

NUCLEAR ENERGY ADVISORY COUNCIL
March 16, 2023 6:30 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

Members not present:

Mr. A. Jordan
Mr. John McGunnigle
Mr. Craig Salonia

1. Call to Order of Meeting

The Council's Chair called the meeting to order at 6:30.

2. Approval of Minutes of the December 15, 2022 NEAC meeting.

A motion was made to approve the minutes was made by Mr. Woolrich and seconded by Mr. Sherrard. Minutes were approved without objection.

3. 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; E. Bousquet, Resident Inspector; E. Allen, Resident Inspector; J. DeBoer, Senior Project Engineer; S. Elkhiamy, Senior Project Engineer.

- 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 White Flint, MD.
- b. Resident Inspectors (RIs) Mr. Allen and Mr. Bosquet introduced themselves and stated their experience and education. Mr. Allen noted that the Senior Resident Inspector was not able to attend the meeting due to a schedule conflict.
- c. Mr. Allen briefed the Council on overall NRC assessment of performance related to Dominion Energy's operation of Millstone in 2022. He stated that Millstone continues to operate safely and securely, protect public health and safety, and protect the environment. The NRC conducted over 9,054 hours of inspections of Millstone in 2022. Based upon NRC's assessment, both Millstone Units 2 and 3

remain in the Licensee Response Column of the Regulatory Response Matrix (the highest level of performance) and will therefore remain under baseline inspection. All NRC performance indicators (PIs) are Green. The NRC has not identified any cross-cutting issues. The NRC identified ten inspection findings. Two were evaluated under the traditional enforcement program and determined to be severity level IV violations.

- d. Mr. Allen discussed the Reactor Oversight Program including a discussion on the action matrix. Mr. Allen noted that both Millstone Units remain in the Licensee Response column. Nationally 87 operating reactors are in the Licensee Response Column and 6 are in the Regulatory Response Column.
- e. Mr. Allen discussed how the significance determination process is used to evaluate the risk significance of findings which are reflected in the color from Green to Red. He noted that nationally there were 381 Green findings, 1 greater than green finding and 6 white findings collectively at the 93 operating reactors in 2022. He also noted that collectively all 6247 of the performance indicators at the 93 reactors were all Green.
- f. Mr. Allen stated the NRC has no Safety Conscious Work Environment (SCWE) concerns for 2022 at Millstone. The NRC assesses safety culture as part of Problem Identification and Resolution (PI&R) inspections. In the 2022 PI&R inspection the NRC inspection team determined Dominion's corrective action (CA) process was effective and that there were no challenges to SCWE with Millstone staff willing to raise concerns. There were three allegations in 2022 which is not excessive when compared to the industry average. NRC RI's remain available and accessible to all staff working at Millstone.
- g. Mr. Allen discussed NRC actions in response to the COVID-19 public health emergency (PHE). NRC learned that RI's could monitor the plants using technology. Mr. Woolrich asked how they could do that from home. Mr. Allen responded that the RI's have remote connection access to the same Plant Process Computer as the operators in the control room and can monitor the same parameters. RI's have also been given access to the Dominion databases for corrective actions and work control used by the plant. During 2021, the SRI and RI's rotated so as to ensure one NRC inspector was on site at a time. Now they have a dedicated continuity of operations plan that integrates technology with on site time focused on the most risk significant components at the plants.
 - i. Mr. Semancik noted the NRC has always placed great emphasis on licensed operators and asked how the NRC is monitoring licensed operator performance and standards. Mr. Allen noted that although during 2021 with higher transmission rates they used a hybrid approach to minimize the risk of infecting the operators while monitoring risk significant activities, the NRC is back to full baseline inspections including monitoring operator activities in the plant. RI's walkdown safety significant areas of the plant on a daily basis.

- ii. Mr. Young also noted that NRC inspection procedures require RI's spend a minimum of 4 hours per calendar quarter directly observing activities in the control room and that other offsite inspectors also observe more activities.

