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U.S. Nuclear Regulatory Commission
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DOMINION ENERGY NUCLEAR CONNECTICUT, INC.
MILLSTONE POWER STATION UNITS 1, 2, 3, AND ISFSI
10 CFR 50.59 ANNUAL CHANGE REPORT FOR 2024
ANNUAL REGULATORY COMMITMENT CHANGE REPORT FOR 2024

Pursuant to the provisions of 10 CFR 50.59(d)(2), the report for changes made to the facility for Millstone Power Station Unit 2 (MPS2) and Unit 3 (MPS3) are submitted via Attachment 1 for 2024, and Attachment 2 contains the Annual Commitment Change Report for 2024.

There were no changes made to Millstone Power Station Unit 1 (MPS1) or the Independent Spent Fuel Storage Installation (ISFSI).

This letter constitutes the Annual Commitment Change Report consistent with the Millstone Power Station's Regulatory Commitment Management Program.

Should you have any questions, please contact Ms. Lori Kelley at (860) 447-1791 Ext. 6520.

Sincerely,

Chris Chatman
Director, Nuclear Plant Support

Attachments: 2

Commitments made in this letter: None

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* I certify under penalty of law that this document and all attachments were prepared and reviewed to assure the quality and accuracy of the information submitted. If data originated from outside sources, based on my inquiry of the person or persons who supplied the data (including vendor supplied data), the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. As stated in the Code of Federal Regulations 10 CFR 50.9a, "Information provided to the Commission by an applicant for a license or by a licensee or information required by statute or by the Commission's regulations, orders, or license conditions to be maintained by the applicant or the licensee shall be complete and accurate in all material respects."

Action Plan/Commitments (Stated or Implied): None

Required Changes to the UFSAR or QA Topical Report: None

Attachment 1

10 CFR 50.59 ANNUAL REPORT 2024
MILLSTONE POWER STATION MPS2 AND MPS3

Millstone Power Station Unit 2 and Unit 3
Dominion Energy Nuclear Connecticut, Inc. (DENC)

10 CFR 50.59 ANNUAL REPORT 2024 - MPS2

50.59 Evaluation - FSRC MP-23-041

A 10 CFR 50.59 review was performed that applies to the following parent documents:

EVAL-ENG-RSE-M2C29 Revision 0, Addendum A
LBDCR No. 23-MP2-002
FSAR Change No. MP2-UCR-2023-005

Description:

This Reload Safety Evaluation (RSE) Addendum reviews each of the main sections of the original issuance of the M2C29 RSE and each attachment. The changes to the RSE are specific to the safety analysis portions of the original RSE and the level of SME review for this RSE Addendum is reflective of the updated content.

Addendum A updates Millstone Unit 2 Cycle 29 (M2C29) RSE to implement the NRC approved EMF-2310, Revision 1, Supplement 2P-A, Revision 0. EMF-2310, Revision 1, Supplement 2P-A, Revision 0 applies the Biasi Critical Heat Flux (CHF) correlation in the Departure from Nucleate Boiling (DNB) analysis of the Post-Scram Main Steam Line Break accident with limits developed to ensure DNB is prevented for the limiting rod in the core with 95 percent probability at a 95 percent confidence level (95/95) reflective of the HTP fuel design. implementation of EMF-2310, Revision 1, Supplement 2P-A, Revision 0 resolves the non-conforming condition addressed by Operability Determination (OD) CA7408314.

Revision 0:

Original Issue. This document characterizes the reload core and discusses the supporting analyses and operational impacts of the core design.

10 CFR 50.59 ANNUAL REPORT 2024 - MPS2 / MPS3

50.59 Evaluation - FSRC MP-24-026

A 10 CFR 50.59 review was performed that applies to the following parent documents:

ETE MP-2024-1020 Millstone License and Design Basis Evaluation for Eversource 345kV Switchyard 1T/2T Breaker Replacements

Description:

The activity being evaluated is the changes to the Millstone Power Station (MPS**)** Unit 2 FSAR and Unit 3 FSAR to update statements that switchyard breakers can support three Close-Open (CO) cycles after a loss of their air compressor and that switchyard breakers are equipped with DC shunt trip features that trip the DC power supply to the breaker's trip coil.

