for the scheduled refueling outage. They also reviewed licensee readiness to conduct the inspections.
 - ii. Mr. Semancik asked how such generic issues (aging management inspections) are shared within the NRC. Mr. Young responded that the NRC has a process for knowledge transfer for industry issues. In this case they conducted training on aging management for Region 1 RI's and showed pictures of the degraded conditions at Millstone. Nationally, the NRC has an Operational Experience Branch that reviews findings for sharing to all RI's. In 1 to 2 months this branch pushed information to all RI's to understand what is meant by inaccessible areas for aging management. Mr. Fuller added that RI's organically also share lessons learned and can adjust their inspection plans to incorporate a look at areas identified at other plants.
- d. Power History and number of operational events – Mr. Antonangeli discussed operational performance of Millstone units. The power changes in 2024 included three unplanned downpowers of Unit 3 due to feedwater heater leaks, one planned refueling outage at Unit 2, one planned outage to replace a safety valve on Unit 3, and 1 unplanned outage at Unit 2 for a repair in the electrical switchyard.
- i. Mr. Sheehan noted a number of small power changes and asked about the cause. Mr. Antonangeli responded that they were due to feedwater

heater level control issues and for a leaking safety relief valve on the Unit 2 feedwater heating system.

- ii. Senator Osten asked if the NRC had a slide to show how much power Connecticut gets from Millstone. Mr. Antonangeli responded that the NRC only regulates offsite power when it impacts nuclear safety. They do not evaluate the grid impacts.
- e. Apparent higher than normal number of conditions reported in Licensee Event Reports (LERs) – Mr. Antonangeli noted Millstone was required to submit 5 LERs in 2024. He also noted that the RI's conduct follow up inspections of issues reported in the LERs within 12 months. The LERs also serve to provide operational experience to the rest of the industry. Mr. Young added that when the NRC is initially notified of an event they immediately assess risk and will inspect sooner than 12 months if they determine it is risk significant. Mr. Fuller noted that the LER follow-up inspection results are included in the quarterly inspection reports.
 - i. Mr. Salonia noted there were a number of findings related to failures of the secondary containment barrier at Millstone and that some lasted for several hours. He asked how they all still screened to Green. Mr. Antonangeli responded that the NRC conducted independent risk assessment, and all were very low safety significance (Green). Mr. Fuller acknowledged that both units had challenges to secondary containment barriers. He noted a few things that factor into low safety significance including that they some involved door/hatch latches that the license allows 24 hours to repair. Overall, both secondary containment systems have a lot of margin. Mr. Young also noted that for dose mitigation systems (such as secondary containment), the size of the breach is more risk significant than the time (which tends to dominate for systems designed to mitigate core damage.)

4. Other Questions from the Council

- a. Mr. Salonia noted that the Council had reviewed license amendments for improved fuel that allows 24 month fuel cycles. He asked if it changes the volume of high-level waste. Mr. Fuller acknowledged the licensee was working on new fuel, but did not have specifics on waste. Mr. Semancik commented that the fuel is the same size and volume, and the spent nuclear fuel would contain more fission products which are proportional to the integrated power.
- b. Mr. Quinn asked what extent of condition review Dominion conducted related to performing required surveillances on other the "difficult to access" components. Mr. Fuller stated that Dominion did an extensive review after the service water issue and identified the CST pipe trench. They modified their procedures but failed to notice that they never did the baseline inspection until questioned by the NRC. With Unit 3 entering its period of extended operations this year, Dominion is working to ensure all the baseline aging inspections are completed.