- 4. **Public Comment.** There were four members of the public present. Mr. Young asked if any members had any questions or comments.
 - a. Ms. Nancy Burton had several questions for the NRC. Ms. Burton asked what the community lost out on during COVID. Specifically, she asked if the required environmental monitoring was performed and whether anything unusual was identified. Mr. Allen responded that Dominion maintained the staffing to complete required environmental monitoring. He noted that experts from regional offices inspect the environmental monitoring program annually. He stated that it was his opinion that Dominion fully met all monitoring requirements. Ms. Burton asked why information was missing from the website. Mr. Young responded that as part of the environmental monitoring program, Dominion must submit its report annually. He noted that the 2022 report and data is expected to be submitted in April and that all the reports are publicly available on the NRC website.^{1, 2}
 - b. Ms. Burton asked if a list of the Council members was available to the public. Mr. Semancik noted that the list of members is included as Appendix I to the NEAC 2022 Annual Report which is publicly available on the DEEP website.³

5. Questions from the Council

- a. Mr. Sheehan asked what mechanism Dominion uses to ensure employees can express their frustrations and raise safety concerns. Mr. Allen stated that everyone on site gets training on how to raise safety concerns. The preferred path is through their supervisor but they can also report their concerns through the Dominion Employee Concerns Program (ECP) coordinator or can go directly to the NRC. Mr. Sheehan recalled that Dominion moved the ECP program to corporate in Richmond and asked if employees still have a place on site to voice concerns. Mr. Young responded that Dominion maintains an ECP contact on site that is available to employees. He reiterated that the NRC has assessed the station as having a healthy safety culture.
- b. Mr. Sheehan asked about the corrective action backlog especially in light of supply chain issues related to the PHE. He asked if corrective actions are being addressed in a timely fashion or are they languishing in a backlog. Mr. Allen replied that most corrective actions are completed in 1 to 2 weeks. He also

¹ <https://www.nrc.gov/reactors/operating/ops-experience/tritium/plant-specific-reports/mill2-3.html>

² DEEP's independent environmental data is also publicly available and can be accessed from <https://portal.ct.gov/DEEP/Radiation/Millstone-Nuclear-Power-Plant>

³ <https://portal.ct.gov/DEEP/Radiation/Nuclear-Topics>

noted that many equipment issues require a plant shutdown to fix and that these are scheduled for refueling and maintenance outages.

- c. Mr. Sheehan noted that license extension has been approved for Millstone and further license extension is currently being considered in the industry. He also stated that further analysis demonstrating adequate safety margin of reactor vessels to the effects of neutron embrittlement was likely to be a limiting factor. He asked if the NRC keeps track of commitments associated with the period of extended operations⁴. Mr. Allen noted the NRC now has an inspection for aging management⁵ and noted that he recently watched Dominion repair a concrete crack that maintenance personnel had identified in an aging management activity. He further noted that Millstone Unit 2 is in its 20 year license extension period but that Unit 3 is still within its originally licensed period. He stated that NRC assesses the Millstone aging management program to be acceptable and robust.
- d. Mr. Woolrich noted recent reports that Dominion is considering integrating a data center on site. He asked if the NRC has a position on that. Mr. Allen responded that the NRC has not seen an application for modifying the plant to incorporate a data center yet, but that the NRC would evaluate any such proposal for impact on public safety including a public comment period. Mr. Young noted that other nuclear power plants have sited data centers on site. For such applications, he stated the NRC ensures that it does not adversely affect the plant or present an increase to the risk of a loss of offsite power. Mr. Semancik noted that licensees have the ability to change a plant design without prior NRC approval if they evaluate that the proposed change does not represent a new failure or present a significant reduction in safety margin. He asked if a data center might fall under this provision and not require prior NRC review and approval nor public comment period. Mr. Young states that 10 CFR 50.59 does allow the licensee to make changes to the plant without prior NRC approval. In these cases, the NRC would conduct inspections to verify that design and the associated safety evaluation meet all requirements.
 - i. Senator Osten noted that entity that approached Dominion about siting a data center has tried to site them in other locations and has not yet been successful. She cautioned against assuming he would be successful at Millstone.
- e. Mr. Semancik noted that every performance indicator at every site in the country was Green in 2022 and questioned how good the indicators were if none ever exceeded green. Mr. Allen responded that the reactor oversight program is

