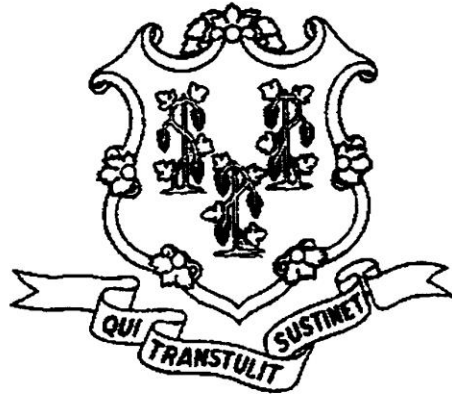


STATE OF CONNECTICUT



THE NUCLEAR ENERGY ADVISORY COUNCIL REPORT

2019

Established Pursuant to Public Act 96-245

Rep. Kevin Ryan, Chairperson

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CHARGE TO THE COUNCIL

Section 17 of Public Act 96-245(now CGS16-11a as amended) created the Nuclear Energy Advisory Council (NEAC) and requires it to:

1. Hold regular public meetings to discuss issues relating to the safety and operations of nuclear power plants and to advise the governor, legislature, and municipalities within a five-mile radius of the plants on these issues;
2. Work with federal, state, and local agencies and the companies operating such plants to ensure public health and safety;
3. Discuss proposed changes in, or problems arising from, the operation of the plants;
4. Communicate, through reports and presentations, with the plants' operators about safety or operational concerns at the plants, and
5. Review the current status of the plants with the Nuclear Regulatory Commission.

COUNCIL MEMBERS

The Council consists of fourteen (14) members appointed by the Governor, legislative leadership, and the executive bodies in the towns in or near which the state's nuclear power plants are located. There were six active members at the end of 2019. One member resigned his position due to geographical reassignment. (Appendix 1).

Executive Summary

This is the twenty-first annual report presented by the Nuclear Energy Advisory Council (NEAC). During calendar year (CY) 2019, the NEAC met two times and received reports from representatives of the Nuclear Regulatory Commission (NRC) and Dominion Energy Nuclear Connecticut as well as a written status report from Connecticut Yankee Independent Spent Fuel Storage Installation (ISFSI). Routine and Special NRC Millstone Power Station (MPS) inspection and performance assessment reports were also received and reviewed.

The NEAC continues to examine issues relating to the safety and operations of nuclear power plants and advise the governor, legislature, municipalities, and residents within a five-mile radius of the plants on these issues.

During 2019, Dominion continued to safely operate the nuclear plants at Millstone Power Station. Spent nuclear fuel continues to be safely stored and monitored in wet storage and ISFSI at Millstone Power Station and in ISFSI at Connecticut Yankee. NRC and DEEP oversight provides effective oversight of activities.

NEAC Recommended Actions

State:

- Facilitate and encourage the Division of Emergency Management and Homeland Security (DEMHS)/DEEP nuclear emergency preparedness collaboration and continue executing current responsibilities and duties in kind.
- The Governor/General Assembly/DEEP should endorse a nuclear waste strategy that includes consent based consolidated interim storage.

NEAC:

- The NEAC will continue to discharge its duties as specified by Section 17 of Public Act 96-245 (now CGS16-11a as amended). The Council acknowledges Dominion Energy's improvements in performance and safety culture.
- State energy policy should recognize the importance of Millstone for regional grid fuel security as indicated by the Independent System Operator (ISO) New England.
- The Council requests the Legislature clarify NEAC's responsibilities for nuclear power plant decommissioning in the state.

Highlighted Findings

Millstone Operations

Based upon presentations of Millstone Power Station (Millstone) in Waterford, CT performance made to the Nuclear Energy Advisory Council (the Council) by the U.S. Nuclear Regulatory Commission (NRC) and Dominion Nuclear Energy, Inc. (Dominion) in conjunction with the Council's review of NRC and Dominion correspondence and reports, the Council:

- Did not identify any safety or operational concerns with the plants.
- Concludes the NRC continues to provide effective regulatory oversight

The NRC briefed the Council on its annual assessment of performance at Millstone. This assessment was informed by the observations, reports, and inspections conducted by NRC Resident Inspectors and supplemented with regional and headquarters inspectors in areas such as security, cybersecurity, health physics and engineering design basis. The NRC concluded that Dominion Nuclear Energy continues to operate Millstone Power Station safely, protect public health and safety, and protect the environment. Millstone Units 2 and 3 both remain in the Licensee Response column of the Regulatory Response Matrix (the highest level of performance) and will therefore remain under baseline inspection. There were no scrams (automatic shutdowns) of either Millstone unit in 2018. The NRC identified nine inspection findings, - five in design basis inspection, all nine findings were of very low safety significance (green).



The NRC briefed the Council on Dominion's request for Millstone Unit 2 to adopt a program for risk informed treatment of structures, systems and components (SSC) for nuclear power reactors pursuant to 10 CFR 50.69. The Council noted that this program, if implemented according to regulatory standards, would help to focus resources on the most risk significant systems and improve safety/

The Council reviewed NRC staff recommendations for enhancing the Reactor Oversight Process (SECY-19-0067, June 28, 2019) and provided written comments urging careful considerations to reducing inspections (Federal Register Notice NRC-2019-0155, Reactor Oversight Process Enhancement Initiative (August 7, 2019)). This letter is provided as an attachment to this report.

Dominion briefed the Council on its internal assessment of performance including two unplanned shutdowns:

- November 3, 2018 Millstone Unit No. 2 shutdown from 20% power due to In Core Instrumentation (ICI) failures.
- April 22, 2019 Millstone Unit No. 2 turbine generator taken offline to repair a failed feedwater heater (FWH) and repair pressure relief valves.

Based upon the information presented and detailed in the minutes, the Council did not identify any safety or operational concerns associated with these shutdowns. Dominion also briefed the Council on their Voluntary Retirement Program. The Council did not identify any safety culture concerns with Dominion's implementation but urged Dominion to continue to monitor and assess any impact of staffing changes and turnover to safety culture of the station going forward.

There were two additional unplanned shutdowns of Millstone units in 2019 that occurred after the presentations. These will be reviewed by the Council in 2020:

- December 17, 2019 manual shutdown of Millstone Unit 3 required by the plant's operating license when Dominion was unable to complete repairs to a standby emergency diesel generator within the allowed outage time. The shutdown was uncomplicated. Dominion completed repairs to the diesel generator and returned the unit to operation on December 23, 2019
- December 27, 2019, operators manually tripped (shutdown) Millstone Unit 2 due to a failure of a feedwater pump. The shutdown was uncomplicated. The pump was repaired and the unit returned to service on December 29, 2019

No emergency events in were declared at either Millstone or Connecticut Yankee in 2019.

There were no environmental impact events at Millstone in 2019.

Decommissioning:

Millstone - No significant decommissioning activities were conducted at the unit during 2019.

Connecticut Yankee – Normal operations, no significant regulatory findings were identified.

High Level Nuclear Waste:

The House refile of the Nuclear Waste Policy Amendments Act bill (HR 2699 was passed by the full Energy Committee on November 20, 2019 on a voice vote (Note: Congressman Courtney and Congressman Keating were original co-sponsors of the bill). The Senate Environment & Public Works Committee Chairman Barrasso introduced the Nuclear Waste Policy Amendments Act of 2019 (S 2917) that mirrors the HR 2699 bill in the House.



There has been no action taken by the Senate Energy and Natural Resources Committee on the bi-partisan bill that was introduced last year to amend the Nuclear Waste Policy Act (S 1234 - the Nuclear Waste Administration Act of 2019).

In December, President Trump signed into law two measures to fund the federal government through the fiscal year that ends on September 30, 2020. In a deal reached by the House and Senate Appropriations leaders, the 12 individual spending bills were combined into two "omnibus" pieces of legislation.

One of the omnibus bills (H.R. 1865) included the Energy & Water Development bill. Both the House and Senate E&WD bills that passed in their respective branches contained no funding for Yucca Mountain but both did for the first time include funding for Consolidated Interim Storage (CIS). The Senate bill also included authorization for a pilot consent based CIS facility. However, there was no direction or funding for CIS in the omnibus bill. Accordingly there is no FY 2020 funding for any federal action on a national nuclear waste management program.

Nuclear Regulatory Commission - Private Consolidated Interim Storage (CIS) License Applications

The NRC Atomic Safety and Licensing Board for both the CIS license applications has closed the hearing process for both as none of the contentions raised were determined admissible for an evidentiary hearing. The intervenors on both the Texas and New Mexico applications have appealed to the Commissioners.

NRC staff reported to the Commissioners in a meeting late last year that they expect to complete the environmental and technical/safety reviews of both applications before May 2021.

Community Advisory Board Best Practices Report

Under last year's "Nuclear Energy Innovation and Modernization Act" the NRC was directed to hold at least ten public hearings and develop a report on the best practices for community engagement panels near decommissioning nuclear power plants. The Council provided written response to the questionnaire. These comments are included as an attachment to this report.

Decommissioning Rulemaking

The Draft Rulemaking continues to have no set timetable for the NRC Commissioners to take action. NRC staff's long stated goal is to publish the final rule by mid-2021.

Council Activities in 2019

As required by CGS16-11a (PA 96-245) as amended, the NEAC held two public meetings and attended one public meeting of the Connecticut Yankee Fuel Storage Advisory Committee. The purpose of these meetings was to provide a venue for discussion of issues relating to the safe operation of the state's nuclear power plants. Meeting minutes are included in Appendix 2.

- April 24, 2019 (Waterford Public Library): This was a joint meeting with the NRC Region I staff and focused on the Annual Assessment Report of Millstone Power Station Units 2 and 3 for the four quarters of CY2018. It was reported that overall both units were operated in a manner that preserved public health and safety and fully met NRC cornerstone objectives.
- May 21, 2019 (Riverhouse at Goodspeed Station, Haddam CT) As noted in the minutes to the third quarter meeting, no second quarter Council meeting was held due to scheduling conflicts and reduced membership. However four Council members, - Mr. Semancik, Mr. Sherrard, Mr. Woolrich and Mr. Salonica,- all attended the Connecticut Yankee (CY) Fuel Storage Advisory Committee Meeting (FSAC) on Tuesday, May 21, 2019. While this was not specifically noticed as a Nuclear Energy Advisory Council (NEAC) meeting, it was a public meeting and notice was provided. The issues discussed are consistent with the Council's charter.
- September 17, 2019 (Waterford Town Hall): Dominion Nuclear Connecticut representatives provided an update of activities at Millstone Power Station.
- December 13, 2019 (Millstone Simulator Training Building in Waterford, CT): Meeting was cancelled due to ice storm.

Millstone 1 Decommissioning Advisory Committee (M1DAC): Since Millstone 1 remains in Safe Storage (SAFSTORE) and no significant activities were conducted at the Unit during the past calendar year, M1DAC did not meet in CY2019.

Recommendations

STATE

1. DEMHS and DEEP should continue to address any emergency preparedness issues at Connecticut's nuclear sites.
2. DEEP, in conjunction with Connecticut State Police should continue to address any security issues at Connecticut's nuclear sites.
3. DEEP should continue radiological and environmental monitoring of Connecticut's nuclear sites.
4. The Governor, General Assembly, DEEP, and NEAC should continue to insist that the NRC continue vigilant oversight of Connecticut Yankee and Millstone Power Station sites for as long as high-level nuclear waste remains on site.
5. The Governor, General Assembly, and DEEP should encourage the federal government to develop a solution to the spent fuel storage. Specifically, The Governor, General Assembly and DEEP should endorse a nuclear waste strategy that includes consent based consolidated interim storage that gives priority to removal of waste from permanently shutdown reactor.
6. Elected officials should work with NEAC to make appointments necessary to fill vacant Council positions.

NEAC

1. Continue to monitor the stability of the Employee Concern Program and Safety Conscious Work Environment and Corrective Action Program at Millstone Power Station.
2. Continue to monitor operations and activities at Millstone Power Station and Connecticut Yankee Site, including the dry cask storage programs.
3. Continue to encourage the development of a solution to the problem of Spent Nuclear Fuel, High Level Waste and Greater Than Class C Low-Level Radioactive Waste and the safe transfer of this nuclear waste from Connecticut. Including the establishment of a consent based consolidated interim storage that gives priority to removal of SNF and GTCC waste from permanently shutdown reactor sites and transfers title of SNF to DOE upon receipt.
4. Monitor status of the Low Level Waste Compact and its impact on Connecticut.

Conclusions

Dominion continues to safely operate the nuclear plants at Millstone Power Station. Spent nuclear fuel is safely stored and monitored in wet storage and ISFSI at Millstone Power Station and in ISFSI at Connecticut Yankee. NRC and DEEP oversight provides effective oversight of activities. All oversight entities and stakeholders must continue vigilant oversight of Connecticut Yankee and Millstone Power Station sites for as long as high-level nuclear waste remains on site. Each must encourage the federal government to develop a consolidated interim storage solution to the spent fuel storage problem that prioritizes removal of Spent Nuclear Fuel (SNF) and Greater Than Class C (GTCC) waste from permanently shut down reactor sites and includes transfer of the SNF title to DOE upon receipt.

Appendix 1
NUCLEAR ENERGY ADVISORY COUNCIL MEMBERSHIP

Rep. Kevin Ryan Oakdale: OD, Pennsylvania College of Optometry. Legislator, Adjunct Faculty, University of New Haven.