- c. Senator Osten asked if there were other sites moving forward with adding new nuclear at their facilities. Mr. Fuller responded that several were pursuing power uprates to generate more electricity. Mr. Young noted that NRC approval would be required, but they currently had no pending applications. Any application would be public and information would be on the website.
- d. Mr. Semancik asked about a recent prompt report issued by Dominion related to the loss of offsite notification and communications. Mr. Fuller responded that since this occurred in 2025, it was still being evaluated by NRC in the Emergency Preparedness inspection. NRC regional experts reviewed to ensure no other immediate actions were required.
- e. Mr. Jordan asked NRC to discuss how LERs that reflect repeat issues are assessed. Mr. Fuller noted the NRC and industry were aware of several repeat issues and take actions to better understand the causes and address corrective actions. For example, he noted there were repeat LERs reporting setpoint drift in Main Steam Safety valves. The industry, through the Electric Power Research Institute, has done testing to show that in a real event they will still function. Mr. Young added that if the event represents a significant condition adverse to quality, the licensee is required to take corrective actions to prevent recurrence.
- f. Mr. Semancik asked if the NRC was expecting changes to RI staffing or the ROP process. Mr. Young noted that the ADVANCE Act requires the NRC to assess all aspects of the ROP and make it more efficient. He does not expect any reductions to baseline RI staffing. Overall, Mr. Young felt that inspection numbers might be more performance based. NRC Office of General Counsel is still reviewing several executive orders. Mr. Young noted that the NRC did retain all probationary employees and is still hiring RI's.
- g. Mr. Semancik asked about the change to the NRC Mission Statement. Mr. Young stated that the NRC Commissioner state that safety and security remain the "guiding star" for the NRC but the mission was revised to become more efficient so as not to hinder development. Mr. Fuller read the revised NRC mission statement, "The NRC protects public health and safety and advances the nation's common defense and security by enabling the safe and secure use and deployment of civilian nuclear energy technologies and radioactive materials through efficient and reliable licensing, oversight, and regulation for the benefit of society and the environment." Mr. Quinn noted that the verb "advances" is just short of "promotes," shared in the context that in the 1974-75 time frame the former Atomic Energy Commission had been re-framed as the US NRC, which would 'regulate' but could no longer 'promote' nuclear power.
- h. Mr. Sheehan noted that the Millstone units are old and getting older and that Dominion is looking to extend the license even further. He asked if NRC has guidance on how to inspect a pipe that has to last 80 years versus the 40 it was designed for. Mr. Antonangeli responded that when a plant enters the period of extended operations, the RI's have been trained on the aging management program requirements as described in the licensee's license renewal application.

Mr. Fuller noted that they do have gaining management inspection procedures and that they are periodically updated. He noted that he submitted a change based on the service water issues identified at Millstone. The inspection procedure was updated.

5. **Public Comment.** There were nine members of the public present. The public had no questions or comments.
- a. One member of the public asked how the NRC staff uses Artificial Intelligence (AI) to enhance operational experience searches Mr. Young said that AI guidance for staff was coming out shortly. He also noted that the NRC has access to licensee systems and expects that these will be the first to use AI and noted that the federal government limits what sensitive data can be used to train the AI. Mr. Fuller added that he was one of the RI's in a pilot program to use MS Copilot and found it helpful for summarizing design requirements.

6. **NEAC Business**

a. **NRC Correspondence Reviewed since the last meeting.**

The following NRC Correspondence was reviewed by the Council:

- i. Millstone Power Station, Unit No. 3 – Issuance of Amendment No. 292 Regarding Adoption of Technical Specification Task Force Traveler TSTF-421 (EPID L-2024-LLA-0035) dated December 3, 2024.
- ii. Millstone Power Station, Unit No. 3 Reactor Vessel Internals Inspections Aging Management Program Submittal Related to License Renewal Commitment No. 13 (EPID L-2023-LRO-0091) dated December 19, 2024.
- iii. Millstone Power Station, Unit No. 3 Reactor Coolant System Alloy 600 Inspection Program for License Renewal Commitment No. 15 (EPID L-2023-LRO-0092) dated December 19, 2024.
- iv. Millstone Power Station, Units 2 and 3 – Integrated Inspection Report 05000336/2024004 and 05000423/2024004 dated February 12, 2025.
- v. Annual Assessment Letter for Millstone Power Station, Units 2 and 3 (Reports 05000336/2024006 and 05000423/2024006) dated March 11, 2025.

b. **Other Correspondence Reviewed since past meeting.**

The following other Correspondence was reviewed by the Council.