⁴ The Atomic Energy Act authorizes the NRC to issue licenses for commercial power reactors to operate for up to 40 years. These licenses can be renewed for an additional 20 years at a time. The time beyond 40 years is known as the "period of extended operation."

⁵ "Aging management" is the term used by the NRC to describe the licensee program required by 10 CFR §54.21(a)(1)(i) and (ii) to demonstrate the company is adequately managing the effects of aging of the plant systems, structures, and components during the period of extended operation.

a mature program with 20 years of operating experience that focuses on risk significant equipment. Mr. Young added that NRC management also noticed this fact and couldn't explain why. However, he noted that plant performance across the nation was reflective of this with low numbers of complicated and unplanned scrams.

- f. Mr. Semancik noted that Millstone was unique in having a railroad track that goes through a portion of the owner controlled area. In light of the train derailment and chemical release that occurred in East Palestine, Ohio, how does the NRC review potential impacts of a train derailment to Millstone? Mr. Young responded that as part of the original licensing, the NRC reviewed the potential impact of train accidents as a hazard that could affect the station. They ensured the licensee had appropriate processes, plans, and procedures in place to protect the workers (including licensed operators) needed to assure plant safety. They also review impacts to evacuations and offsite response. Mr. Semancik asked if there were any periodic reviews of the what might be shipped by rail to ensure this analysis remains bounding. Mr. Young said there was no periodic review, but that the station has emergency preparedness and operating procedures necessary to take appropriate actions to ensure public protection.
 - g. Mr. Woolrich noted that there was no media present and challenged to Council to ask local media why they no longer cover Council meetings.
6. **Additional Public Comment.** Mr. Young asked if there were further questions from the public.
- a. Ms. Burton said she was not aware that ECP had moved to Virginia and asked for clarification about the presence of staff on site to address safety allegations. Mr. Allen responded that although ECP has a smaller footprint on site than in the past, Dominion maintains an ECP coordinator in site. He also reiterated that employees can report allegations to the NRC RI's on site.
 - b. Ms. Burton asked if there was somebody who keeps track of commitments made as part of the life extension license amendment. Mr. Young replied that in order for a plant to be granted a license extension beyond its original 40-year license period, the Aging Management Program is reviewed and approved by the NRC. While the NRC reviews and approves the program, Dominion maintains the documentation and tracks the commitments. The NRC then conducts license renewal inspections to verify the licensee is completing its commitments. The results of these inspections are publicly available in the inspection reports.
 - c. Ms. Burton asked about any changes in fish populations around Millstone. Mr. Allen responded that Dominion will update its radiological effluent report at the end of April.
 - d. Ms. Burton asked for more information about the concrete crack mentioned by Mr. Allen. Specifically, she wanted to know where the crack was, how big was it, and what was the cause. Mr. Young responded that the crack was repaired by the licensee before it reached a threshold that would adversely affect any

structure and that it was repaired proactively. Typically, such cracks are caused by shifting ground and that the program is designed to identify and repair these types of cracks.

- e. Ms. Burton asked to follow up on the issue with train tracks near the station and asked for clarification whether NRC had a program to identify materials transported by rail on this line. Mr. Young replied that in the original analysis of the plant, the NRC reviews a worst case scenario and ensures the licensee has necessary plant and emergency procedures to handle this worst case.
- f. Ms. Burton asked if there was any progress of Company towards closed cooling water systems. Mr. Allen stated there is no current application to the NRC to modify the plant to change to closed cooling water. Mr. Young added that the NRC only reviews the plant design as built or submitted.

7. NEAC Business

a. NRC Correspondence Reviewed since past meeting.