John W. (Bill) Sheehan Waterford: BS, Naval Science, US Naval Academy; MBA, Rensselaer Polytechnic Institute; former Commanding Officer, Nuclear powered submarine.; retired Navy Captain

Thomas A. Nebel Niantic: BS Industrial Engineering New York Polytechnic University; Retired Monsanto/Solutia - former First Responder & NE HAZMAT Coordinator for company; C.E.R.T. Member Missouri & Connecticut.

Raymond D. Woolrich Waterford: BS, Nuclear Science, US Naval Academy; MS Computer Systems and Financial Management, US Naval Postgraduate School; former Commanding Officer, Nuclear Powered Submarine; retired Navy Captain; Naval Analyst, Sonalysts, Inc.

Craig Salonia Haddam: BS in Medical Technology from Northeastern University. Account manager and trainer for GE Health care Life Sciences division.

James Sherrard Mystic: PhD Nuc. & Mech Eng. MIT/UCONN. Chairman, Nuclear Engineering Technology Department, TRCTC.

Mr. Jeffrey Semancik Groton: BS Physics, US Naval Academy. MS, Electrical Engineering. Former qualified engineer, nuclear powered aircraft carrier. Former Senior Reactor Operator at Millstone Unit 3. Director, Radiation Division, Department of Energy and Environmental Protection.

Members resigning in 2019:

Royce W. James, New London, PhD, Physics, Stevens Institute of Technology; MS, Applied Physics, Columbia University; BS, Physics, New Mexico State University. Physics Professor, U. S. Coast Guard Academy

Appendix 2
NUCLEAR ENERGY ADVISORY COUNCIL
MEETING MINUTES

NUCLEAR ENERGY ADVISORY COUNCIL
April 24, 2019 6:00 PM
Waterford Public Library
49 Rope Ferry Road
Waterford, CT 06385

MINUTES

Members Present

Mr. Jeffrey Semancik representing DEEP Commissioner Dykes
Mr. Bill Sheehan Mr. Craig Salonia
Mr. James Sherrard CDR Royce James
Mr. Ray Woolrich

Members not present
Rep Kevin Ryan, Chair
Mr. Arnold Jordan

1. Call to Order of Meeting

NEAC Alternative Chairperson Mr. Semancik called the meeting to order at 6:00 PM at Waterford Public Library, Waterford, CT.

2. Approval of Minutes of the December 13, 2018 NEAC Meeting

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

3. Program – Briefing on Millstone Power Station Annual Assessment by US Nuclear Regulatory Commission (NRC): P. Krohn, Deputy Director, Division of Reactor Safety; D. Schroeder, Branch Chief, Projects Branch 2, Division of Reactor Projects; M. Draxton, Senior Project Engineer, J. Fuller, Senior Resident Inspector; L. McKown, Resident Inspector; P. Boguszewski, Acting Resident Inspector; and, J. Hughey, Office of Nuclear Reactor Regulation.

- a. Mr. Krohn introduced NRC members. He noted the NRC has 3 full-time resident inspectors at Millstone Station supplemented by specialist inspectors. All inspectors have unfettered access to the facility.
- b. NRC presenters provided introductions including each member's experience in operation and oversight.
- c. Mr. Schroeder briefed the Council on performance of Dominion's operation of Millstone. Mr. Schroeder stated that Millstone continues to operate safely, protect public health and safety, and protect the environment. Millstone Units 2 and 3 are both in the Licensee Response column of the Regulatory Response Matrix (the highest level of performance) and will therefore remain under

baseline inspection. There were no scrams (automatic shutdowns) of either Millstone unit in 2018. The NRC identified nine inspection findings, - five in design basis inspection, all nine findings were of very low safety significance (green).

- d. Mr. Schroeder noted the NRC would be closing two unresolved issues (URI):
 - i. NRC determined Millstone corrective actions associated with Anchor Darling double disk gate valves were complete. Dominion provided a list of six potentially affected valves installed at Unit 2. During the Unit 2 fall 2018 scheduled refueling outage, Millstone inspected all six valves. Two had no issues. Maintenance was conducted on four valves using new high strength components. NRC noted there was no more than minor impact on safety. Although NRC felt Dominion's initial response to the Part 21 notification was slow, they determined Dominion's actions were good.
 - ii. Dominion has addressed URI associated with incoming industry operating experience (OE) not being properly reviewed for applicability to Millstone and not initiating corrective actions (CAs). During the inspection, Dominion reviewed all part 21 notifications. Dominion completed the review of the backlog and NRC inspected in March 2019.
 - 1. Mr. Sheehan asked if Dominion modified their procedure/checklist so they don't get behind again. Mr. Schroeder noted that the OE review was a corporate program. When the responsible individual left the company, the reviews fell through the crack. Corrective actions were implemented to make sure this would not happen again. Mr. Krohn also noted that when NRC questioned individual engineers about the OE, they were aware but the documentation was weak.
 - iii. CDR James asked what the time frame for completing URIs was. Mr. Schroeder stated it varied by issue. For the Anchor Darling URI, the Part 21 notification was issued in 2017 and Dominion resolved it in 2019. Mr. Krohn noted that the NRC's internal metric is 6 months to close URIs.
 - iv. Mr. Semancik asked if the two URI's were related. Mr. Schroeder stated they were not; they were independent issues.
- e. Mr. Schroeder briefed the Council on the status of the Unit 3 Turbine Driven Auxiliary Feedwater (TDAFW) Pump. NRC cited Dominion in 2018 for a repetitive failure to address the issues. This was a white finding, low to medium safety significance. Dominion completed a comprehensive evaluation of margins for the Unit 3 TDAFW pump linkage and controls. Causes were reasonably identified and corrective actions implemented. Several quarterly runs of the pump have been completed since with successful results.
 - i. Mr. Sheehan asked if it was the original system. Mr. McKown stated it was the original system, but that Dominion had improved the margins in settings and maintenance. Performance monitoring was also improved.

- f. Mr. Schroeder briefed the Council on the NRC's assessment of safety culture at Millstone.
 - i. NRC monitors performance of safety culture during biennial Problem Identification and Resolution (PI&R) inspections. During the latest PI&R, NRC concluded implementation of Corrective Action Program (CAP) was effective and there was no evidence of any challenges to Safety Conscious Work Environment (SCWE). Millstone staff, based on interviews, are willing to raise safety concerns by at least one means available.
 - ii. There were two SCWE allegations from Millstone in 2018. This is down from eight in 2017 and eight in 2016 and is lower than the industry mean. Resident inspector staff remains available for reporting safety allegations.
- g. Mr. Schroeder discussed the 2017 confirmatory order for apparent security violations, - related to armorer failed to maintain weapons and falsified records. The armorer claimed he did this due to higher work tasking. In 2019 the NRC completed inspection of all actions required by the confirmatory order and determined that only one remained to be completed, - an action to present OE on the issue to industry counterparts. This final action is scheduled for Aug 2019.
 - i. CDR James inquired whether any action was taken with respect to the contract security firm. Mr. McKown replied that there were a number of activities on roles and responsibilities as well as a workload balance of staffing needs such that labor was distributed more effectively.
 - ii. CDR James noted that in the discussion of safety culture, Security was noted as one of the areas of concern. While he noted there was training and evaluation in the actions, is there a mechanism to document the number of concerns before and after the training? Is there a marker of safety issues? Mr. McKown stated the station tracks the number of employees and they interact on safety issues. The Employee Concerns Program (ECP) supports staff and has internal metrics by department. Mr. Krohn noted that industry baseline for security is 3 per year, and NRC reviews deviations.
- h. Mr. Fuller briefed NEAC on Resident Inspector (RI) activities. He noted that there will be turnover in the resident inspector office. Mr. McKown is transferring to Surry Power Station in Virginia. He is being replaced by Evan Allan in June. Mr. Allen has six years of experience in the NRC and was previously the acting RI at Seabrook. He has an MS in Health Physics and 15 years of experience in the nuclear industry as well as prior navy nuclear reactor operator experience. Mr. Fuller noted resident inspectors are a critical part of NRC's oversight that complete the majority of inspections including 8,699 inspection hours at Millstone in 2018.
 - i. The diversity of NRC RI backgrounds enhances effectiveness. Mr. Fuller's background and experience in nuclear construction culminated in his

identifying a crack on a service water pipe that was noted in a finding. The small crack was on a pipe on Unit 2 at the discharge of the B service water pump that was determined to be through wall. The licensee evaluated the flaw and was able to show that it would continue to perform its safety function. It was not actively leaking as it was a crack in a reinforcing weld on fillet to slip-on flange. Dominion concluded that it was likely a manufacturing defect missed on receipt inspection.

- ii. NRC RI day-to-day inspection are supplemented with regional and headquarters inspectors in areas such as security, cybersecurity, health physics and engineering design basis. In one particular inspection, six NRC engineering inspectors conducted an inspection over five weeks (two of which were on site) in the area of engineering design basis. The inspectors identified five findings of very low safety significance (Green) that added value to the licensee organization. As an example, NRC inspectors identified that in a Dominion Corrective Action for a conduit penetrating through the unit 2 emergency diesel generator room that might not be sealed properly, Dominion engineers incorrectly concluded that the conduit was above the minimum flood height. As a result, the repair was given a low priority. Inspector identified that it was actually below the design basis flood height. As a result, the conduit seal repair priority was increased and completed by the licensee.
 1. Mr. Semancik asked if the original seal discrepancy was part of post Fukushima walk-downs. Mr. Fuller responded that it was. The licensee had found others and repaired them.
 2. Mr. Fuller also noted that the licensee has recognized that five findings in a design basis inspection is higher than average and conducted an extent of condition evaluation that determined overall engineering quality could be improved. Mr. Fuller noted that RI's interact daily with engineers and improvements have been noted.
 3. Mr. Sheehan commented that the Council has noted in the past that engineering at Millstone has been overworked or undermanned or both. He also asked if the licensee has taken any actions to improve process or training. Mr. Fuller stated that the NRC did not believe it was a resource issue in this case, but that engineers did not have the right appreciation that it could be a nonconforming condition that required repair vice justification. NRC felt it was a training issues that has been addressed.
- iii. Mr. Semancik noted that Connecticut Department of Energy and Environmental Protection (DEEP) personnel that observe performance at Millstone appreciate that the NRC RI's are approachable and work with DEEP personnel to address any concerns or issues. He stated it was a

very positive working relationship that provides the state confidence that any potential issues raised by state inspectors are addressed.

- i. Mr. Draxton briefed the Council on two significant licensing changes
 - i. Millstone Unit 2 Spent Fuel Pool (SFP) technical change to storage requirements is expected to be approved 2Q19. The change is to the criticality analysis, not to increase capacity. Specifically, the licensee has asked for additional flexibility on how to store and move the fuel and will increase boron concentration in the water.
 1. Mr. Sheehan asked if this means with more boron you can put spent fuel assemblies closer. Mr Draxton responded that yes, fuel assemblies could be stored closer and that increased boron also ensures SFP remains subcritical under all conditions.
 - ii. Millstone Unit 2 has requested permission to adopt a program for risk informed treatment of structures, systems and components (SSC) for nuclear power reactors pursuant to 10 CFR 50.69. Mr. Draxton explained that most existing NRC regulation categorize SSCs based on a deterministic engineering approach where specific safety components are designed to mitigate design basis events. This results in three categories of components: safety-related (SR), important to safety, and basic. Each category get a specific treatment with respect to quality assurance (QA), quality control (QC) and testing. SR components have special treatment requirements (more QA, etc.) defined in regulation. Basic components are required for electrical generation. Important to safety components are not defined in regulation. 50.69 allows licensees to enhance this classification through the use of Probabilistic Risk Assessment (PRA). This was a recommendation post Three Mile Island (TMI) to use PRA insights in addition to safety related. Under 50.69 there are four classification for a Risk Informed Safety Component (RISC): RISC 1 – safety significant function (SR), RISC 2 – non SR with safety significant function; RISC 3 – SR with low safety significance; and, RISC 4 – Non-SR with low safety significance. RISC 1 and 2 components would receive Special Treatment. RISC 3 and 4 would not require Special Treatment. For compliance with 50.69, the licensee implements the program through a licensee amendment. The NRC uses an inspection procedures to assess implementation (licensee procedures, proper defense in depth, and safety function). NRC focus is on RISC 3 classifications. Dominion requested the license amendment in 2019. NRC target for approval is January 2020.
 1. Mr. Sheehan noted this appeared to create a cart and horse dilemma – do you have to do all the work before you implement? Mr. Draxton answered that the licensee has to have the program, procedures and PRA models in place to implement and specific classifications can be done after.