The replacement 1T and 2T circuit breakers are hydraulically operated and are capable of 2.5 CO cycles on loss of power to the circuit breaker charging spring motor. This element of the activity was screened in for evaluation since the reduction of CO cycles from 3 to 2.5 is adverse.

In addition, the replacement 1T and 2T circuit breakers are not equipped with a DC shunt trip feature that trips the DC power supply to the circuit breaker trip coil on breaker failure initiation. This element of the activity was screened in for evaluation since the removal of an automatic protection feature is adverse.

The ETE evaluates the impact of replacing the existing GE-Hitachi and HICO 345KV switchyard circuit breakers 1T/2T with new ABB-Hitachi SF6 Gas circuit breakers on the Millstone design and licensing bases. Specifically, the following areas will be evaluated to identify any impact on the Millstone design and licensing bases:

- Impact on AC electrical loading changes on Millstone Unit 3 (MP3).
- Impact on existing interfaces between the Switchyard and Millstone Unit 2 (MP2) and MP3.
- Impact of revised circuit breaker control logic.
- Impact on changes to MP2 FSAR.
- Impact on changes to MP3 FSAR

ETE documents the results of the safety and regulatory review to support the FSAR technical changes that require a 50.59 evaluation (ETE Level II Item 2.4c).

10 CFR 50.59 ANNUAL REPORT 2024 – MPS3

50.59 Evaluation – FSRC MP-22-010

A 10 CFR 50.59 review was performed that applies to the following parent documents:

Design Change MP3-21-01113, Rev 1 - Replacement of Unit 3 Reactor Coolant Pump 'A' Seal w/ Upgraded Flowserve NX Seal.

Description:

The design change installs a three-stage mechanical seal in the 'A' RCP in place of the existing three-stage seal. The differences are that the new seal has: a rotating face made of conductive Tungsten Carbide with a Nickel Alloy binder on each stage rather than the existing non-conductive Silicon Carbide material lower closing forces due to fewer springs and changes in the surface profiles of the seal faces of each stage a re-designed radial gap seat gasket/backup ring arrangement for the rotating face integral to the sleeve as used on all other N-seal models, to preclude any secondary effects from hard support contact to the
rotating face

The 50.59 Evaluation for MP3-21-01113 remains unchanged. However, Engineering Change (EC) MP3-21-01113 has been revised to remove the identification of the seal (NX-SEAL-5) from the EC. This revision facilitates changing the seal replacement sequence for the Reactor Coolant Pumps (RCPs).

Attachment 2

ANNUAL COMMITMENT CHANGE REPORT FOR 2024
MILLSTONE POWER STATION

Millstone Power Station Unit 1, 2, 3, and ISFSI
Dominion Energy Nuclear Connecticut, Inc. (DENC)

Annual Regulatory Commitment Change Report for 2024

MPS2

Commitment change Evaluation for RCR-02249
Title: MPS2 Rodlet Poison Surveillance Program Frequency
COMCR: LA12338732
Commitment Source: A11497.04 – ML20045J234 "Millstone Nuclear Power Station, Unit No. 2 Response to Request for Additional Information (TAC No. M86361)", dated July 16, 1993.

Description:

The MPS2 rodlet surveillance program will be performed at a frequency not to exceed 10 years to visually inspect no less than 1 percent of the MPS2 stainless steel rodlets for material degradation.

The NRC staff's review as documented in ML18249A08 (Millstone Power Station, Units 2 and 3 - Closeout of Generic Letter 2016-01) determined that the provided response sufficiently addressed GL 2016-01 for borated stainless steel. In particular, the described monitoring program included the following key features:

- Visual inspection of rodlets.
- Established processes to ensure that the licensee will take the appropriate corrective actions if any potentially non-conforming material is discovered.
- A testing [inspection] frequency not to exceed 10 years.
- Acceptance criteria to ensure maintenance of the 5-percent subcriticality margin for the SFP.