The following NRC Correspondence was reviewed by the Council:

- i. Request For Withholding Information from Public Disclosure for Dominion Fleet - Response to Request for Additional Information Regarding NRC Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors" (EPID L-2017-LRC-0000 dated December 21, 2022
- ii. Millstone Power Station, Units 2 and 3 – Security Baseline Inspection Report 05000336/2022401 and 05000423/2022401 and Preliminary Finding(S) of Greater than Very Low Significance and Apparent Violation(S) dated January 26, 2023.
 - 1. DEEP Radiation Division staff reviewed the security related information concerning these findings and details of the issues. DEEP staff met with the NRC security inspectors during their inspection to discuss all potential findings and with Dominion Security staff to review the specific findings including a walkdown at the site. DEEP reviewed the OUO (Official Use Only) version of the notice of violation. Based upon this review, DEEP concluded that Dominion has taken appropriate and adequate compensatory and corrective actions to eliminate any potential vulnerabilities and ensure the security of the station. The NRC has done a thorough job in their inspection, and Dominion has responded appropriately. There is no existing threat to station security or the health and safety of the public.

- iii. Annual Assessment Letter for Millstone Power Station, Units 2 and 3 (REPORTS 05000336/2022006 and 05000423/2022006) dated March 1, 2023.

b. Other Correspondence Reviewed since past meeting.

The following other Correspondence was reviewed by the Council.

- i. CTInsider article, "The changing face of nuclear power: New tech could lead to an energy renaissance" dated February 22, 2023
- ii. Connecticut General Assembly raised bills:
 - 1. S.B. No. 1170 (RAISED) An Act Concerning the Procurement of Zero-Carbon Resources from Eligible Nuclear Power Generating Facilities.
 - 2. S.B. No. 1101 (RAISED) An Act Concerning Revisions to the Nuclear Moratorium Statute.
 - 3. S.B. No. 1099 (RAISED) An Act Creating a Connecticut Nuclear Advisory Council
- iii. Arkansas House Bill 1142, An Act to Create the Arkansas Nuclear Recycling Program.

c. Future Council Meetings.

- i. June 15, 2023 – Public Forum on Deployment of Additional Reactors at Millstone (proposed)
 - 1. Mr. Semancik will explore potential presenters.
 - 2. Sen Osten recommended more advance outreach to bolster public engagement.
- ii. September 21, 2023 – Millstone Operations Update (Dominion Presentation)
- iii. December 14, 2023 – Annual Report Writing Meeting

8. Adjournment

Motion was made by Mr. Sheehan and seconded by Mr. Sherrard to adjourn; no objections; unanimous vote in favor; meeting adjourned at 8:02 PM.

Millstone Units 2 & 3 Annual Assessment Meeting for 2022

Reactor Oversight Process

**Nuclear Regulatory Commission
Region I**

March 16, 2023



Agenda

- Opening Remarks – Matt Young
- 2022 Millstone ROP Assessment Summary – Eben Allen
- COVID–19 Response Update – Eben Allen
- Q&A – Matt Young