2. Mr. Sheehan asked how many plants currently use this process. Mr. Draxton replied that there are eight approved, ten under NRC review, and two have submitted to use but then withdrew.
 3. CDR James noted that it seems like a brilliant idea but that the upfront work seems to be an inhibitor to get it started. Mr. Krohn agreed and provided the example of a reactor building ventilation system that required evaluation of over 5400 components. He noted that Dominion is just starting to implement at Surry Power Station in Virginia and stated feedback and documentation are large commitments.
 4. Mr. Semancik asked if the program requires a re-evaluation after actual events. Mr. Draxton answered that RISC 3 must still be inspected, tested and its condition monitored. NRC inspects condition monitoring during PI&R and conducts the design basis inspections to look at importance to safety. NRC also has the ability to conduct specific sample inspections if necessary.
 5. Mr. Semancik expressed concern that changes to the classification of SSCs would no longer be public. Mr. Draxton responded that changes would be described in the Facility Safety Analysis Report (FSAR) and FSAR is subject to the 50.59 process for design changes.
 6. Mr. Semancik asked if the program includes Supply Chain Risk Management. For example, is cyber security considered a Special Treatment? Mr. Draxton stated that 50.69 is a robust process for RISC 3 classification in particular for this reason.
 7. Mr. Salonia asked if they expected all licensees to adopt 50.69. Mr. Draxton stated he did not know and that it was a cost-benefit decision for each one. However, the NRC Commissioners have expressed a desire to focus licensee and commission resources on most risk significant systems.
- j. Mr. Schroeder presented status of Millstone compliance with post Fukushima NRC Order. Millstone is in compliance with mitigating systems and SFP instrumentation orders. NRC has inspected standard FLEX equipment and connections. Dominion is expected to submit in 3Q19 its integrated assessment of storm surge, tsunami, maximum precipitation, and flooding focused evaluation. The NRC will provide a final safety evaluation after review. There are no outstanding issues for Millstone with respect to seismic re-evaluation.
- i. Mr. Sheehan noted that significant work has been done and asked if the NRC has a mechanism to ensure it is maintained. Mr. McKown replied the NRC has equipment reliability inspection to ensure testing and maintenance is adequate. Mr. Fuller added that he recently had this discussion with licensee about corrective actions for a FLEX component that didn't pass a test and he has a high level of confidence that they will

maintain the equipment. Mr. Krohn noted he had looked at FLEX equipment that morning and asked licensee questions.

- ii. Mr. Woolrich noted that when NEAC toured the facility Dominion stated they conducted drills with the equipment. Is that still happening? Mr. McKown replied that they verify the equipment works. With respect to emergency scenarios, there is varying level of field implementation including moving equipment. Mr. Fuller noted it was initially verified. MR. Sheehan, Mr. Woolrich and Mr. Salonia expressed concern that the NRC was not ensuring that emergency response personnel at the site periodically verify they can move the FLEX equipment and that training is effective so that they could perform the task in a casualty. Mr. Krohn committed to providing a more complete follow-up to the Council.
[response email attached]
- k. Mr. Schroeder presented summary of NRC assessment of vulnerability of commercial nuclear power plants (NPPs) to an Electromagnetic Pulse (EMP) event. The NRC has concluded that commercial NPPs can shutdown safely after an EMP event and are further enhanced by post-Fukushima equipment. He emphasized that the NRC has studied this for decades, NRC has orders in place to enhance safe shutdown capabilities, and there is ongoing coordination with the North American Electricity Reliability Council (NERC) and the Federal Energy Regulatory Commission (FERC) to enhance the ability of the grid to withstand EMP and geomagnetic disturbances. More recently, in January 2016, NRC developed the EMP Resilience Action Plan with strategic goals with the Nuclear Energy Institute (NEI). In April 2019, President Trump issued an executive order directing specific actions for NRC, industry, and other federal agencies. Further guidance is expected. On April 23, 2019, NRC participated in a closed meeting with NEI, NextEra, and Entergy to ensure the industry was aware of the the executive order and need for action.

4. NRC Correspondence Received since past meeting.

The list of NRC Correspondence was reviewed. Questions and comments from Council members were addressed during the NRC presentation except as noted.

- a. Millstone Power Station – Integrated Inspection Report 05000336/2018004 and 05000423/2018004 dated February 5, 2019.
- b. Millstone Power Station – Security Inspection Report 05000336/2019410 and 05000423/2019410 dated February 19, 2019 (redacted)
 - i. Mr. Semancik noted that he had reviewed the un-redacted report as the State Liaison Officer. He had one question on whether a finding was related to previous security issues. Communication with NRC security inspectors had resolved the question as an unrelated finding.

- c. Millstone Unit 2 - Acceptance Review Determination: LAR Regarding Proposed Adoption of 10 CFR 50.69, "Risk-Informed Categorization and Treatment of SSCs for Nuclear Power Plants" (EPID: L-2019-LLA-0008] dated February 27, 2019.
- d. Annual Assessment Letter for Millstone Power Station, Units 2 and 3 (Reports 05000336/2018006 and 05000423/2018006) dated March 4, 2019.

5. Other material reviewed since past meeting.

NEAC reviewed the following information related to nuclear industry and trends.

- a. Dominion Energy Nuclear Connecticut, Inc. Millstone Power Station Unit 2 Application to Adopt 10 CFR 50.69, "Risk-Informed Categorization and Treatment of Structures, Systems and Components for Nuclear Power Reactors" (Serial No.: 1.8-145) dated January 17, 2019.

6. Public Comment

- a. Five members of the public were in attendance.
- b. Mr. Vinnie Novak stated he was from Long Island and lived 18.5 miles from Millstone, outside the emergency planning zone but within the 50 mile ingestion pathway zone.
 - i. He stated that Suffolk County, LI credits comprehensive emergency planning but does not conduct specialize training for NPP response. Mr. Semancik noted that the state of CT radiological emergency plan and training includes representatives from Suffolk County.
 - ii. Mr. Novak also questioned whether the transmitter frequency for the microwave link between Millstone Station and the Norwich Emergency Operations Facility (EOF) should be public (he saw it in an FCC filing). Mr. Fuller responded that this was a one-way data feed from plant to EOF only. There is no ability to control any components at Millstone from the EOF.
 - iii. Mr. Novak noted that Plum Island was for sale and asked if anyone looked at emergency planning. Mr. Schroeder stated that changes to emergency planning populations is reviewed periodically by a required Evacuation Time Estimate study.

7. Council Business

- a. Mr. Semancik reported to the Council he had provided proposed statutory language changes to the Council charter to Chair Ryan.
- b. The Council discussed next meeting, but did not identify a specific date and topic. Mr. Semancik noted that the Connecticut Yankee Fuel Storage Advisory Committee would meet on May 21, 2019 and was open to Council members.
- c. CDR James informed the Council that he was being temporarily assigned to the Air Force Graduate School in Dayton, OH. He had identified a qualified

replacement on the Council and would forward. Mr. Semancik thanked CDR James for his service on the Council and his insights.

- d. Dominion Annual Presentation (3Q19)
 - i. Mr. Semancik said that he would poll members by email for topics that they would like Dominion to present.

8. **Adjournment**

Motion was made by Mr. Sheehan and seconded by CDR James to adjourn; no objections; unanimous vote in favor; meeting adjourned at 7:55 PM.

Semancik, Jeffrey

From: Tifft, Doug <Doug.Tifft@nrc.gov>
Sent: Friday, June 7, 2019 1:48 PM
To: Semancik, Jeffrey
Cc: DeBoer, Briana
Subject: Millstone AAM follow up

Follow Up Flag: Follow up
Flag Status: Completed

Categories: Follow UP

Jeff,

Here is how the licensee controls FLEX equipment to ensure it is not adversely impacted by plant modifications:

The beyond design basis (BDB) equipment has only been staged during performance of the verification and validation of ETE-CPR-2014-1008 (Millstone Power Station Unit 2 & 3 Beyond Design Basis FLEX Validation for Time Sensitive Actions (TSA's)). Security trains annually on the equipment for debris removal and trailer towing out in the parking lot by the BDB dome. A graded approach was used for validation. The validation process consisted of:

- 1) Identify the tasks, manual actions and or decisions that require validation
- 2) Select the appropriate graded approach (Level A for time sensitive actions that would be needed in the first 6 hours, Level B between 6 and 24 hours, and level c for other tasks or manual actions that are labor intensive or require significant coordination)
- 3) Conduct the validation
- 4) Document the results

The potential for modifications to impact the FLEX strategy is screened for in the licensee Design Change process. And any issues identified with FLEX equipment are dispositioned in accordance with the sites corrective action program.

From the NRC side, we perform periodic inspection to ensure that FLEX equipment is not adversely impacted by plant modifications. NRC baseline inspection procedure IP 71111.22 requires an inspection of a FLEX surveillance every year. The inspection procedure verifies that testing activities provide objective evidence that FLEX SSCs remain capable of performing their intended functions and maintain their operational readiness consistent with their licensing bases.

<https://www.nrc.gov/docs/ML1817/ML18177A109.pdf>

The NRC also has the opportunity to identify issues with FLEX equipment during routine resident plant status tours of the plant, our plant modifications inspections, and routine Problem Identification and Resolution inspections.

Let me know if you have any additional questions.

Thanks,
-Doug

Doug Tifft

Regional State Liaison Officer

Office: 610-337-6918

Cell: 484-393-2672

Connecticut Yankee (CY) Fuel Storage Advisory Committee Meeting (FSAC)

Tuesday, May 21, 2019, Riverhouse at Goodspeed Station, Haddam, CT

Draft Meeting Summary – 6/9/9

Attendees

FSAC Members: Terry Concannon (East Hampton), Raul de Brigard (Haddam), Vic Fetter (Chester), Sylvia Reeves (CT Emergency Management), Ayanti Grant (Congress), Emmett Lyman (East Haddam), Bob Mitchell (Acting ISFSI Manager)

Connecticut Nuclear Energy Advisory Council (NEAC): Jim Sherrard, Raymond Woolrich, Craig Salonica

State of Connecticut: Mike Firsick (DEEP Liaison), Jeff Semancik (DEEP)

CYCP: Jim McHutchison

Public: Maurice Adams, Haddam

CY: Bob Capstick, Rob Desmarais, Matt Marston and John Arnold (note taker)

Chair Terry Concannon called the meeting to order at 6:13 pm.

Attendees introduced themselves.

Approval of May 15, 2018 Meeting Summary

The members approved the May 15, 2018 meeting summary as distributed.

CY ISFSI Site Status Report

Bob Mitchell, Acting ISFSI Manager, provided a CY status site update report and spoke from the attached meeting handout, "ISFSI Status Report."

Several questions were raised and addressed.

Bob described the ISFSI pad surface repair work in some detail. In answer to a question, Bob explained that the scabbling process for areas of the top layer of the pad that have experienced some flaking from the pad base is a slow process. The approximately 1.5 inches of concrete that was removed and resurfaced in several areas this year was removed in several thin layers so as to not challenge the integrity of the pad. He explained the cause of the flaking and delamination was the power troweling method used to finish the pad surface during construction. The other Yankee sites used

a different method and have not experienced this issue. The pad repair effort will continue and may take three years or longer.

Jeff Semancik explained that concrete experts at CT DOT were consulted about the CY Pad issues and they were in general agreement with the path that CY was pursuing.

Bob Mitchell stated that the Maine Yankee dry storage cask/canister inspection program in 2018 was very successful in demonstrating the inspection process and that the inspected canister was in excellent condition showing no recordable indications on the surface after 16 years in operation. A robotic camera was used in the annulus between the stainless steel canister and the concrete cask liner to check the surfaces of both as well as the stainless-steel canister welds. The Maine Yankee storage system is just like the CY and Yankee Rowe storage systems and the information from this inspection will be used to inform the license renewal applications for all three sites and the ongoing aging management program for the future 40-year renewal period.

The initial NRC license for the storage system was for 20 years and the aging management program that will be described in the cask relicensing application addresses the ongoing maintenance needed and any potential issues that may occur with the storage system over the extended life time as there are methods that can be employed to address any identified issues.

It was noted that with respect to future transportation of the canisters from the site that spent fuel was previously shipped from CY in the 1970s for reprocessing at a facility in Morris Illinois. These assemblies were never reprocessed and are still stored at that facility.

National Nuclear Waste Program and DOE Spent Fuel Lawsuit Status Update

Bob Capstick provided the attendees with an update on nuclear waste issues from the national perspective and the DOE spent fuel Phase IV lawsuit. He spoke from the attached handout documents entitled “Federal Nuclear Waste Issue Update” and DOE Spent Fuel Lawsuit Status Update.” In response to questions the following items were raised and discussed.

Several congressional efforts have been initiated this session to address the need to fund a federal integrated nuclear waste program as Congress has not provided direction or funding for several sessions now. Bob said it will be important for Congress to access and use the money collected in the Nuclear Waste Fund for both consolidated interim storage and disposal projects. Potential Consolidated Interim Storage sites are still being pursued in Texas and New Mexico.

Operating nuclear power plants have not contributed to the nuclear waste fund since 2014 because the national nuclear waste program for Yucca Mountain was stopped in 2010 by the Obama administration and the states and utilities won their case in US Court that the fund should not be collected if there was no program being worked on.

Ten million dollars per year is the rough estimate used for the average annual costs of each of the Yankee companies to remain in business and operate the ISFSIs at this time.

It is important for the Yankees to seek the approximately \$1.1 million dollars in employee benefit costs in the upcoming DOE Spent Fuel litigation trial in the Phase IV case in addition to the award of approximately \$103.2 million in the recent summary judgement by Judge Nancy Firestone (US Court of Federal Claims). The employee benefits expenditures being challenged by the government are necessary on-going expenses that would not have needed to be paid had the companies been able to go out of business and thus should be considered as damages due to the government's failure to meet its obligation to remove the spent fuel and high-level waste beginning in 1998 in accordance with the Nuclear Waste Policy Act.

Public Comments

One member of the public attended who also reports for the Haddam News asked several questions.

In response to a question about drones coming onto the CY site, Bob Mitchell explained that CY security follows site reporting procedures established in accordance with NRC regulatory guidance in the event of a flyover of the site by a manned or unmanned aircraft. According to Jeff Semancik, nuclear power plants and ISFSIs have no authority to ban these aircraft.

A question was raised: is CY available for acquisition as other nuclear power plant sites have been acquired. In response Bob Capstick explained that the sites that have been previously been acquired have not yet been decommissioned. The business model for these acquisitions involves the takeover of decommissioning of the plants as well as taking title to the spent fuel. Since CY has previously been decommissioned, it does not fit this business model.