- i. Dominion Energy Nuclear Connecticut, Inc. Millstone Power Station Non-Emergency Report, Primary and Backup Methods of Activating the Site Emergency Response Organization (ERO) Not Available dated February 18, 2025.

c. Future Council Meetings.

- i. July 24, 2024 – Tour of Commonwealth Fusion
 1. Mr. Semancik to confirm date and tour details with Commonwealth Fusion staff.
 2. Mr. Sherrard noted he can use the school van to arrange travel.
- ii. September 25, 2025 – Millstone Operations Update (Dominion Presentation)
- iii. December 11, 2025 – Annual Report Writing Meeting

7. Adjournment

A motion was made to adjourn by Mr. Sheehan and seconded by Mr. McGunnigle; no objections; unanimous vote in favor; meeting adjourned at 7:40 PM.

Millstone Units 2 & 3

2024 Annual Assessment Meeting

Reactor Oversight Process

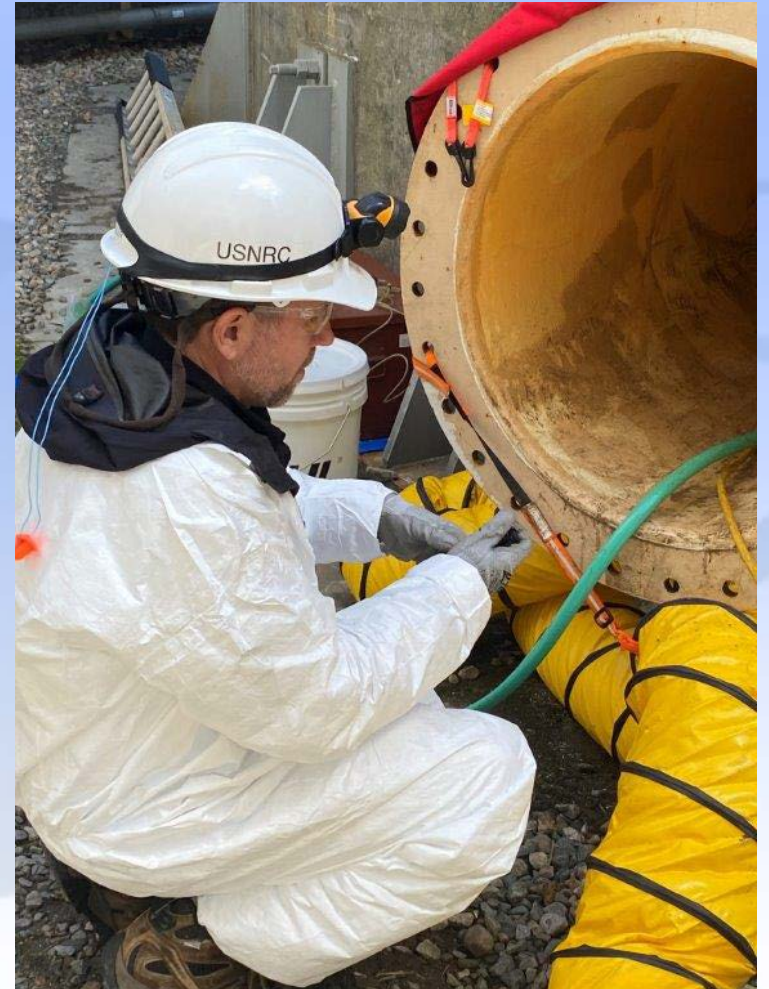
Nuclear Regulatory Commission
Region I

April 30, 2025



Agenda

- Opening Remarks
- 2024 Millstone Reactor Oversight Process (ROP) Assessment Summary
- Q&A





