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U. S. Nuclear Regulatory Commission Attention: Document Control Desk Washington, DC 20555



Serial No.: 22-068 MPS Lic/DB R0 Docket No.: 50-336 License No.: DPR-65

MAR 1 8 2022

## DOMINION ENERGY NUCLEAR CONNECTICUT, INC. MILLSTONE POWER STATION UNIT 2 LICENSEE EVENT REPORT 2022-001-00 STRUCTURAL INTEGRITY OF REACTOR BUILDING COMPONENT COOLING WATER CRACKED THREADED FITTING COULD NOT BE ESTABLISHED RESULTING IN SYSTEM INOPERABLE LONGER THAN ALLOWED BY TECHNICAL SPECIFICATIONS

This letter forwards Licensee Event Report (LER) 2022-001-00, documenting a condition that occurred at Millstone Power Station Unit 2 (MPS2), on January 20, 2022, when MPS2 could not maintain structural integrity of the reactor building component cooling water system which was determined to have existed longer than its Technical Specification Allowed Outage Time. This LER is being submitted pursuant to 10 CFR 50.73(a)(2)(i)(B) as operation or condition prohibited by Technical Specifications.

There are no regulatory commitments contained in this letter or its enclosure. Should you have any guestions, please contact Mr. Dean E. Rowe at (860) 444-5292.

Sincerely,

Michael J. O'Connor Site Vice President – Millstone

Enclosure: LER 336/2022-001-00

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Serial No. 22-068 Docket No. 50-336 Licensee Event Report 2022-001-00 Page 2 of 2

c: U.S. Nuclear Regulatory Commission Region I 2100 Renaissance Blvd. Suite 100 King of Prussia, PA 19406-2713

> R.V. Guzman NRC Senior Project Manager Millstone Units 2 and 3 U.S. Nuclear Regulatory Commission One White Flint North 11555 Rockville Pike Mail Stop 08 C-2 Rockville, MD 20852-2738

NRC Senior Resident Inspector Millstone Power Station

CC:

Serial No. 22-068 Docket No. 50-336 Licensee Event Report 2022-001-00

# ATTACHMENT

LICENSEE EVENT REPORT 2022-001-00 STRUCTURAL INTEGRITY OF REACTOR BUILDING COMPONENT COOLING WATER CRACKED THREADED FITTING COULD NOT BE ESTABLISHED RESULTING IN SYSTEM INOPERABLE LONGER THAN ALLOWED BY TECHNICAL SPECIFICATIONS

> MILLSTONE POWER STATION UNIT 2 DOMINION ENERGY NUCLEAR CONNECTICUT, INC.

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#### U.S. NUCLEAR REGULATORY COMMISSION APPROVED BY OMB: NO. 3150-0104



## LICENSEE EVENT REPORT (LER) CONTINUATION SHEET

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1. FACILITY NAME	2. DO	CKET NUMBER	3. LER NUMBER						
	05000-		YEAR	SEQUENTIAL NUMBER	REV NO.				
Millstone Power Station Unit 2		336	2022	001	- 00				

### NARRATIVE

### EVENT DESCRIPTION

The existence of a leak in the Reactor Building Closed Cooling Water (RBCCW) system was identified on 12/28/2021, with Millstone Unit 2 (MPS2) in Mode 1 at 100% power, when an increase in containment sump level was correlated to increased RBCCW system leakage. Systematic troubleshooting including multiple containment entries were conducted. Cameras and crawlers were employed to investigate the various elevations of containment due to higher dose rates while online. The leak was determined to be in the 'C' reactor coolant pump (RCP) motor area by remote crawler on 1/19/2022. Following further containment entry and inspection, on 1/20/2022 at 1900 hours the Technical Requirements Manual (TRM) 3.4.10 action for structural integrity was entered when the leak location was narrowed down to the 3/4" RBCCW piping supplying the 'C' RCP motor lower bearing cooler. The leak rate at this time was approximately 0.185 gpm, while the allowable external leakage limit for the RBCCW system was 0.60 gpm. The Unit was shutdown on 1/22/2022 to allow closer inspection to identify and evaluate the specific leak location within the TRM 3.4.10 allowed action time. While in Mode 3 on 1/22/2022 at 1400 hours, the point of leakage was identified at a threaded fitting on the RBCCW 3/4" line supplying the 'C' RCP lower bearing cooler. After removal, the inlet pipe stub-end that threads into the bearing cooler was observed to be cracked internal to the pipe diameter. Engineering determined that structural integrity could not be established as there is no approved method to evaluate a threaded joint for structural integrity. Cooldown continued and Mode 4 was entered at 1632 hours on 2/22/2022 and Mode 5 was entered at 0330 hours on 1/23/2022. On 1/24/2022 at 0859 leak repairs and retests were completed.

TS 3.7.3.1 requires that 2 RBCCW loops shall be operable in Modes 1-4. There is evidence that this RBCCW leak existed in December of 2021, and it can be concluded that structural integrity was not maintained at that time. The Structural Integrity TRM 3.4.10 action if structural integrity cannot be maintained is to isolate the component and if it cannot be isolated within 72 hours the affected component, RBCCW in this case, is declared non-functional. One loop of RBCCW would have been inoperable for longer than its allowed outage time of 72 hours. Therefore, this condition has been determined to be reportable pursuant to 10CFR50.73(a)(2)(i)(B) as an operation or condition prohibited by Technical Specifications.

## CAUSE

The crack in the RBCCW lower bearing cooler supply line fitting is the direct cause of the component failure.

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NRC FORM 366A	U.S. NUCLEAR REGULATORY COMMISSION	APPROVED BY OMB:

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1. FACILITY NAME	2.	DOCKET NUMBER	3. LER NUMBER						
Millstone Power Station Unit 2	05000-	336	YEAR	SEQUENTIAL NUMBER		REV NO.			
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## NARRATIVE

## ASSESSMENT OF SAFETY CONSEQUENCES

Continued operation with the actual RBCCW System leak rates experienced at MPS2 had no significant impact on safety. Considering these rates, the RBCCW System was capable of supplying cooling water to all the loads without the need for makeup water for greater than 24 hours. Normal makeup to the RBCCW system was available from the primary makeup water system. The fire water system was available as an alternate makeup means to the RBCCW system in the event of a loss of offsite AC power to MPS2.

If the structural integrity of the piping to the 'C' RCP motor failed resulting in a larger RBCCW leak, the potential existed for a loss of cooling water to that RCP. With MPS2 operating at power, plant operators would respond to high RCP motor bearing temperature by tripping the reactor and the RCP. Following the trip response, Operations would enter AOP 2564, Millstone Unit 2 Loss of RBCCW, which provides instructions, based on leak location, that identify the valves to use to isolate the leak. If the RBCCW leak continued without isolation, the associated RBCCW header could be lost. In that scenario, the opposite RBCCW header would be available to maintain MPS2 safety shutdown. Based on this, the potential safety consequences are judged to be low.

## CORRECTIVE ACTION

The leaking inlet piping to the lower bearing cooler which includes a flange and threaded piece was replaced on the 'C' RCP.

Additional corrective action will be taken in accordance with the Corrective Action Program.

### PREVIOUS OCCURRENCES

There have been no similar events with RBCCW leaks leading to a RBCCW train being inoperable for longer than the TS AOT at Millstone Power Station over the last 3 years.

ENERGY INDUSTRY IDENTIFICATION SYSTEM (EIIS) CODES PSF Pipe Fittings CC Closed/Component Cooling System