In response to a question the makeup of the NRC was discussed. The names of the NRC Commissioners are as follows:

Kristine Svinicki (chair)
David Wright
Annie Caputo
Jeff Baran
5th position unfilled

Next Meeting Date

After some discussion the Committee voted to hold the 2020 meeting on Tuesday, May 5, 2020.

Adjournment

There being no further business, the meeting was adjourned at 8:05 PM.

Connecticut Yankee Fuel Storage Advisory Committee

Meeting Agenda

Tuesday, May 21, 2019

Riverhouse at Goodspeed Station, Rte. 82, 55 Bridge Rd.,
Haddam, CT

Agenda

6:00 Call FSAC Meeting to Order – Terry Concannon
Approval of May 15, 2018 meeting summary

Status Report – Bob Mitchell
ISFSI Operations
Security and Equipment Upgrades
ISFSI Pad work
Cask Relicensing

Federal Nuclear Waste Management Program Update – Bob Capstick

DOE Spent Fuel Lawsuit Status Update – Bob C

Public Comment and Questions

2020 Meeting date: May 19 or 26, 2020?

8:00 Adjournment

CONNECTICUT YANKEE FUEL STORAGE ADVISORY COMMITTEE UPDATE – MAY 21, 2019

Federal Nuclear Waste Issues Update

Administration:

Department of Energy

The President's FY 2020 budget included funding for an integrated nuclear waste program requesting \$116 million to support the Yucca Mountain license application process and the implementation of a robust consolidated interim storage program. The budget request also included \$38 million for NRC to support activities for the resumption of the Yucca Mountain License application review.

The DOE continues to conduct preliminary evaluations of the increasing number of shut down plant sites and support the National Transportation Stakeholders Forum as a mechanism through which DOE works at a national level with states and tribes regarding the Department's shipments of radioactive waste and materials.

The DOE continues to work on the design, analysis, and prototype fabrication of the buffer and railcars that will be used to transport SNF and that meet performance specifications for trains used to carry spent nuclear fuel and high-level radioactive material. The Atlas Railcar Project is scheduled to be completed in 2022.

Congress

Nuclear Waste Program Funding

Senate: It is expected that Senate Energy & Water Development Committee Chairman Alexander and Ranking Member Feinstein will introduce a funding bill similar to those of past sessions that will be focused on funding a consolidated interim storage program with priority for shutdown sites. Different this year is that Senator Alexander has indicated that he will offer a floor amendment to include funding for the Yucca Mountain license application in order to force a Senate floor debate and vote on Yucca Mountain. The timing on that bill is not clear as the Senate and House appropriations committees need to decide on the larger issue of spending caps, but the Senate vote on Yucca Mountain could occur in the June-July time frame. This is significant because there has not been a Senate debate and vote on Yucca Mountain since 2002 when the Senate and House overrode the State of Nevada's veto allowed under the NWPA of the DOE Secretary's determination that Yucca Mountain was suitable for development as the national repository and the prelude to submittal of a formal license application.

House: The new House Energy & Water Development Appropriations Committee Chair is Marcy Kaptur of Ohio (whose district has the Davis Besse plant which is scheduled to shut down in May 2020) and the new House Appropriations Chair is Nita Lowey of NY (who has the Indian Point plants in her district that are scheduled to retire in the 2020- 2021 timeframe). The House Energy & Water Development FY 2020 funding bill was introduced May 14th and included funding to begin SNF interim storage activities and nothing for Yucca Mountain.

Joint Congressional Member letter: An April 1 letter signed by 15 Congressional members (including Congressman Neal, Courtney and Pingree) was sent to House E&WD Committee Chair Kaptur and Ranking Member Simpson urging them to include in the FY 2020 Energy and Water Development Appropriations bill \$25 million to fund the development of a CIS program at DOE and for DOE to assist with site preparations and regional SNF transportation efforts. Specifically \$10 million was requested for initiation of a robust CIS program at DOE; \$10 million for site preparation at shutdown plants; and \$5 million for state regional transportation groups to prepare for SNF transportation from shutdown sites to a CIS facility. [*Letter attached*]

Joint Industry Letter: A joint letter sent to Congressional Energy & Water Appropriations Leaders (and copied to DOE & OMB) on April 30th regarding FY 2020 funding for critical nuclear waste management activities on behalf of the American Nuclear Society (ANS); Decommissioning Plant Coalition (DPC); National Association of Regulatory Utility Commissioners (NARUC); Nuclear Energy Institute (NEI); U.S. Nuclear Industry Council (NIC); and Nuclear Waste Strategy Coalition (NWSC). It specifically requested funding for Yucca Mountain, Consolidated Interim Storage and preparation of the needed transportation infrastructure in the FY 2020 Energy & Water Development Appropriations bill. It was signed by Wayne Norton as Chair of the DPC Steering Committee. [*Letter attached*]

Nuclear Waste Legislation

Senate:

A bi-partisan bill that was introduced in the 114th Congress by the Chairs and Ranking Members of the Senate Energy and Natural Resources Committee and the Senate E&WD Committee was reintroduced (S 1234 - the Nuclear Waste Administration Act of 2019) on April 30th. The bill is designed to implement several of the recommendations of President Obama's 2012 Blue Ribbon Commission report. The hearing process is unclear at this point, but could possibly occur in the June timeframe.

Senate EPW Committee Chairman Barrasso on April 24th released a draft version of the Nuclear Waste Policy Amendments Act of 2019 that mirrors the bill that was passed by the House last year. A hearing by the committee to discuss the bill was held on May 1st.

House:

Two bills have been introduced this session by the Nevada delegation in the Senate and House that seek to stop any attempt to revive the Yucca Mountain nuclear waste site. The “Nuclear Waste Informed Consent Act” that was filed last session to require the Secretary of Energy to obtain the consent of a repository host state before making any expenditure from the Nuclear Waste Fund was reintroduced; and, the “Jobs, Not Waste Act” was introduced to prohibit any actions by DOE related to a nuclear waste repository until the Office of Management and Budget submits to Congress a report on the economic viability and job-creating benefits of alternative uses of the Yucca Mountain site.

A refile of the NWPA Amendments Act that passed the House last session was introduced by Congressman McNerney (D-CA) and Congressman Shimkus (R-IL) on May 15th. Congressman Courtney was a co-sponsor on the bill.

A new bill expected to be introduced by freshman Rep. Mike Levin (D-CA who represents the decommissioning San Onofre plant) would change the queue for determining the removal of nuclear waste from a shutdown site providing priority for those sites closest to large populations and earthquake hazards, among other factors.

Also, Congresswoman Matsui (D-CA) whose district includes the shutdown Rancho-Secco site is expected to introduce a bill specifically focused on consolidated interim storage.

Nuclear Decommissioning Collaborative

An organization called the Nuclear Decommissioning Collaborative received a grant from the Commerce Department to perform an 18 month study and write a report fulfilling the report language accompanying the FY 19 Appropriations bill of the Subcommittee on Commerce, Justice, Science and Related Agencies regarding existing resources and funding opportunities to assist shutdown site communities. There was an April 10th federal agency roundtable meeting of the Collaborative and the US Department of Commerce’s Economic Development Administration and that effort continues to move forward.

The DOE was also tasked with doing a similar study directed in the Committee report language accompanying the FY ’19 Energy & Water Development Appropriations bill. It’s not clear yet how the DOE will address the report direction, but could be coped within the Commerce report effort that is underway.

Nuclear Regulatory Commission

Consolidated Interim Storage Initiatives

The NRC Atomic Safety and Licensing Board (ASLB) held a hearing in January on the license application submitted by Holtec Inc. and the Eddy-Lea Alliance to construct and operate a consolidated interim storage facility for spent fuel from commercial nuclear power reactors in Lea County, New Mexico. The three-judge board heard oral arguments as to the standing of the several petitioners and the admissibility of their proposed contentions. On May 7th, the ASLB issued a decision that while some of the six petitioners met the qualifications for standing, they concluded the nearly 50 contentions raised were not admissible for an evidentiary hearing as they were either were not relevant to the application or did not establish a genuine dispute with aspects of the application.

The Interim Storage Partners (ISP) revised CIS license application for the WCS site in west Texas was submitted to the NRC June 8, 2018. The ASLB panel in the Holtec proceeding will also adjudicate this application and has scheduled a hearing on standing and the admissibility of contentions on July 11 & 12 in Texas. The NRC staff continues to state they are on schedule to complete the environmental and technical/safety reviews of both applications before the end of 2020.

Community Advisory Board Best Practices Report

Under last year's "Nuclear Energy Innovation and Modernization Act" the NRC was directed to hold hearings and develop a report on the best practices for community engagement panels near decommissioning nuclear power plants. The Commission issued a Federal Register Notice on March 18th seeking comments from the public on potential locations for a minimum of 10 public meetings in locations that ensure geographic diversity across the United States, with priority given to states that have a nuclear power reactor currently undergoing the decommissioning process and request a public meeting.

Requests had to be filed by April 17th and the Maine Yankee Community Advisory Panel (MY CAP) commented that they were willing to host a meeting or participate in one held in the New England area. The Vermont Windham Regional Commission requested that a hearing be held near Vermont Yankee. The MY CAP Chair informed the Windham Commission that several of the MY CAP members were willing to attend the meeting if it was held in Vermont.

Decommissioning Rulemaking

The Draft Rulemaking that was submitted by the staff to the Commissioners for their review in May 2018 continues to have no set timetable for the Commissioners to take action.

Commissioner Burns Retirement

Stephen Burns retired on April 30th as a member of the U.S. Nuclear Regulatory Commission. Burns' retirement leaves the commission with one Democrat, Jeff Baran, and three Republicans: Svinicki, Annie Caputo, and David Wright. No more than three commission members can come from one political party. Senate Democratic Party leadership is believed to be preparing a list of potential candidates for nomination. There has been no word from the White House or Senate Minority Leader Chuck Schumer (D-N.Y.) regarding the status of the process.

DOE Spent Fuel Lawsuit Status Update

Phase IV Case

The Phase IV case was filed in May 2017 in the U.S. Court of Federal Claims and addresses damages resulting from the federal government's ongoing failure to honor its contract obligations for the 2013-2016 timeframe. In the Phase IV case the three Yankee Companies (Maine Yankee, Connecticut Yankee, and Yankee Rowe) sought roughly \$104.2 million dollars in damages.

On February 21, 2019, Judge Nancy Firestone granted the 3 Yankee Companies' Motion for Partial Summary Judgment on undisputed damages of approximately \$103.2 million. The government did not appeal by the April 23 deadline so the decision is now final.

The Yankees are now in the process of requesting the Treasury Department to release the funds as soon as possible. The Yankees have begun the process of working with FERC counsel and the states to prepare filings leading to the use of the funds under the settlement agreements. The trial dates on the contested amount of approximately \$1.1 million are still on schedule for June 10th and 11th.

NOTE: The ongoing litigation between the three Yankee companies and the Department of Energy is being conducted in phases as an earlier U.S. Federal Appeals Court decision ruled that utility companies cannot receive damage awards for costs that have not yet been incurred. As a result, the three companies have, and expect to continue to litigate with the DOE every several years to request damages for costs incurred by the ratepayers for the federal government's failure to meet its statutory and contractual obligation to begin removing the SNF and GTCC waste from the sites beginning in January 1998. The total damages awarded to the 3 companies to date for the Phase I, II, and III lawsuits are \$471.8 million (\$159.6 million + \$235.4 million + \$76.8 million). These awards are paid out of the US Judgment Fund - not the Nuclear Waste Fund.

Congress of the United States
Washington, DC 20515

April 1, 2019

The Honorable Marcy Kaptur
Chairwoman
House Appropriations Subcommittee on
Energy and Water Development
2362 Rayburn House Office Building
Washington, DC 20515

The Honorable Mike Simpson
Ranking Member
House Appropriations Subcommittee on
Energy and Water Development
1016 Longworth House Office Building
Washington, DC 20515

Dear Chairwoman Kaptur and Ranking Member Simpson:

We write to request your assistance in addressing a long-standing issue that exists in each of our districts and states – finding a path forward for the timely removal of spent nuclear fuel (SNF) and material classified as Greater-Than Class C waste (GTCC waste) from sites where nuclear power generating activities have permanently ceased.

It is well known that the federal government has been found by the courts to be in partial breach of the contractual obligation created by the 1982 Nuclear Waste Policy Act to remove this material beginning in January 1998. Over the course of litigation in the intervening years, the U.S. Court of Claims has consistently ruled in favor of companies for expenditures they have incurred in the continuing storage of these materials. The Department of Energy (DOE) has previously estimated that the resulting impact on taxpayers could reach or exceed \$30.8 billion – assuming it is in a position to begin meeting its obligation through the use of a pilot consolidated storage facility in 2021. Any delay in this schedule will only increase the Department's liabilities. These funds are paid out of a permanent appropriations account known as the Judgment Fund and they add to the federal deficit without benefit of budget or appropriations considerations.

DOE has been obligated to draw from the Judgment Fund because issues associated with the management of SNF and GTCC material at permanently shuttered nuclear plants have been at a stalemate for an extended period of time. We were pleased to see that these issues were a major focus of the Blue Ribbon Commission on America's Nuclear Future during the Obama Administration, and remain a top priority of the Trump Administration as well.