Overall Assessment

**Millstone Units 2 and 3 were operated safely in 2024
and continue to operate safely today**





Inspection and Oversight

- Three full-time residents assigned to Millstone



Justin Fuller
Senior Resident



Dominic Antonangeli
Resident Inspector

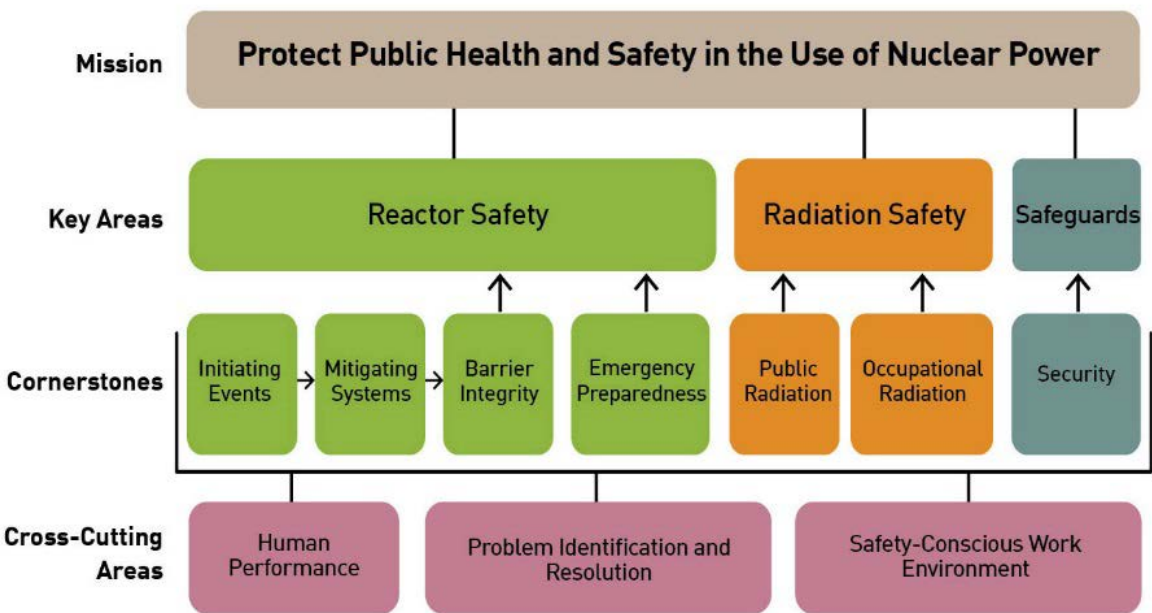


Earl Bousquet
Resident Inspector



Reactor Oversight Process

Reactor Oversight Framework



Reactor Oversight Action Matrix Performance Indicators

Performance Indicators



Inspection Findings





Types of Inspections

- **Baseline Inspection Program**
 - Minimum level of inspection conducted at all facilities regardless of their performance.
- **Reactive Inspections (e.g., Special Inspections)**
 - Events involving reactor facilities are investigated in a timely, objective, systematic and technically sound manner.
- **Supplemental Inspections (e.g., IP 95001)**
 - Applies NRC inspection resources in a graded manner when risk-significant performance issues are identified.



Action Matrix Concept

Licensee Response	Regulatory 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

2024 Assessment Summary

- Operated safely and in a manner that preserved the public health and safety and protected the environment
- Licensee Response Column
 - Regulatory Response Column April 11, 2024, to July 11, 2024
- 9495 hours of inspection and related activities
- Green Performance Indicators
- 11 Green Findings and 4 Severity Level IV Violations
- A Greater-Than-Green finding and Greater-Than-Severity Level IV violation in the Security cornerstone