Overall Assessment

**Millstone Units 2 and 3 operated safely in 2022
and continue to do so today**





Inspection and Oversight

- **Three full-time residents assigned to Millstone**



Justin Fuller
Senior Resident



Eben Allen
Resident Inspector



Earl Bousquet
Resident Inspector

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

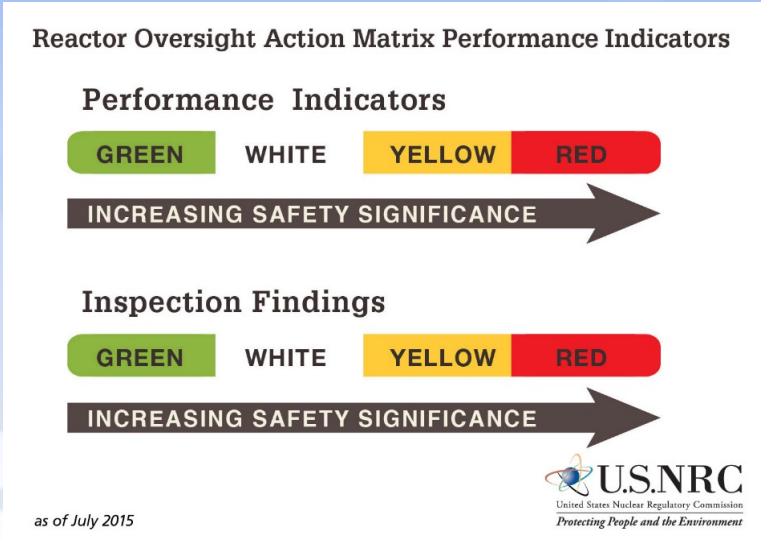
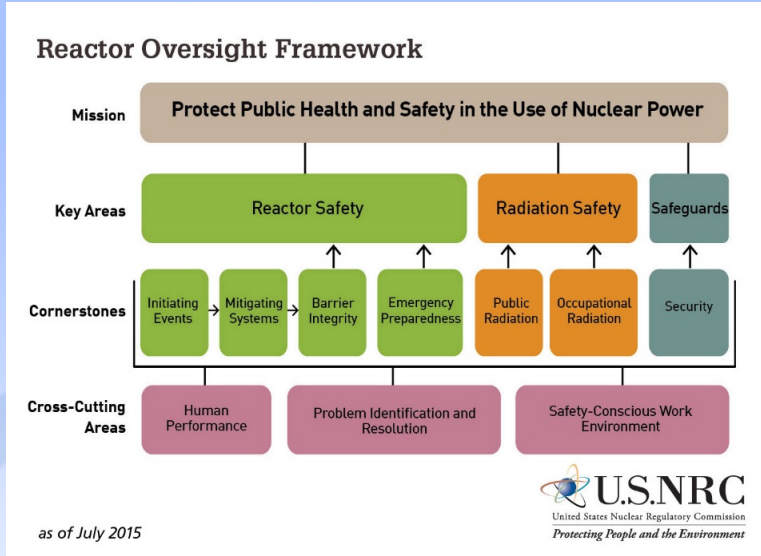


Millstone Units 2 & 3 2022 Assessment Summary

- **Operated safely and in a manner that preserved the public health and safety and protected the environment**
- **Licensee Response Column**
- **9054 hours of inspection and related activities**
- **Green Performance Indicators**
- **10 Green Findings and 2 Severity Level IV violations**
- **1 Apparent Violation – Significance not finalized in Security Cornerstone**



Reactor Oversight Process





Action Matrix Concept

Licensee Response	Regulatory Response	Degraded Performance	Multiple/Repetitive Degraded Cornerstone	Unacceptable Performance
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Increasing Safety Significance

Increasing NRC Inspection Efforts

Increasing NRC/Licensee Management Involvement

Increasing Regulatory Actions



National Summary of Plant Performance

Status as of 12/31/2022

Licensee Response	87
Regulatory Response	6
Degraded Cornerstone	0
Multiple/Repetitive Degraded Cornerstone	0
Unacceptable Performance	0
IMC 0350 Oversight	0
Total	93