Moreover, the Trump Administration's fiscal year 2020 budget for the Department of Energy requests robust funding to address SNF and GTCC material via an interim storage program. The requested funding could help with the initiation of a consolidated interim storage (CIS) program within DOE with an initial focus on accepting SNF and GTCC waste from the shutdown reactors. The NRC has already docketed two CIS facility applications, which are now undergoing multiyear technical review processes to ensure the facilities would meet all applicable standards.

With this in mind, we respectfully request \$25 million to support the development of a CIS program at DOE, complete the necessary applications, and assist with site preparation activities

and regional transportation efforts of SNF. Specifically, we request \$10 million for the initiation of a robust CIS program at DOE; \$10 million for site preparation activities at Stranded Fuel sites preparing to move SNF to interim storage facilities; and \$5 million to support DOE's efforts to reinstate Regional Transport compacts and transportation coordination.

Our constituents have waited patiently for action on this matter, and it is past time that we end the continued stalemate that is wasteful of taxpayer resources and detrimental to the redevelopment of these sites in our communities. We urge you to include funding for SNF and GTCC waste storage and disposal in order to move forward and make these important advances in the nation's used fuel management program.

Sincerely,



DORIS O. MATSUI
Member of Congress



CHELLIE PINGREE
Member of Congress



MIKE LEVIN
Member of Congress



TONY CARDENAS
Member of Congress



JOE COURTNEY
Member of Congress



SALUD CARBAJAL
Member of Congress



SCOTT PETERS
Member of Congress



JERRY MCNERNEY
Member of Congress



HARLEY ROUDA
Member of Congress



RICHARD E. NEAL
Member of Congress



RON KIND
Member of Congress



PETER WELCH
Member of Congress



DONALD NORCROSS
Member of Congress



AMI BERA, M.D.
Member of Congress



WILLIAM R. KEATING
Member of Congress



April 30, 2019

The Honorable Lamar Alexander
Chairman, U.S. Senate Subcommittee on Energy &
Water Appropriations
455 Dirksen Senate Office Building
Washington, DC 20510

The Honorable Marcy Kaptur
Chair, U.S. House Subcommittee on Energy & Water
Appropriations
2186 Rayburn House Office Building
Washington, DC 20515

The Honorable Dianne Feinstein
Ranking Member, U.S. Senate Subcommittee on
Energy & Water Appropriations
331 Hart Senate Office Building
Washington, DC 20510

The Honorable Mike Simpson
Ranking Member, U.S. House Subcommittee on
Energy & Water Appropriations
2084 Rayburn House Office Building
Washington, DC 20515

Dear Senate and House Energy & Water Appropriations Leaders:

The undersigned organizations seek your leadership to appropriate funds in FY 2020 for the following critical elements of an effective nuclear waste management program:

- **Completion of the Yucca Mountain Licensing Review.** Consistent with the Nuclear Waste Policy Act (NWPA), the U.S. Nuclear Regulatory Commission (NRC) and the U.S. Department of Energy (DOE) need funding as requested to proceed with the adjudicatory process for evaluating scientific evidence provided by experts from DOE, the State of Nevada, and other parties and determining whether the license application for the proposed Yucca Mountain repository should be granted.
- **Implementation of Pilot Consolidated Interim Storage with Priority for Shutdown Reactor Fuel.** Congress should also facilitate a pilot consolidated interim storage (CIS) facility for spent nuclear fuel (SNF) and Greater-Than-Class-C (GTCC) waste stranded at shutdown nuclear sites to (i) enable the government to begin meeting its obligations sooner; (ii) allow for other uses of decommissioned reactor sites; and (iii) implement the country's SNF transportation infrastructure. So that this pilot can be made available in a timely manner, DOE should be instructed to work with private initiatives that are already pursuing licenses for such a facility to the maximum extent possible.
- **Preparation for SNF Transportation.** Because development of SNF transportation infrastructure will be necessary regardless of destination, we support funding for DOE to (i) test, certify, and procure rail cars, as well as licensed transportation casks and components in a manner that utilizes the private sector to the maximum extent practicable as required by the NWPA; and (ii) increase financial and technical assistance to tribal, state, and local governments for transportation and related emergency preparedness activities that will enhance public confidence in the safety of SNF transportation.

We ask that your respective Energy and Water Appropriations Subcommittees include these three items in your upcoming markups. It is imperative that Congress provide direction and funding this session to advance an integrated national nuclear waste program that includes completing the Yucca Mountain license application review and establishing a pilot CIS facility with priority for shutdown reactor fuel. In addition, we urge you to restructure the funding and spending mechanisms for the Nuclear Waste Fund (NWF) to provide the necessary certainty to implement the program over multiple decades. This should include sustainable access to the NWF



balance and all accumulated interest while maintaining effective Congressional oversight. Together, these actions would send a clear message that you are committed to resolving the nuclear waste stalemate and ensuring that the federal government carries out its statutory and contractual responsibility to manage and dispose of SNF.

Urgent action is needed. NWF receipts total nearly \$50 billion, including fees collected from U.S. electric consumers per the NWPA and interest accumulating at a rate of approximately \$1.5 billion per year. Electric consumers have met their obligation and received nothing in return. In addition, the impasse over nuclear waste is costing all U.S. taxpayers billions of dollars. As of September 30, 2018, the federal government had paid \$7.4 billion in damages as a result of lawsuits and settlements, and its current estimate of remaining federal liabilities is over \$28 billion. Every extra day of Congressional inaction costs American taxpayers another \$2.2 million! Finally, U.S. commercial SNF inventories now exceed 80,000 metric tons at 98 operating reactors, 15 shutdown sites, and the Morris independent spent fuel storage site in Illinois, and all must be removed and permanently disposed per the federal government’s obligation.

In closing, our organizations respectfully request that your response to our joint call for action include funding the noted priorities in FY 2020 and ensuring sustainable funding of an integrated nuclear waste management program. Thank you for your consideration, and please do not hesitate to contact Katrina McMurrian, NWSC Executive Director, at katrina@theNWSC.org or 615.905.1375, for more information.

Sincerely,

John E. Kelly
President
American Nuclear Society (ANS)

Wayne Norton
Chair, Decommissioning Plant Coalition (DPC) Steering Committee, and President & CEO, Yankee Atomic Electric Company

Nick Wagner
President, National Association of Regulatory Utility Commissioners (NARUC), and Board Member, Iowa Utilities Board

Maria G. Korsnick
President & CEO
Nuclear Energy Institute (NEI)

David Blee
President & CEO
U.S. Nuclear Industry Council (NIC)

Sarah Hofmann
Chair, Nuclear Waste Strategy Coalition (NWSC), and Commissioner, Vermont Public Utility Commission

cc: The Honorable Rick Perry, Secretary, U.S. Department of Energy
The Honorable Mick Mulvaney, Director, Office of Management and Budget

Connecticut Yankee Fuel Storage Advisory Committee
May 21, 2019
ISFSI Manager Status Report

ISFSI Operations

ISFSI Operations continue to be normal.

Shae Hemingway continues his assignment as the ISFSI Manager (IM) at Yankee Rowe on an interim basis and Bob Mitchell as the IM at CY on an interim basis. Bryan Lovin's initial training is nearing completion. Shae is expected to return to CY during the week of May 27.

An Independent Management Assessment was conducted earlier this spring. A retired NRC official with substantial engineering experience conducted the assessment and provided a report which is being evaluated and an action plan to address his findings has been formulated.

Equipment Upgrades

CY's primary 2019 focus continues to be on the Security Software Upgrade project. Training continues on the new software and additional minor changes are being implemented based on feedback during the training. Field equipment design is complete and purchasing of field components in support of installation is complete. Pre-assembly and testing of equipment is planned in support of deployment beginning in late spring with a completed installation in third quarter of 2019

ISFSI Pad Repair Work

Issues with the ISFSI Pad surface delamination have been documented and worked on over the last 9 years. This involves a thin top layer of the pad flaking or delaminating from the pad base. This issue is not structural in any way but does create tripping hazards and visually makes for an unattractive appearance. Several iterations of test repairs were completed in 2013, 2014, and 2015. During the 2017 post winter inspection, we noted issues with the test repair areas not being effective. A more aggressive approach leading to a more lasting repair is currently being pursued. A plan for limited area repair in 2018 followed by more extensive repair in 2019 and 2020 that incorporate lessons learned from the 2018 effort.

The Planned 2019 ISFSI Pad repairs is completed, an area of approximately 650 sq. ft. was resurfaced after removal of approximately 1.5 inches of existing concrete.

Cask Relicensing

Dry storage system relicensing activities are ongoing and on track for an early 2020 submittal, appropriately in advance of the April 10, 2020 expiration date. A pre-

application inspection of a lead dry storage system was conducted at Maine Yankee in July of last year. The inspection was sponsored by the dry storage system users group, which is comprised of seven nuclear power plants and the dry storage system designer and supplier. NRC and others participated in the inspection. The results are used to inform the relicensing activities and on-going aging management program. Subsequent to this, the renewal application efforts will continue to completion and ultimately submittal to the NRC. The review and approval process is expected to take at least 2 years. The term of the renewal certificate is 40 years.

NAC, the CY cask vendor, has developed and submitted a Yankee reviewed amendment to the cask Certificate of Compliance (CofC) to address winter operation concerns for CY and YR on 2/28/18. It was posted to the Federal Register on 12/18/18 for a 30-day comment period and became effective on March 4, 2019. CY and YR submitted exemption requests to permit the continued application of existing exemptions following the adoption of Amendment 8 of the NAC-MPC CoC.

Atmospheric monitoring is at Connecticut Yankee again this year. All 3 sites are performing wet candle testing to provide comparable data on the environment at each site.

NRC

Site Visits

Raymond J. Powell, Chief, Decommissioning Branch will be visiting Connecticut Yankee on June 12th

NRC Region 1 Quarterly Conference Call

The NRC regional quarterly call is scheduled to be held on July 10th.

NUCLEAR ENERGY ADVISORY COUNCIL
September 17, 2019 6:30 PM
Waterford Town Hall
Leigh Appleby room
Waterford, CT

MINUTES

Members Present

Rep Kevin Ryan, Chair

Alternate Chair Mr. Jeffrey Semancik representing DEEP Commissioner Dykes

Mr. Craig Salonia

Mr. R. Woolrich

Mr. Bill Sheehan

Mr. A. Jordan

Mr. James Sherrard

Members not present:

1. Call to Order of Meeting

NEAC Chair Rep. Ryan called the meeting to order at 6:30 PM at Waterford Town Hall, Waterford, CT.

2. Approval of Minutes of the April 24, 2019 NEAC meeting.

A motion was made to approve the minutes by Mr. Sheehan and seconded by Mr. Sherrard. Minutes were approved without any corrections or objections.

3. Program - Presentation by Ms. Lori Armstrong, Director of Nuclear Safety and Licensing (DNSL), and Mr. Michael O'Connor, Assistant Plant Manager, for Dominion Nuclear Energy Inc. and supported by Mr. Kevin Hennessey, Senior Policy Director for Dominion Nuclear Energy, Inc. (attached).

- a. Ms. Armstrong provided her background including previous experience as the Director of Recovery at Millstone and Engineering Director at Dominion's Kewaunee Power Station in Wisconsin. MR. O'Connor noted he provided Dominion's presentation to the Council last year as the DNSL and that he was supporting this year for continuity as his role was now Assistant Plant Manager.
- b. Safety – Ms. Armstrong emphasized that safety, including nuclear, radiological, industrial and environmental safety. Ms. Armstrong highlighted the following station achievements and credited first line supervisor intrusiveness and standards to the success at the station :
 - i. No Occupational Safety and Health Administration (OSHA) recordable injuries in over 690 days.
 - ii. No significant human performance errors for 909 days
 - iii. Mr. Jordan asked if these numbers included contractors. Ms. Armstrong stated that they did. She also noted that station management tracks minor injuries as precursors with three year to date (YTD).

- c. Millstone Unit status – Millstone 2 was online 145 days with a 94.2% capacity factor YTD. Unit 3 was online 127 days with a 86.46% capacity factor YTD. Ms. Armstrong discussed the power history curves for both units and noted the following specific operational occurrences:
- i. Millstone Unit No. 2 shutdown from 20% power for In Core Instrumentation (ICI) failures (11/03/2018). Ms. Armstrong explained that during startup from the planned refueling outage, 91 of 172 ICI detectors were determined to be failed. The plant's Technical Specifications require that 75% of the detectors in the right distribution be operable in order to exceed 20% reactor power. Based on the failures, Dominion made the decision to shut down, disassemble the reactor, and replace the detectors. Ms. Armstrong explained that the current maintenance interval requires all the detectors to be replaced every nine years and was completed during the refueling outage. Dominion's lab identified corrosion pits that allowed water to get into the detectors and short them out. They determined that chloride contamination caused the pitting on the Inconel material. Ms. Armstrong explained that corrective actions include inspection of vendor in-process and replacing a portion of the detectors each refueling outage.
 1. Mr. Woolrich asked if the ICI's were nuclear detectors and if they performed any nuclear safety function. Ms. Armstrong explained that, yes, they were rhodium nuclear detectors. They are used to calibrate the detectors external to the reactor (excore detectors) but do not provide any specific safety function.
 2. Mr. Salonia asked if any failed in use. Mr. O'Connor replied that some fail occasionally in use including a few this operating cycle. However, following any failure, operators verify the number and pattern of functioning detectors remains above the minimum requirement. Currently Millstone 2 has verified that 95% of detectors are functioning (75% is the minimum required).
 3. Mr. Woolrich asked if the vendor has identified the cause of the chloride contamination. Mr. O'Connor stated not yet.
 4. Mr. Sheehan asked if any other plants use these ICI's. Mr. O'Connor stated that Calvert Cliffs, St. Luci and Arkansas Nuclear One all use similar detectors.
 5. Mr. Sherrard asked if they were off the shelf components. Ms. Armstrong replied that parts are available, but each detector must be custom cut to the proper length for the exact core location. She noted a set of ICI detectors cost about \$1.5M.
 6. Mr. Semancik asked if they were able to replace all the failed detectors prior to starting up. Ms. Armstrong replied that 27 failed detectors were not replaced due to parts not being available, but that all the failed detectors would be replaced in the 2020 refueling outage.
 7. Mr. Jordan asked what the basis for replacing all of the ICIs in one outage was. Ms. Armstrong answered that it was an industry benchmark to replace all detectors every six refueling outages due to the limited life of rhodium detectors.
 - ii. Millstone Unit No. 2 turbine offline to repair a failed feedwater heater (FWH) and repair relief valves (04/22/2019). Ms. Armstrong explained that this was another

power reduction due to a vendor error. Unit No. 2 FWHs are used to preheat feedwater using extraction steam from the main turbine. The FWH's have impingement plates to prevent the steam flow from directly impinging on the tubes. In April one of these impingement plates sheared and broke several tubes in the FWH. Operators diagnosed and isolated the leak. The FWH filled with water due to the leak and lift the pressure relief valves. While the FWH as repaired, the turbine was taken offline and the reactor remained online. After the FWH was repaired, power was limited to 30% until the relief valves were repaired. Ms. Armstrong noted that operator performance was noted to be good.