Therefore, because no significant degradation of the borated stainless steel rodlets has been observed during the visual inspections conducted every 5 years since 1999, no significant degradation is expected during their service life, and because the NRC stated that an inspection frequency "not to exceed 10 years" is acceptable, there is technical basis to revise the surveillance program as follows:

Current Surveillance Program (SP 21038)	**Revised Surveillance Program**
1% of the MPS2 stainless steel rodlets at 5- year intervals to visually inspect for material degradation	1% of the MPS2 stainless steel rodlets at a frequency not to exceed 10 years to visually inspect for material degradation

Commitment Change Evaluation for RCR-42493
Title: MPS2 Service Water System (SWS) heat exchanger (HX) inspection and cleaning program requirements
COMCR: LA 12944558
Commitment Source: B15696.10 – Millstone Nuclear Power Station, Unit No. 2, Service Water System – Generic Letter GL 89-13, Update to the GL 89-13 Response (TAC No 74026), dated June 21, 1996, later combined with other commitments under COMCR 2-98-127.

Description:

The commitment is being revised to reflect a cleaning, inspection, and eddy current testing (ECT) interval of 24 months for the Switchgear Room coolers (X-181A/B, X-182, and X-183).

The reduced frequency of cleaning, inspecting, and Eddy Current Testing described in this Commitment Change ETE-MP-2024-1052 justifies extending the frequency of cleaning, inspection, and eddy current testing (ECT) from 18 months to 24 months given that the heat exchanger performance is evaluated assuming an overall fouling factor associated with a 24-month cleaning cycle. In addition, a review of visual inspection and ECT reports going back 8 years shows no significant indications of macrofouling, biological growth, silting/mud, corrosion/degradation, or protective coating failure. Thus, the ability of the heat exchangers to continue to meet their design basis function with the revised cleaning, inspecting, and ECT frequency of 24 months is confirmed.

Commitment Change Evaluation for RCR-43024
Title: MPS2 Administrative Controls will be established for cleaning of the switchgear room coolers, X181A, at an 18-month interval.
COMCR: LA12944568
Commitment Source: DNC Letter 13-227 – Dominion Nuclear Connecticut, Inc., Millstone Power Station Unit 2, License Amendment Request for Changes to Technical Specification 3/4.7.1, “Ultimate Heat Sink” dated May 3, 2013.

Description: X-181 A/B heat exchanger cleaning will be changed to 24 months per Engineering technical justification.

ETE-MP-2024-1052 justifies extending the frequency of cleaning, inspection, and eddy current testing (ECT) from 18 months to 24 months given that the heat exchanger performance is evaluated assuming an overall fouling factor associated with a 24-month cleaning cycle. In addition, a review of visual inspection and ECT reports going back 8 years shows no significant indications of macrofouling, biological growth, silting/mud, corrosion/degradation, or protective coating failure. Thus, the ability of the heat

exchanger to continue to meet its design basis function with the revised cleaning, inspecting, and ECT frequency of 24 months is confirmed.

Missed Commitment - RCR-43029
Title: Clean EDG Service Water Heat Exchangers prior to 75 Degrees F
COMCR: LA3051483
Commitment Source: DNC Letter 13-227 – Dominion Nuclear Connecticut, Inc., Millstone Power Station Unit 2, License Amendment Request for Changes to Technical Specification 3/4.7.1, “Ultimate Heat Sink”, dated May 3, 2013.

Subject: Commitment RCR-43029 was not completed as required. RCR-43029 specifies that RBCCW and EDG heat exchangers will be cleaned within 4 months of the UHS temperature exceeding 75 degrees.

Ultimate Heat Sink temperature exceeded 75 degrees between 17:54 to 18:14 on 7/13/23.