National Summary

- **Performance Indicator Results for 2022***

– Green	6247
– White	0
– Yellow	0
– Red	0

*PIs are counted per plant per quarter

- **Total Inspection Findings in 2022#**

– Green	381
– Greater-than-Green	1
– White	6
– Yellow	0
– Red	0

Finding data current as of 2/24/2023



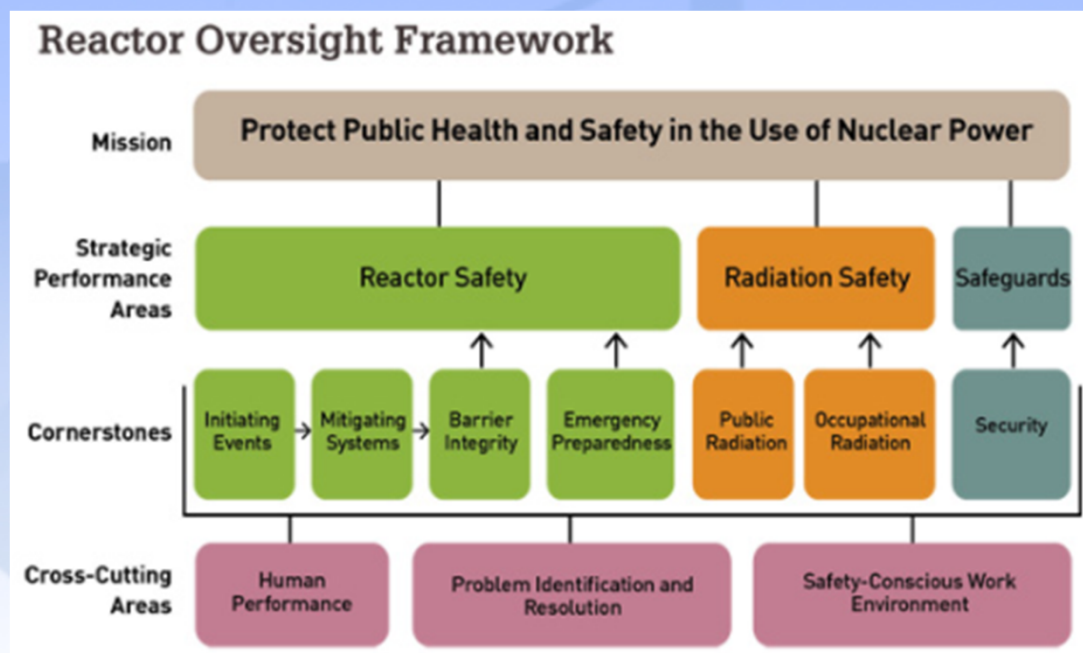
Safety Conscious Work Environment (SCWE)

SCWE

- No SCWE concerns
- The last PI&R was September 2022

Allegations

- 3 allegations in 2022
- Resident inspectors and regional staff are highly accessible and take all allegation matters seriously





NRC Actions in Response to COVID-19

- **Monitored plant activities through inspections and oversight**
- **Maintained emergency response capabilities within Regional Incident Response Centers and our headquarters Operations Center**





NRC Response to COVID-19

- **Additional Actions:**
 - Expanded use of telework where appropriate
 - Dedicated Continuity of Operations Plan
 - Coordinating actions with industry on best practices to minimize impacts
 - Risk-informing “eyes-on” inspections through residents’ and regional inspections

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NRC Social Media Channels

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www.facebook.com/nrcgov/

Twitter

twitter.com/nrcgov

YouTube

www.youtube.com/user/NRCgov

Flickr

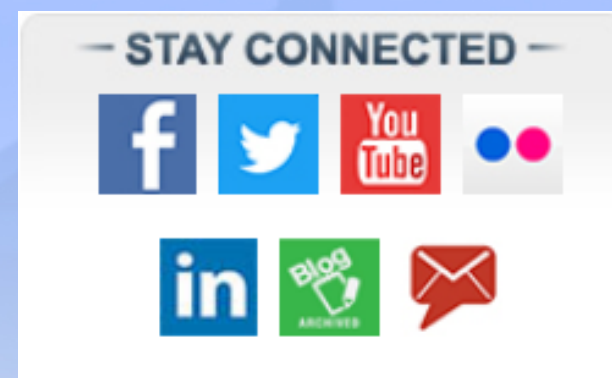
www.flickr.com/photos/nrcgov/

LinkedIn

www.linkedin.com/company/u-s--nuclear-regulatory-commission/

RSS

www.nrc.gov/public-involve/listserver.html#rss





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Meeting number: 20230220



Questions and Answers





This ends the Meeting

Thank You for Attending