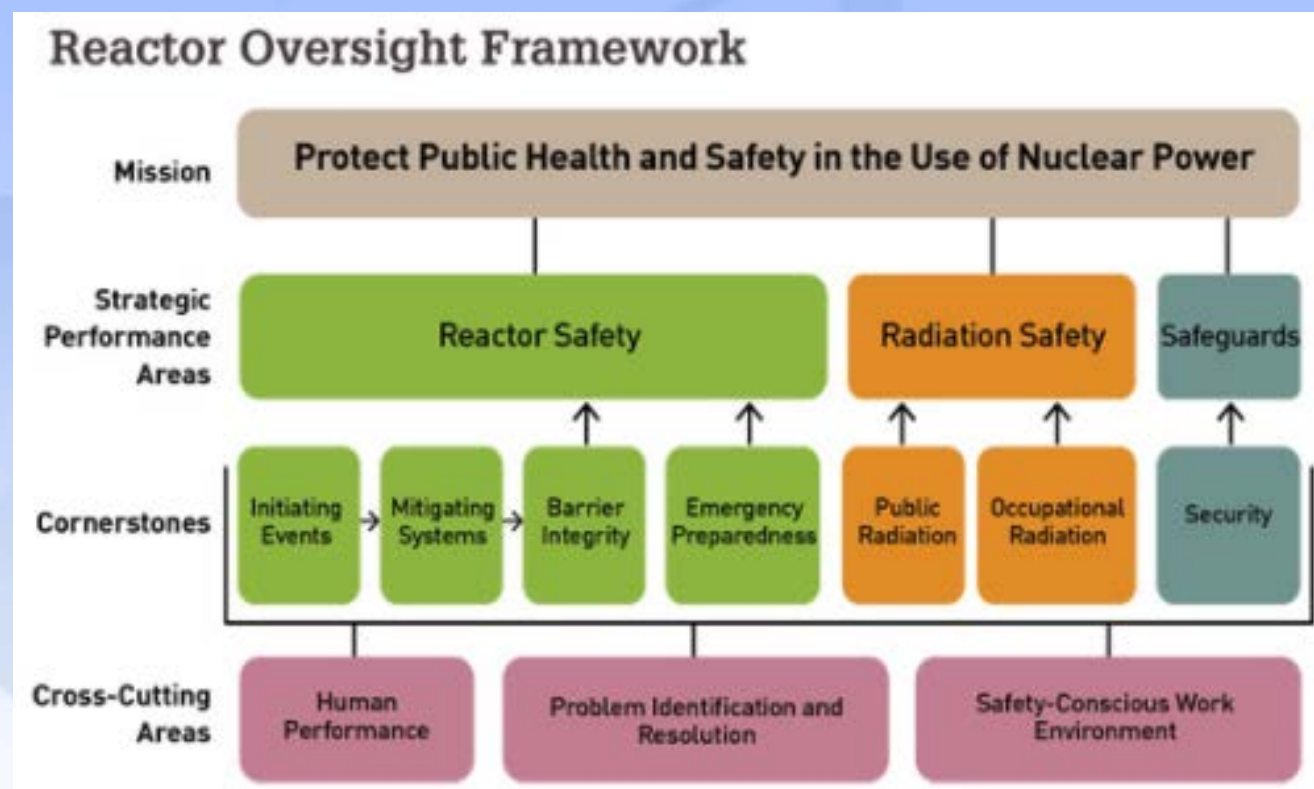
Safety Culture

Cross-Cutting Aspects

- No Human Performance concerns
- 2024 Problem Identification and Resolution (PI&R) Inspection
- No SCWE concerns

Allegations

- 3 allegations in 2024 (National Avg. = 3)
- Resident inspectors and regional staff are highly accessible and take all allegation matters seriously