Millstone Unit 2 has a regulatory commitment to clean and inspect all safety related service water heat exchangers prior to Ultimate Heat Sink temperature reaching 75 deg. F. Presently, the "A" and "B" EDG service water heat exchangers have not been cleaned or inspected within 90 days of exceeding 75 deg F Ultimate Heat Sink Temperature.

Plant Impact: The maximum ultimate heat sink temperature (TS 3.7.11) is less or equal to 80 deg F and this limit was not exceeded. The "A" and "B" EDG remained operable and remained unaffected by this missed commitment.

Engineering confirmed that EDGs remained within their design basis and would be able to perform their safety function without being cleaned and inspected within 90 days prior to exceeding 75 deg F ultimate heat sink temperature.

Reason for Missed Commitment:

Work Orders to perform cleanings were rescheduled multiple times due to other organizational priorities, Maintenance resource challenges and organizational decision making. Primary drivers were the extension of 2R28 and the Unit 3 forced outage due to Main Generator Open Breaker ground. The deferrals were discussed with and agreed upon with station leadership.

Work Order 53203357231 M2H7BD has been completed with PMT satisfactory on July 18, 2023, and was in status 85 – Closed on October 16, 2023

Work Order 53203357833 M2H7AD has been completed with PMT satisfactory on July 15, 2023, and was in status 85 – Closed on September 27, 2023.

MPS3

Commitment Change Evaluation for RCR-25497
Title: MPS3 Rosemount Transmitter Enhanced Surveillance Program
COMCR LA12345836
Commitment Source: A08646-18 – Haddam Neck Plant, Millstone Nuclear Power station, Unit 1, 2, and 3, NRC Bulletin 90-01 Loss of Fill-Oil in Transmitters Manufactured by Rosemount, dated July 3, 1990.

Description:

This COMCR is documenting the removal of the six transmitters. Some 1153 and 1154 series Rosemount Transmitters are being replaced with a model 3154 series that is not susceptible to oil leakage and do not need to be in the enhanced surveillance program per NRC Bulletin 90-01.

Regulatory Commitment Record (RCR)-25947 original wording from Letter A08646 dated July 3, 1990 (A08646-18):

> This [enhanced surveillance for Rosemount transmitter] program has been developed and implemented for all transmitters in Table 1. The program will be formalized (i.e., a new plant surveillance procedure generated) by November 30, 1990.

RCR-25497 revised commitment wording with new text shown in italics:

> This [enhanced surveillance for Rosemount transmitter] program has been developed and implemented for all transmitters in Table 1. The program will be formalized (i.e., a new plant surveillance procedure generated) by November 30, 1990.
>
> *As documented under COMCR 97-21 and captured in RCR-42251, 3FWS*LT551, 3FWS*LT552, 3FWS*LT553 and 3FWS*LT554 have been deleted from Table 1 and the NRC was notified in the annual report of revised regulatory commitments under letter B17038 on June 30, 1998.*
>
> *COMCR LA 12345836 removes the following from Table 1 due to replacing with a model that is not susceptible to oil leakage and no longer need to be in the enhanced surveillance program per NRC Bulletin 90-01:*

- *M33RCS*LT459 - PRESSURIZER LEVEL (CHANNEL 1) LEVEL TRANSMITTER*
- *M33RCS*LT460 - PRESSURIZER LEVEL (CHANNEL 2) LEVEL TRANSMITTER*
- *M33RCS*LT461 - PRESSURIZER LEVEL TRANSMITTER*
- *M33RCS*PT457 - PRESSURIZER 3RCS*TK1 PRESSURE TRANSMITTER (CHANNEL 3)*
- *M33RCS*PT458 - PRESSURIZER 3RCS*TK1 PRESSURE TRANSMITTER (CHANNEL 4)*
- *M33CHS-LT112 - VOLUME CONTROL TANK 3CHS*TK2 LEVEL TRANSMITTER*