



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION I
2100 RENAISSANCE BLVD., SUITE 100
KING OF PRUSSIA, PA 19406-2713

April 8, 2016

MEETING SUMMARY

LICENSEE: DOMINION NUCLEAR CONNECTICUT, INC.

FACILITY: MILLSTONE POWER STATION

SUBJECT: SUMMARY OF PUBLIC MEETING

On March 29, 2016, at 6:00 p.m., the U.S. Nuclear Regulatory Commission (NRC) met with the Connecticut Nuclear Energy Advisory Council (NEAC) at the Waterford Town Hall in Waterford, Connecticut. The NRC conducted the meeting to discuss its assessment of the safety performance at Millstone Power Station for 2015.

A notice of the NEAC meeting was issued on March 11, 2016, and was posted on the NRC's external (public) Web page. The meeting notice can be found in the NRC's Agencywide Documents Access and Management System (ADAMS) with Accession Number ML16074A037. ADAMS is accessible from the NRC Web page at: <http://www.nrc.gov/reading-rm/adams.html>.

The NRC discussed its assessment of the safety performance of Millstone Power Station for the period of January 1 through December 31, 2015, as documented in our letter dated March 2, 2016 (ADAMS Accession Number ML16060A055). Additional information relative to the NRC's Annual Assessment Process and the safety performance of Millstone Power Station can be found on the NRC's web site at: www.nrc.gov/NRR/OVERSIGHT/ASSESS/index.html.

Members of NEAC, the public, and members of the media attended the meeting and were offered the opportunity to question the NRC regarding Dominion's performance and the role of the agency in ensuring safe plant operations. Some of the questions required additional research with technical experts within the NRC. The answers regarding these topics are included as an enclosure to this letter.

/RA/

Glenn T. Dentel, Chief
Projects Branch 2
Division of Reactor Projects

Enclosure:
Annual Assessment Meeting Public
Topics of Interest

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Annual Assessment Meeting Public Topics of Interest

Time frame for NRC decisions on Fukushima Tier II/Tier III recommendations

At this time, it is the current goal to close out all items by the end of 2016. Please bear in mind, though, that some additional actions could be identified for specific plants that may require their actions to extend beyond that timeframe.

Plans for a new cancer study

There are currently no plans at this time. The NRC staff will continue to monitor international and national studies on cancer risk to see if we should conduct any future work in this area.

Current status of the Millstone steam generators

The Millstone 2 and 3 steam generators are being inspected/managed in accordance with NRC requirements. The licensee performs periodic steam generator tube inspections in accordance with their Technical Specifications. NRC regional inspectors use Inspection Procedure 71111.08 to monitor the licensee's steam generator program.

Millstone 2 has two steam generators that were designed and fabricated by Babcock and Wilcox Canada. The steam generators were installed in 1993. There are 8,523 tubes in each steam generator. The tubes are made from thermally treated Alloy 690, which is much more resistant to corrosion than the tubes that were in the original steam generators at Millstone 2. As of completion of their Fall 2015 refueling outage, 32 tubes have been plugged in the Millstone 2 steam generators (19 in one steam generator and 13 in the other). This is approximately 0.19% of the tubes. The most recent report can be found here:

<http://pbadupws.nrc.gov/docs/ML1535/ML15356A375.pdf>

Millstone 3 has four steam generators that were designed and fabricated by Westinghouse. The steam generators have been in service since initial operation (1986). There are 5,626 tubes in each steam generator. The tubes are made from thermally treated Alloy 600, which is an improved material compared to that used in earlier steam generator designs. As of completion of their Fall 2014 refueling outage, 187 tubes have been plugged in the Millstone 3 steam generators (49, 25, 22, and 91 in the four steam generators). This is approximately 0.83% of the tubes. The most recent report can be found here: <http://pbadupws.nrc.gov/docs/ML1505/ML15050A041.pdf>

Operating experience for all plants with thermally treated Alloy 600 (like Millstone 3) is summarized in NUREG-2188, which is current through December 2013. Similarly, NUREG-1841 summarizes operating experience with thermally treated Alloy 690 (like Millstone 2) as of December 2004. Links to these documents are provided below:

NUREG-2188: <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr2188/>

NUREG-1841: <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1841/>

Current status of Millstone Unit 2 & Unit 3 reactor vessel heads and inspections

The reactor vessel heads are inspected in accordance with the requirements in 10CFR50.55a, namely ASME Code Case N-729-1 and ASME Code XI IWA-2200 (contained within IWA-2000) requirements. Both of these documents are publicly available. The reactor vessel heads do not have a scheduled replacement interval, this would be decided after completing evaluation of data from the individual inspections, with input from industry operating experience. Information on each unit below.

- Unit 2
 - Age:
 - Reactor vessel head replaced in 2005 with one composed of primary water stress corrosion cracking resistant material
 - Dominion's Inspection Strategy:
 - Inspected in accordance with N-729-1 (inspection schedule Item No. B4.30 and B4.40) as incorporated under 10CFR50.55a
 - Examination methods are volumetric (ultrasonic) and surface (bare metal visual) performed in accordance with ASME Code XI IWA-2200 requirements
 - Extent and frequency: all nozzles, not to exceed one inspection interval (10 calendar years), along with visual inspection every third refueling outage, not to exceed 5 calendar years
 - Dominion's Inspection Results:
 - Last inspected Fall 2012 using volumetric and surface methods with no findings
 - Next scheduled visual inspection is in 2017, and the next volumetric inspection is scheduled in 2021

- Unit 3
 - Age:
 - Original, plant placed in service in 1986
 - Dominion's Inspection Strategy:
 - Inspected in accordance with N-729-1 (inspection schedule Item No. B4.10 and B4.20) as incorporated under 10CFR50.55a
 - Monitor industry operating experience and thermal sleeve wear, replace when needed
 - Examination methods are volumetric (ultrasonic) and surface (bare metal visual) performed in accordance with ASME Code XI IWA-2200 requirements
 - Extent and frequency: all nozzles, every 8 calendar years or before the potential for crack propagation is 2.25, whichever is less (the potential for crack propagation is a complex formula under section 2410 of N-729-1), plus visual inspection every refueling outage
 - Dominion's Inspection Results:
 - Last inspected spring 2013 using volumetric and surface methods with no findings
 - Next scheduled volumetric and surface inspection fall 2017