1. Mr. Woolrich asked why the relief valves had to be repaired. Ms. Armstrong replied that after opening and passing water, the valves leak unless repaired.
 2. Mr. Jordan asked what the vendor issue was. Ms. Armstrong stated that the weld on the impingement plate should have been full penetration but was not. Dominion boroscoped the sister FWH and determined that it was properly welded. The weld on the failed heater was just stitched welded. She also noted that the other FWHs will be checked at the next refueling outage for both units and that two new FWH's being manufactured were checked satisfactorily.
 3. Mr. Jordan asked if there was any water hammer? Mr. O'Connor stated that there was due to having a FWH out of service and complicated by cold water return from the heater drain tank. Dominion conducted post water hammer evaluation.
- iii. Update on moisture carryover at Millstone Unit No. 2. Ms. Armstrong noted that Unit No. 2 electric output has been reduced for 10 years, and the cause was identified as excessive moisture carryover (MCO) from the steam generators (SGs). The specification for MCO is 0.2% and Dominion has measured 1.25%. IN spring 2019, Dominion hired a second independent vendor to measure MCO using tracer chemicals. These results were consistent at 0.86% from A SG and 1.3% from B SG. Visual inspections have not identified any damage in SGs or moisture separators. Dominion is working to determine the cause.
1. Mr. Semancik asked if there were any safety implications. Mr. O'Connor noted that the radioactivity limit calculation assumes an MCO value but that it has very little effect. The main effect is the partitioning of iodine. There were no safety implications as the measure MCO is much less (by a factor of 20) than what is assumed in the analysis.
- iv. Update on reactor coolant pump (RCP) seals at Millstone Unit No. 3. Ms. Armstrong recapped Unit No. 3 seal performance including replacement of seals with new design in 2014 and 2015 and subsequent failures in 2016. The vendor has provided a new design for both Millstone and Turkey Point, but Turkey Point is still reporting problems. Millstone is currently managing seal performance by keeping seal injection water temperature cooler. By doing this they can manage operations during the cycle but have to change the seals every outage vice the nine year design life.
1. Mr. Woolrich asked what the failure mode was. Ms. Armstrong stated that in some conditions there is not enough lift generated by the seal faces

followed by rubbing then cracking between the stationary and rotating faces.

2. Mr. Woolrich noted that vendor problems seem to be increasing as the industry shrinks. Ms. Armstrong replied that Dominion is doing more vendor assurance and aggressive monitoring. Mr. O'Connor added that they already do a fair amount of factory testing citing the new electrical transformers as an example of good performance. He noted they were adding additional vendor surveillances along with other Dominion sites and the industry.
- d. Nuclear Regulatory Commission (NRC) Findings – Seven Green (very low safety significance) Non-cited Violations (NCVs) were identified.
 - i. Mr. Sheehan asked how long it takes Dominion to close a finding from when it is identified by the NRC. Ms. Armstrong stated that it depended on the significance and that it is categorized and entered into the corrective action system to correct immediately, in 30 days, or in 60 to 90 days. She noted six of the seven findings have been fixed.
 - e. Ms. Armstrong brief the Council that all 30 corrective actions that Dominion committed to complete in its confirmatory order with the NRC related to security issues have been completed and satisfactorily inspected by the NRC.
 - f. Ms. Armstrong reviewed the current license amendment requests pending with the NRC. All NRC correspondence related to license amendments is reviewed by the Council as noted in section 4.
 - i. At the request of the Council, Ms. Armstrong provided additional detail on the pending request for Millstone Unit No. 2 to use a risk informed classification of components and system per 10CFR50.69. She indicated that the top priority systems were radiation monitoring and reactor building closed cooling water to identify Risk Informed Safety Classification (RISC) 3 components that were safety related but low risk. This would allow Dominion to use an alternate treatment to ensure quality without having to procure category 1E.
 1. Mr. Semancik recommended that the Cyber and Infrastructure Security Administration (CISA) recommends applying a Supply Chain Risk Management (SCRM) process to critical components to ensure vendor controls are adequate.
 2. Mr. Jordan asked who makes the final RISC decision. Ms. Armstrong replied that the Facility Safety Review Committee (FSRC) consisting of senior plant management makes the final decision.
 3. Mr. Salonia asked who checks their work after the decision. Ms. Armstrong stated Dominion with fleet and industry help conducts an internal check and others inspect and monitor performance. The Probabilistic Risk Assessment model must be peer reviewed.
 - g. All NRC performance indicators (PIs) for Millstone are Green.

- h. Ms. Armstrong discussed one Environmental Impact event, - a title 5 Air permit violation. The fire training facility has two propane driven fire water. Although the pumps did not run more than 20 hours, the permit requires that the oil and filter be changed periodically with no grace period. Instead of changing the oil/filter, the periodic maintenance (PM) item was closed to an inspection. The PM has been re-identified as required. As a noted, Ms. Armstrong stated they are reviewing whether these components require a title 5 permit.
 - i. Mr. Sheehan asked how the NPDES permit renewal was going. Mr. Armstrong stated that Dominion was waiting for CT DEEP decision and was currently operating under a continuance.

- i. Dominion's assessment of Safety Culture. Ms. Armstrong noted improving trends in safety culture assessment and discussed most recent results. In particular, she noted that over 700 employees in 2018 and over 600 in 2019 had answered the safety culture survey (out of approximately 900 employees).
 - i. Mr. Sherrard asked if they had compared the survey results between the non-union site at Millstone and the union nuclear sites in Virginia. Ms. Armstrong replied no direct comparison has been made but that it was in interesting question.
 - ii. Mr. Jordan asked what the industry trend was and how Millstone compared to that trend. Ms. Armstrong did not have industry trend data available.

- j. Summary of Dominion's Internal Oversight assessment of performance and findings. Ms. Armstrong stated that corporate oversight was not currently tracking any issues of significance.

- k. Ms. Armstrong provided an update on emergency response procedures.
 - i. Millstone has completed training for plant personnel on Severe Accident Management Guidelines including lessons learned from Fukushima.
 - ii. Overwater protective action guideline have been implemented to ensure Millstone provides recommendations to state for overwater sectors in the event of a release.
 - iii. Millstone has submitted a request to update the Emergency Action Level tables used to classify events to the latest guidance.

- l. Ms. Armstrong discussed the Voluntary retirement Program (VRP). VRP is a Dominion wide initiative for a 10% reduction in staff. She noted it was creating opportunities for staff. Retirements were staggered to minimize impact on operations and to ensure the emergency plan and other critical functions remain fully staffed. Mr. Hennessy noted the catalyst for the program was Dominion's acquisition of a South Carolina utility and they decided to offer company wide.
 - i. Mr. Jordan asked if the intention was to stay at -10%. Ms. Armstrong replied that Millstone released >10% and is currently hiring about 20 people.
 - ii. Mr. Salonia noted Millstone was reducing staff by 10% and inquired what the number of staff they needed to run the site safely. Ms. Armstrong replied that when compared to other sites with two different reactor designs across the country, Millstone had higher staffing levels.
 - iii. Mr. Jordan asked if any particular areas were impacted. Mr. O'Connor noted a larger number from online work control, engineering and training. He noted that

recent initiatives to ensure new operators were higher meant operations department was not impacted.

- iv. Mr. Sherrard asked what current staffing was. Mr. O'Connor stated it was 1050, down to 920-930 following the VRP. As stated before they were hiring again with about 35 open positions.
- v. Mr. Jordan asked if corporate has conducted a composite assessment of the VRP. Ms. Armstrong stated that Millstone intentionally conducted the safety culture survey after the first large release of people. She stated that Millstone would be doing its own assessment that would be presented to senior station management.
- vi. Mr. Woolrich asked in Millstone had any problems recruiting. Mr. O'Connor stated they did not. However, there are fewer resources available from The Virginia plants to share.
- vii. Mr. Woolrich asked how Millstone recruits new employees with the risk of nuclear plant closure. Mr. Hennessey noted the recent 10 year zero carbon contract with the state and the 2035 and 2045 license expiration dates are currently helpful to ensure jobs will remain. Mr. O'Connor replied that hiring local from Three Rivers Community College and New London High School helps to keep local talent. Ms. Armstrong noted Dominion is evaluating operating Surry Power station another 20 years (80 year total).
- viii. Mr. Semancik asked if Millstone was having any problems retaining new hires. Mr. O'Connor stated they were losing radiation protection staff to Electric Boat and several staff to IT data centers. Millstone has a focus area on Value and engaged employees to better retain new hires.
- ix. Ms. Armstrong discussed changes in Millstone Station management team. She noted the VRP created many of the opportunities. All new management positions were succession planned.
- m. Mr. Jordan asked Dominion what keeps them up at night. Mr. Hennessey stated the uncertainty of US power markets. Mr. O'Connor said he wants to make sure resources are there to maintain operations over time; so, he needs to ensure the operator pipeline.
- n. Reviewed open items for Dominion follow-up and agreed to have Dominion provide in six to nine months to allow for time to see any effects after completion of Voluntary Retirement Program (VRP).
 - i. Industry trend in safety culture compared to Millstone trend
 - ii. Corporate assessment of Voluntary Retirement Program (VRP)
 - iii. Update on VRP
 - iv. Retention numbers for new hires.

4. NRC Correspondence Reviewed since past meeting.

The list of NRC Correspondence was reviewed. One comment from NEAC was related to NRC environmental qualification inspection.

- a. Treatment of Reevaluated Seismic Hazard Information Provided under Title 10 of the Code of Federal Regulations 50.54(1) Regarding Recommendation 2.1 of the Near-Term Task Force Review of Insights from the Fukushima Dai-Ichi Accident dated July 3, 2019.

- b. Summary of June 3, 2019, Meeting with Dominion to Discuss Proposed LAR to Extend Integrated Leak Rate Test Interval dated July 12, 2019.
- c. Email from Doug Tiffit NRC Regional State Liaison to Jeff Semancik Director radiation Division CT DEEP, NEAC Follow-up dated June 7, 2019.
- d. Millstone Power Station, Unit No. 2 - Audit Plan and Setup of Online Reference Portal for License Amendment Request to Adopt 10 CFR 50.69, "Risk-Informed Categorization and Treatment of Structures, Systems and Components for Nuclear Power Reactors" (EPID L-2019-LLA-0008) dated July 18, 2019.
- e. Federal Register Notice NRC-2019-0155, Reactor Oversight Process Enhancement Initiative, August 7, 2019
 - i. SECY-19-0067, Recommendations for Enhancing the Reactor Oversight Process dated June 28, 2019.
 - ii. Mr. Sheehan present recommended comments from the Council on the proposed changes. A motion was made by Mr. Jordan for the Council to submit these comments and seconded by Rep. Ryan; no objections; unanimous vote in favor. Mr. Semancik agreed to submit the comments for the Council.
- f. Millstone Power Station, Units 2 and 3 – Integrated Inspection Report 05000336/2019002 and 05000423/2019002 dated August 12, 2019.
- g. Treatment of Reevaluated Flood Hazard Information Provided under Title 10 of the Code of Federal Regulations 50.54(1) Regarding Recommendation 2.1 of the Near-Term Task Force Review Of Insights from the Fukushima Dai-Ichi Accident dated August 20, 2019.
- h. Millstone Power Station, Unit 3 – Operator Licensing Examination Approval dated August 22, 2019.
- i. Millstone Power Station, Units 2 and 3 – Updated Inspection Plan (Inspection Report 05000336/2019005 and 05000423/2019005) dated August 28, 2019.
- j. Millstone Power Station, Unit 3 – Requalification Program Inspection dated August 29, 2019.
- k. Millstone Unit 2 - Acceptance Review Determination: LAR Regarding Revised Technical Specification Limits for Primary and Secondary Coolant Activity (EPID: L-2019-LLA-0164] dated September 6, 2019.
- l. Millstone Unit 3 - Acceptance Review Determination: LAR to Revise Integrated Leak Rate Test (Type A) and Type C Test Intervals (EPID: L-2019-LLA-0165] dated September 6, 2019.