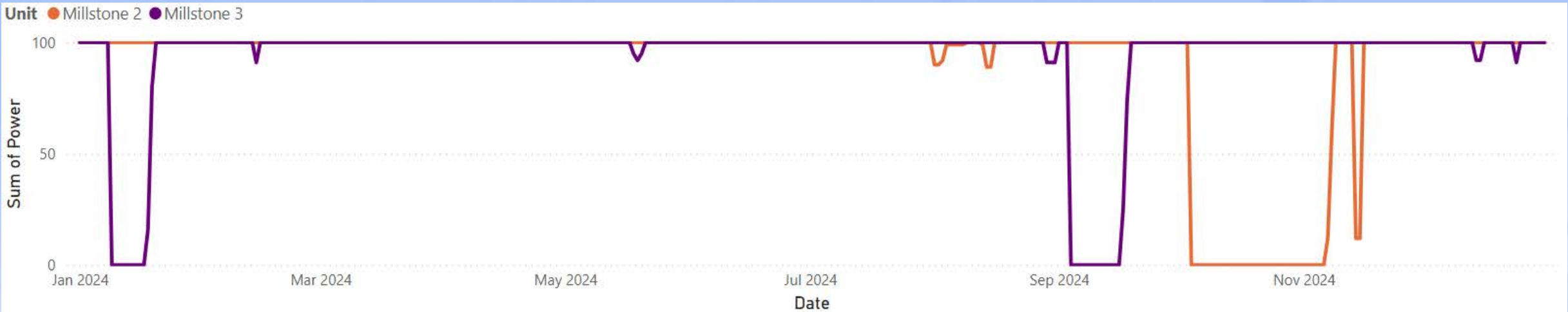


Millstone Finding Summary - 2024

- Security Cornerstone Greater-than-Green Finding and Greater-than-Severity Level IV Violation
 - Special Inspection Report, November 16, 2023 (ML24010A182)
 - Special Inspection Follow-up Report and Choice Letter, April 25, 2024 (ML24116A045)
 - Final Significance Determination and Notice of Violation, May 2, 2024 (ML24123A204)
 - Supplemental Inspection Report, August 6, 2024 (ML24219A016)
- Unit 2 CST Trench Aging Management
 - NCV 05000336/2024001-01, Failure to Implement Structures Monitoring, Infrequently Accessed Areas, and Buried Piping Aging Management Programs for the Condensate Storage Tank (CST) Pipe Trench



Millstone Power History - 2024



Date	Unit	Cause
January 9, 2024	3	Unplanned Downpower – Feedwater Leak Repair
September 4, 2024	3	Planned Maintenance Outage – Pressurizer Safety Relief Valve Replacement
October 4, 2024	2	Refueling Outage
November 14, 2024	2	Unplanned Downpower - Switchyard Repair



Millstone Licensee Event Reports - 2024

Event Date	Unit	Topic	Status
October 20, 2023	3	Pressurizer power operated relief valve failed to open during surveillance testing resulting in a condition prohibited by Technical Specifications	Closed (Inspection Report 2024004)
April 14, 2024	2	Control room air conditioning unit inoperable due to refrigerant overcharge resulting in a condition prohibited by Technical Specifications	Closed (Inspection Report 2024002)
August 21, 2024	3	Loss of safety function and condition prohibited by Technical Specifications for loss of secondary containment boundary	Closed (Inspection Report 2024004)
October 1, 2024	2	Two main steam safety valves failed to lift within the acceptance criteria resulting in a condition prohibited by Technical Specifications	Open
October 10, 2024	3	Door latch failure resulted in loss of safety function for secondary containment boundary	Closed (Inspection Report 2024004)



Diane Screnci

Diane.Screnci@nrc.gov

610-337-5330



NRC Social Media Channels



- Facebook www.facebook.com/nrcgov
- Twitter twitter.com/nrcgov
- YouTube www.youtube.com/user/NRCgov
- Instagram www.instagram.com/nrcgov
- Flickr www.flickr.com/photos/nrcgov/sets
- LinkedIn www.linkedin.com/company/u-s--nuclear-regulatory-commission/mycompany/
- GovDelivery service.govdelivery.com/accounts/USNRC/subscriber/new



More Information

- Inspection Reports
 - <https://www.nrc.gov/reactors/operating/oversight/listofrpts-body.html>
- Reactor Oversight Process
 - <https://www.nrc.gov/reactors/operating/oversight.html>
- Fact Sheets and Brochures
 - <https://www.nrc.gov/reading-rm/doc-collections/fact-sheets/>
- NRC Information Digest
 - <https://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1350/>
- Regulations
 - <https://www.nrc.gov/reading-rm/doc-collections/cfr/>



Annual Assessment Meeting Feedback



Ways to submit feedback:

- Scan QR Code
- Visit <https://feedback.nrc.gov/pmfs/> and enter the meeting number
- Visit the NRC Public Meeting Schedule after the meeting and click the Meeting Feedback Form link

Meeting number: 20250469



Questions and Answers





This Ends the Meeting
Thank You for Attending