5. Other material reviewed

NEAC reviewed the following information related to nuclear industry and trends.

- a. Letter from Rep. Frank Pallone, Jr, Chairman Committee on Energy and Commerce; Rep. Nita M. Lowey, Committee on Appropriations; Rep. Bobby L. Bush Chairman Committee on Energy and Commerce & Subcommittee on Energy; and, Rep. Marcy Kaptur Chairwoman Committee on Appropriations & Subcommittee on Energy and Water Development, and Related Agencies to the Honorable Kristine L. Svinicki, Chairman, US Nuclear Regulatory Commission dated July 15, 2019.

- b. "Nuclear Industry Push for reduced Oversight Gaining Traction," Ellen Knickmeyer Associated Press July 17, 2019.
- c. Connecticut Yankee (CY) Fuel Storage Advisory Committee Meeting (FSAC) Tuesday, May 21, 2019, Riverhouse at Goodspeed Station, Haddam, CT Draft Meeting Summary
- d. State of Connecticut Department of Public Safety Investigation Report CFS No. 1900417625 dated 8/29/2019.
- e. Nuclear Waste Storage and Nuclear Security, National Governors Association dated September 2019.

6. Council Business.

- a. Chair Ryan discussed status of 2018 Annual Council report. The workload of the legislative sessions and loss of Council members who contributed last year have delayed the completion of the report. He has updated the legislative contacts and is working to complete the report.
- b. Mr. Semancik provided the current membership and vacancy list for review. The Council has identified several candidates to refill. Chair Ryan will continue to work with elected officials to make the necessary appointments.
- c. Mr. Semancik noted that no second quarter Council meeting was held due to scheduling conflicts and reduced membership. He noted that four members, - himself, Mr. Sherrard, Mr. Woolrich and Mr. Salonia,- all attended the Connecticut Yankee (CY) Fuel Storage Advisory Committee Meeting (FSAC) on Tuesday, May 21, 2019. While this was not specifically noticed as a Nuclear Energy Advisory Council (NEAC) meeting, it was a public meeting and notice was provided. The issues discussed are consistent with the Council's charter.
- d. Reminded Council the fourth quarter meeting is Tuesday, December 17, 2019.

7. Public Comment

- a. Two members of the public were in attendance. There were no questions from the public.

8. Adjournment

Motion was made by Mr. Sheehan and seconded by Mr. Woolrich to adjourn; no objections; unanimous vote in favor; meeting adjourned at 8:52 PM.

Millstone Power Station NEAC Presentation

Safety

- **Safety is our first priority**
- **Commitment to protect the health and safety of the public**

Millstone Current Status

Millstone Unit 2

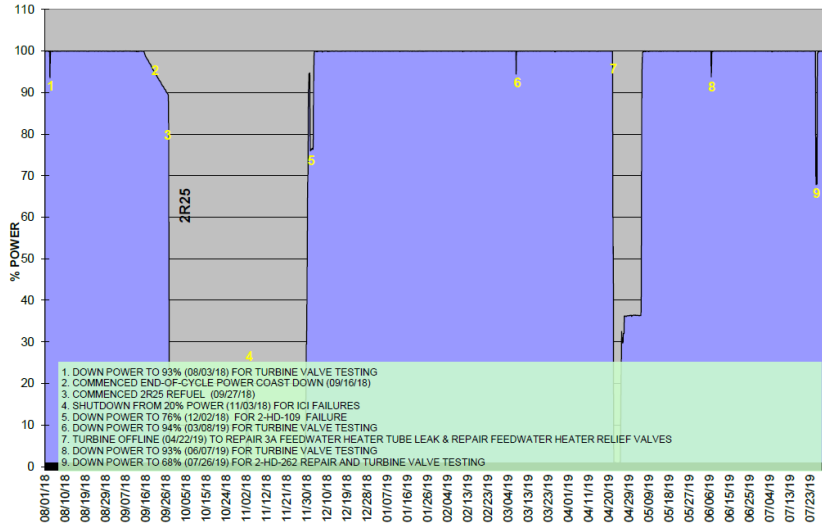
- **145 days online**
- **94.2% Capacity Factor YTD**

Millstone Unit 3

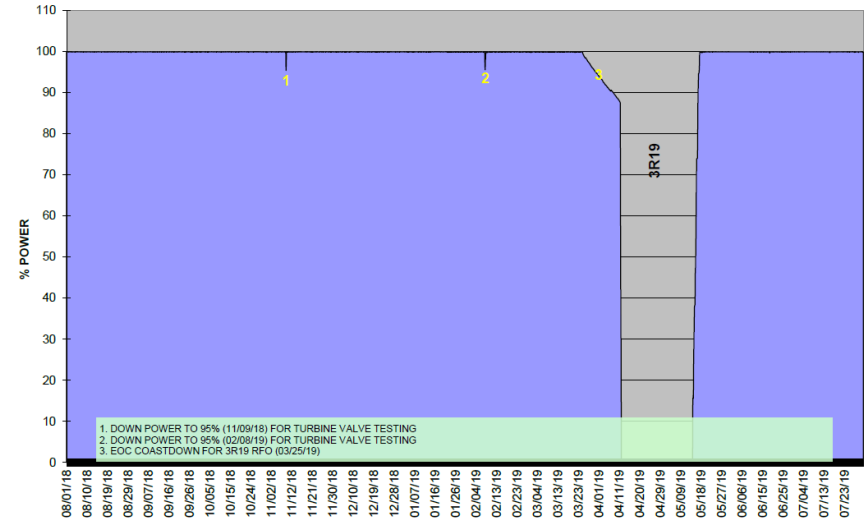
- **127 days online**
- **86.46% Capacity Factor YTD**

Operations History

Unit 2



Unit 3



NRC Findings

Station is in the Licensee Response column

7 GREEN Non-cited Violations Identified since last meeting

All are of very low risk significance

All are in our corrective action system.

Millstone Response to NRC Security Confirmatory Order Progresses

- **Millstone has completed 30 of 30 corrective actions**
 - **30 have been inspected satisfactorily by NRC**
 - **Baseline inspection to be closed in third quarter quarterly report**

License Amendment Requests

Significant License Amendment Requests Approved by the NRC

- Unit 2 - Extend ILRT Interval from 10 years to 15 years
- Unit 3 – Revise TS Action Statement for loss of control building inlet ventilation radiation monitor instrumentation (LA 272)
- Unit 3 – Revised TS to reflect results and constraints of new criticality safety analysis for fuel assembly storage in Unit 3 fuel storage racks (LA 273)

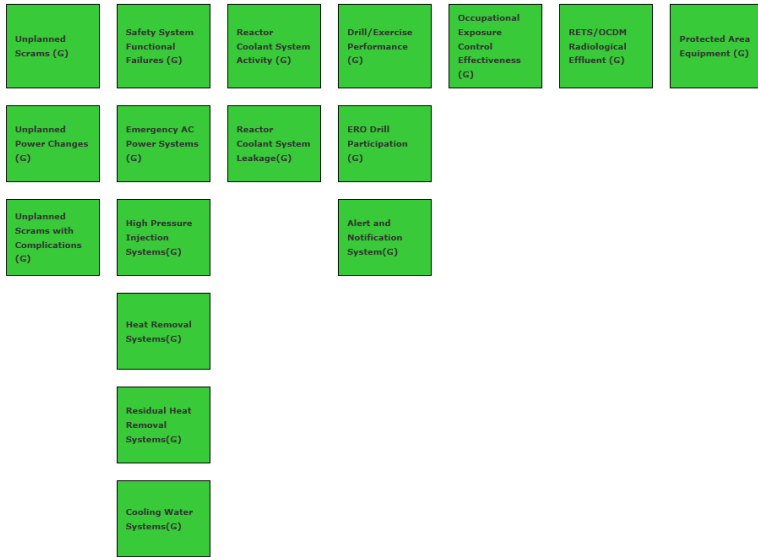
License Amendment Requests

Significant License Amendment Requests Pending Approval by the NRC

- Unit 1, 2, 3 – Revised EALs per NEI 99-01, Rev. 6
- Unit 2 – 50.69 Risk-Informed Safety Classifications
- Unit 2 – Revise TS limits for Primary and Secondary Activity
- Unit 2 – Revise TS 3.8.1.1 for MPS3 'A' RSST Inoperable and 13T-2 closed
- Unit 2, 3 – Revise ventilation runs from 10 continuous hours every 31 days to 15 minutes (TSTF-522)
- Unit 3 – Extend ILRT Interval from 10 years to 15 years

Millstone NRC Performance Indicators

Performance Indicators



Unit 2 Second Quarter 2019 NRC Performance Indicators

Performance Indicators



Unit 3 Second Quarter 2019 NRC Performance Indicators

Risk Informed Classification of Components and Systems (10CFR50.69)

- **Unit 2 License Amendment submitted**
- **System Categorization – 7 systems**
- **Integrated Decision Panel, UFSAR & FSRC approval**
- **Alternate Treatment Determination**
- **Program and Procedure revisions**

Millstone Oversight Summary

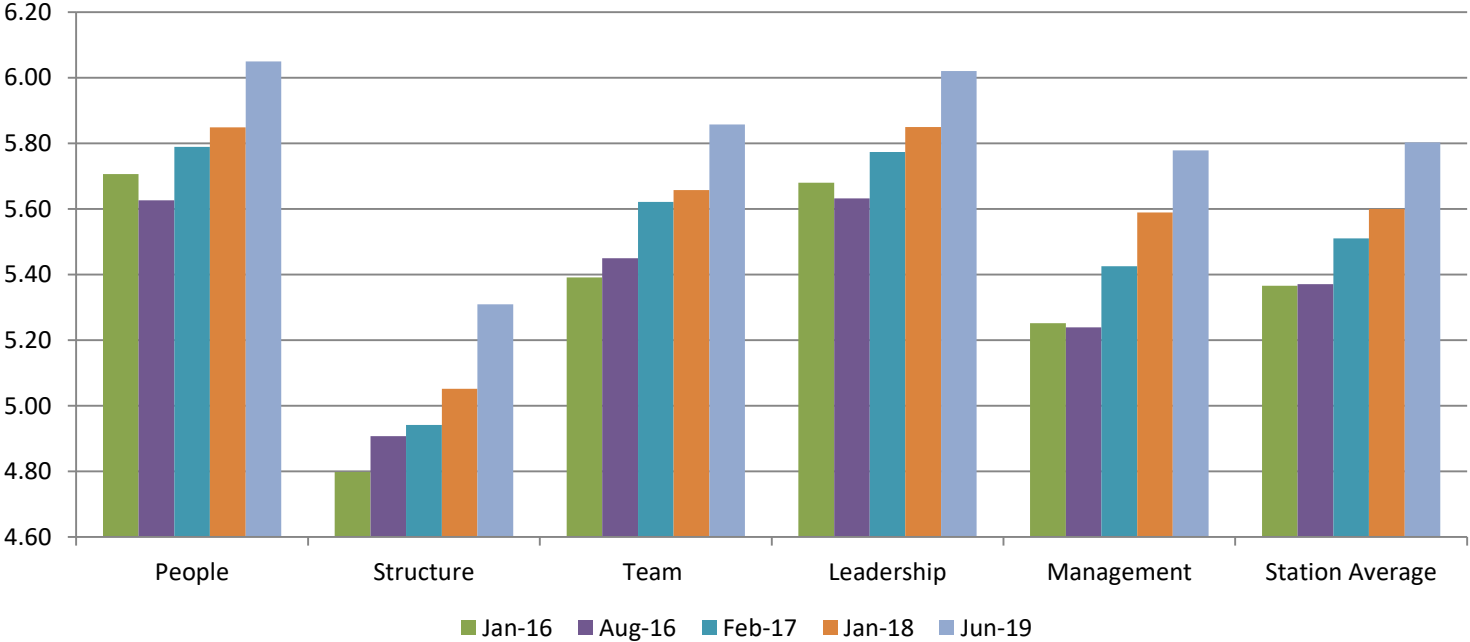
- Performance

Environmental Impacts

- **Title 5 Air Permit Violation**

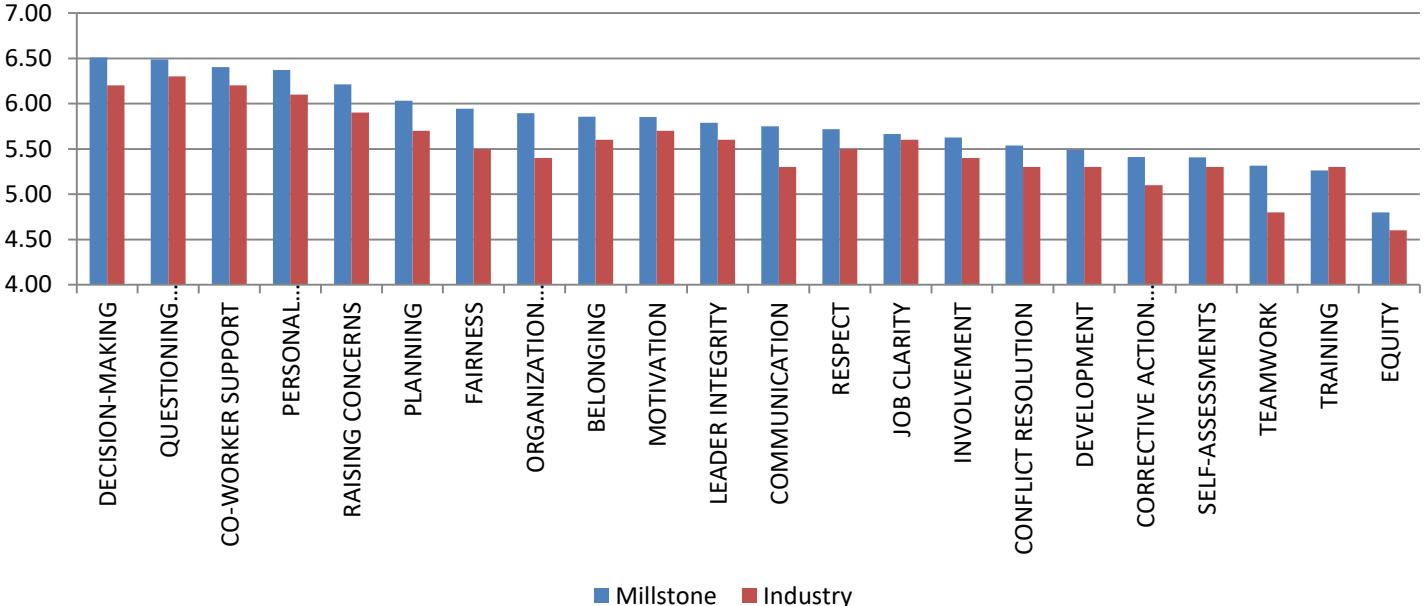
We Monitor and Drive Continuous Safety Culture Improvement

Millstone OR Survey Results



Our Safety Culture Meets or Exceeds Industry Averages

Millstone & Industry Averages



Emergency Plan Event Declaration

- **No Emergency Plan Event Declarations**

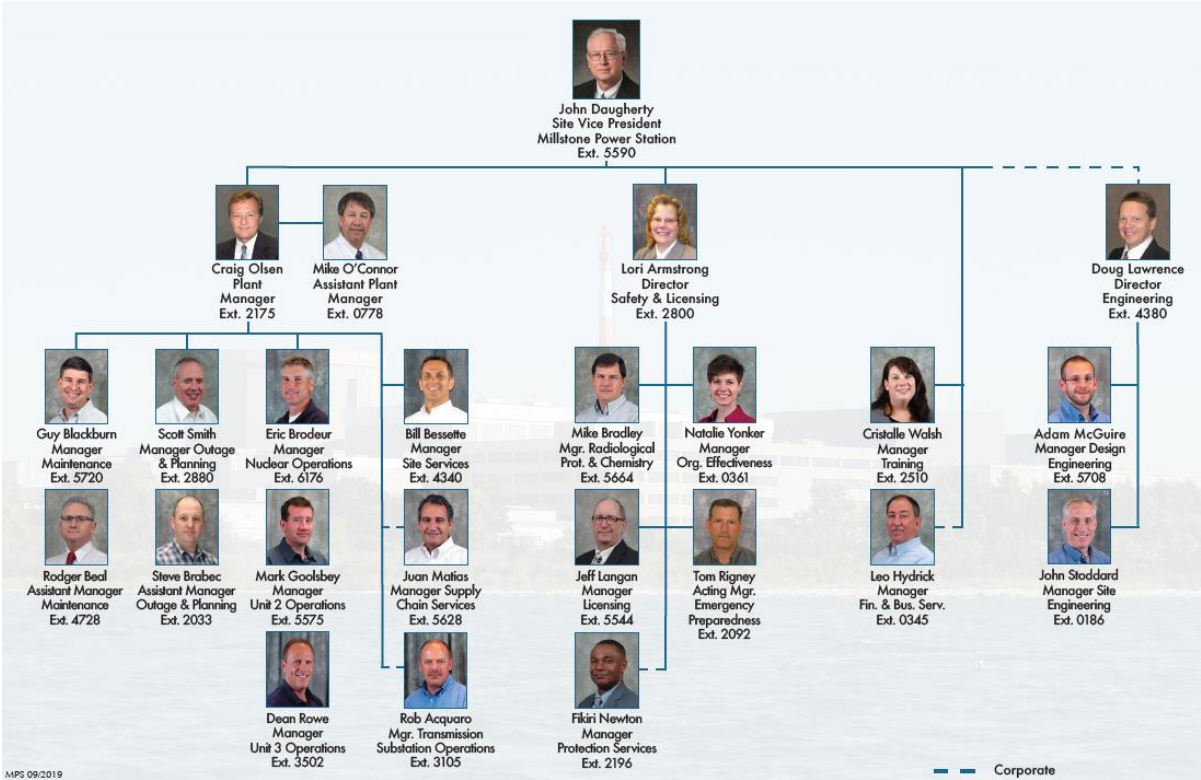
Offsite Emergency Plan Changes

- **SAMG complete**
- **Overwater PARs complete**
- **EAL Tables submitted**

Voluntary Retirement Program

- **Company-wide initiative**
- **Creating opportunities for staff**
- **Retirements are staggered to ensure coverage**
- **Emergency plan fully staffed**

MPS Leadership Team



- Staffing levels
- Hiring effort
- Ops Pipeline

Contact Information

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Michael O'Connor – Assistant Plant Manager

Email: michael.j.oconnor@dominionenergy.com

Phone: 860-447-1791 x0778

Appendix 3
Comments Concerning Recommendations for Enhancing the Reactor Oversight Process
(ROP) – Docket ID NRC-2019-0155



State of Connecticut

NUCLEAR ENERGY ADVISORY COUNCIL

October 4, 2019

Comments Concerning Recommendations for Enhancing the Reactor Oversight Process (ROP) – Docket ID NRC-2019-0155

The State of Connecticut Nuclear Energy Advisory Council (NEAC) met on September 17, 2019 and discussed Policy Issue dated June 28, 2019, SECY-19-0067 from Margaret M. Doane, Executive Director for Operations to The NRC Commissioners with the Subject: Recommendations for Enhancing the Reactor Oversight Process. After reviewing the Issue as discussed and taking into consideration the supporting enclosures, NEAC has the following comments.

1. *Commission Notification Item* on Page 2 – Although “...other Federal entities with regulatory jurisdiction over the national electric grid have increased oversight and coordination with utilities...” and “...the industry’s diverse and flexible coping strategies (FLEX)...” may have mitigated the risk in this area, relying on those agencies to detect problems with off site power without some NRC oversight is overly optimistic.
2. Clarifying the Greater than Green (GTG) inspection findings seems reasonable. Page 2.
3. NRC Response to White Inspection Findings –Pages 5 & 6 – It is the opinion of NEAC that the more the public knows the better they understand how nuclear power plants operate and are inspected. Gubernatorial notification is a must, Release to the General Public is desired.
4. Conducting the confirming inspections after the licensee has reported completion of the corrective action for a Greater Than Green finding and clarifying the definitions of White and Yellow Performance Indicators are good ideas. Pages 8-9.
5. Background on Reactor Oversight Process (ROP) Resource Estimates – Page 12 – NEAC does not agree that lessening inspections will improve licensee performance.
6. Staff Views Regarding Inspection Program Changes - Pages 17-18 – NEAC agrees with the Staff that recommends further study and a comprehensive review to insure that standards are still maintained before implementing the change of frequency of the biennial Problem Identification and Resolution (PI&R) inspection to triennial.
7. Radiation Protection Inspections – Page 21 – Eliminating a specific Radiation Inspection and merging this requirement with other inspections may reduce the perceived importance of this vital requirement.

8. RESOURCES – Page 26 – This paragraph implies to NEAC that the real reason for the proposed changes are due to budget cuts to the NRC that will require a reduction of personnel. That is not a good reason to reduce inspections. The Commissioners would be better served by pointing out the necessity of a properly funded Commission to the White House and Congress.

In summary, the recommendations bring to mind a famous quote by Admiral Hyman Rickover, the Father of the Nuclear Navy – “You get what you inspect, not what you expect.” Relying on outside agencies, increasing the time between PI&R inspections, and elimination of the separate Radiation Protection Inspection are good examples of “expect” rather than “inspect”.

Thank you for your consideration of these comments.

Very Respectfully,

/Kevin Ryan/
Kevin Ryan
Chairman

Copy to:

NEAC

Commissioner, DEEP

Senator Richard Blumenthal

Senator Christopher Murphy

Congressman Joseph Courtney

State Senate President Pro Tem

State Senate Majority Leader

State Senate Minority Leader

State Speaker of the House

State House Majority Leader

State House Minority Leader

Co-Chairs State General Assembly Energy & Technology Committee

Appendix 4
NEAC Response to NRC NEIMA Local Community Advisory Board Questionnaire



Home > Site Help > Comment Form Response

Thank you for your comment, question, or survey response

Dear www.nrc.gov visitor,

Thank you for visiting the Nuclear Regulatory Commission's Web site and sending us your comment, question, or survey response.

If you have asked us for information, please print or save this page for reference. Our goal is to respond to most inquiries within two business days, most often by e-mail or telephone. If we can't get back to you within two days, it is usually because we need to forward your request to an NRC staff member with special expertise. If you don't receive a response within ten business days*, please feel free to contact the NRC Web Team, or fax a copy of this page to (301) 287-9354 and we will follow up with the person who received your request.

*Exception: The time period for responding to Information Quality correction requests is 45 days.

Sincerely,

The NRC Web Team

Below is what you submitted to the NRC NEIMA Local Community Advisory Board Questionnaire on Tuesday, October 29, 2019 at 13:33:09

related-site: Millstone and Haddam Neck (CT)

cab-question1: The Nuclear Energy Council (NEAC) was established in 1996 to provide the public with a forum to comment on the recovery efforts of the Millstone Nuclear Power Plants, then operated by Northeast Utilities. The legislation provided NEAC with the authority to liaison with the NRC and the Utility Management as well as hear from citizens regarding their concerns about Nuclear Power and plant operations. Initially NEAC had a member that had unfettered access to the site and monitored the two plants, reporting to NEAC with a copy to Plant Management. This monitoring ceased after Dominion managers showed that they were able to provide safe operation of the plants. A subcommittee of NEAC was formed to monitor the shutdown and SAFSTORE of Millstone One. This committee was disbanded when those operations were complete.

cab-question2: NEAC was established by an Act of the State Legislature, signed by the Governor in June 1996. The "charter for NEAC" is Connecticut General Statutes CGS 16a-11a.

cab-question3: Initially NEAC met monthly to cover the recovery efforts of Millstone One and Two by Northeast Utilities. After the recovery was completed and the facility sold to Dominion, NEAC settled

on meeting quarterly. It continues to meet quarterly and provides an annual report to the Governor and the Legislature. All meetings are open to the public and subject to the State Freedom of Information Act.

cab-question4: Historically, NEAC was composed of cross section of professional experience. Generally two to three members are retired Submarine Officers with experience operating and supervising a nuclear power plant. At least one member was an elected State Legislator. One member represented the Licensee. Initially this was a Plant Vice President but now it is someone who is a former high level Plant Manager. Other members were from Academia and interested citizens. The Committee tries to maintain this level of experience today.

cab-question5: Members are appointed by the Governor and leaders of the State House and Senate and CEOs of municipalities hosting the power plants according to the State Statue. This has not changed.

cab-question6: There are no specific terms for members. One member has been on NEAC since it was established.

cab-question7: NEAC follows Robert's Rules of Order and the State Freedom of Information Act.

cab-question8: There are no specific logistics supporting NEAC meetings. One of the members takes minutes that are then posted on the DEEP web site and included in the annual report to the Governor and the Legislature.

cab-question9: Initially, NEAC received a small dollar amount from the State budget that were used for travel by some members to Washington or other locations for conferences. Today, NEAC gets no funds from the State and any expenditures are borne by the individual members.

cab-question10: NEAC holds an annual joint meeting with the NRC, has a brief by the Licensee and additional meetings with subject matter experts on storage and transporting of high and low level radioactive material. Annual reports accessible from https://www.ct.gov/deep/cwp/view.asp?a=2713&q=457004&deepNav_GID=1639 provide topics covered by NEAC.

cab-question11: NEAC is unique in that it monitors two operating plants and one SAFSTORE plant. There is generally a lively dialog between NEAC and the Licensee during its annual briefing. The Licensee generally responds to NEAC when a question is not answered at the meeting. the Annual Report is intended to inform the Governor and the legislature to allow them to take any necessary action.

cab-question12: NEAC has an annual joint meeting with the NRC. The NRC conducts its annual performance public meeting for the Millstone site in conjunction with the NEAC meeting.

cab-question13: The public has the opportunity to attend all NEAC meetings and the ability to comment during the meeting. All minutes are included in the annual reports available to public on the DEEP website at https://www.ct.gov/deep/cwp/view.asp?a=2713&q=457004&deepNav_GID=1639

cab-question14: NEAC provides a platform for the public and for the licensee to interact in a neutral arena. It provides the NRC with a platform to reach the public when it gives the annual update. NEAC serves as a year round civilian monitoring of plant activities. NEAC is able to calm citizen concerns through public meetings and factual presentations. Improves public confidence by having local experts review and listen to utility and NRC actions affecting safety.

cab-question15: None.

cab-question16: Public meetings Citizen participation in monitoring practices at the local plant In the beginning there is great public interest but as the licensee gets a handle on a problem and is able to explain in a neutral arena public concern is satisfied and attendance drops off. NEAC's power is a bully pulpit that keeps the licensee "honest" and helps stop the spread of misinformation about the plant. When tensions are high, giving a knowledgeable NEAC member access to the site for monitoring plant practices assisted both the licensee and the public

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