Dominion Nuclear Connecticut, Inc.
Millstone Power Station
Rope Ferry Road
Waterford, CT 06385

Dominion

JUL 26 2004

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

Serial No. 04-443
MPS Lic/RWM R0
Docket No. 50-423
License No. NPF-49

DOMINION NUCLEAR CONNECTICUT, INC.
MILLSTONE POWER STATION, UNIT 3
LICENSEE EVENT REPORT 2004-002-00
INOPERABLE MOTOR DRIVEN AUXILIARY FEEDWATER PUMP RESULTING FROM A DEGRADED SERVICE WATER SYSTEM BRAZED JOINT

This letter forwards Licensee Event Report (LER) 2004-002-00, documenting an historical condition at Millstone Power Station, Unit 3, that was determined reportable on May 26, 2004. This LER is being submitted pursuant to 10 CFR 50.73(a)(2)(i)(B) as a condition prohibited by technical specifications. These preliminary conclusions are based on conservative engineering analysis, which is under review. Final conclusions including safety significance will be addressed in a supplement to this report.

If you have any questions or require additional information, please contact Mr. David W. Dodson at (860) 447-1791, extension 2346.

Very truly yours,

Stephen P. Sarver, Director
Nuclear Station Operations and Maintenance

IE22

Attachments: (1)

Commitments made in this letter: None.

cc: U.S. Nuclear Regulatory Commission
Region I
475 Allendale Road
King of Prussia, PA 19406-1415

Mr. V. Nerses
Senior Project Manager
U.S. Nuclear Regulatory Commission
One White Flint North
11555 Rockville Pike
Mail Stop 8C2
Rockville, MD 20852-2738

Mr. S. M. Schneider
NRC Senior Resident Inspector
Millstone Power Station

Attachment 1

Millstone Power Station, Unit No. 3

LER 2004-002-00

Dominion Nuclear Connecticut, Inc.

NRC FORM 366 (7-2001) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104 EXPIRES 7-31-2004

Estimated burden per response to comply with this mandatory information collection request: 50 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records Management Branch (T-6 E6), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to bjs1@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Millstone Power Station - Unit 3	05000423	1 OF 3

TITLE (4)

Inoperable Motor Driven Auxiliary Feedwater Pump Resulting From a Degraded Service Water System Brazed Joint

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MO	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MO	DAY	YEAR	FACILITY NAME	DOCKET NUMBER 05000
05	26	2004	2004	– 002	– 00	07	26	2004	FACILITY NAME	DOCKET NUMBER 05000

OPERATING MODE (9)	1
POWER LEVEL (10)	100

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply) (11)

20.2201(b)	20.2203(a)(3)(ii)	50.73(a)(2)(ii)(B)	50.73(a)(2)(ix)(A)
20.2201(d)	20.2203(a)(4)	50.73(a)(2)(iii)	50.73(a)(2)(x)
20.2203(a)(1)	50.36(c)(1)(i)(A)	50.73(a)(2)(iv)(A)	73.71(a)(4)
20.2203(a)(2)(i)	50.36(c)(1)(ii)(A)	50.73(a)(2)(v)(A)	73.71(a)(5)
20.2203(a)(2)(ii)	50.36(c)(2)	50.73(a)(2)(v)(B)	OTHER
20.2203(a)(2)(iii)	50.46(a)(3)(ii)	50.73(a)(2)(v)(C)	Specify in Abstract below or in NRC Form 366A
20.2203(a)(2)(iv)	50.73(a)(2)(i)(A)	50.73(a)(2)(v)(D)	
20.2203(a)(2)(v) X	50.73(a)(2)(i)(B)	50.73(a)(2)(vii)	
20.2203(a)(2)(vi)	50.73(a)(2)(i)(C)	50.73(a)(2)(viii)(A)	
20.2203(a)(3)(i)	50.73(a)(2)(ii)(A)	50.73(a)(2)(viii)(B)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
David W. Dodson, Supervisor Nuclear Station Licensing	860-447-1791

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
☒ YES (If yes, complete EXPECTED SUBMISSION DATE).	☐ NO		9	30	2004

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On May 26, 2004, while operating in Mode 1 at 100 percent power, an investigation determined that a potential existed for the operability of the 'B' motor driven auxiliary feedwater (MDAFW) pump to have been impacted by a degraded service water piping connection that was identified and corrected during the unit's most recent refueling outage on April 15, 2004. A pipe separation at this location could create a service water spray hazard to the motor of the 'B' MDAFW pump that has a potential to render the pump unavailable. This historical condition potentially affects the credited design function of the auxiliary feedwater system coincident with a seismic event. The inoperability of the 'B' MDAFW pump would constitute a condition that is prohibited by the plant's technical specifications and is being reported pursuant to reporting criteria of 10 CFR 50.73(a)(2)(i)(B).

This condition is historical in nature and the apparent cause for the condition was a poor work practice during original installation.

These preliminary conclusions are based on conservative engineering analysis, which is under review. Final conclusions including safety significance will be addressed in a supplement to this report. There was no actual unavailability of safety related equipment or systems, piping failure or flow diversions, that resulted from this condition. No loss of safety functions of structures, systems or components has occurred. The consequences of this condition would be limited to the possibility of pipe separation from a seismic event, since normal system transients and loss of power transients have not resulted in a separation of the affected piping.

The corrective action to prevent recurrence of this specific condition has been completed during the refueling outage. The 'A' and 'B' Engineered Safety Features (ESF) supply header tees were cut out and replaced with new 3 inch butt-welded piping and branch weldolets.

FACILITY NAME (1)	DOCKET (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Millstone Power Station - Unit 3	05000423	2004	- 002 -	00	2 OF 3

NARRATIVE *(If more space is required, use additional copies of NRC Form 366A)* **(17)**

1. Event Description

On May 26, 2004, while operating in Mode 1 at 100 percent power, an investigation determined that a potential existed for the operability of the 'B' motor driven auxiliary feedwater (MDAFW) [BA] pump to have been impacted by a degraded service water [BI] piping connection that was identified and corrected during the unit's most recent refueling outage on April 15, 2004. The degraded piping condition was inadequate braze bonding and a 360 degree crack of the brazing in a socket joint of the 3 x 3 x 3/4 inch tee in the 3 inch diameter 'A' service water Engineered Safety Features (ESF) supply line (3-SWP-003-67-3) to the residual heat removal and containment recirculation pump ventilation units (HVQ), and the safety injection pump lube oil cooler (CCI).

No unavailability of safety related equipment or systems, piping failure or flow diversion, had resulted from the affected brazed socket joint, which had cracking of the braze and signs of weepage that prompted its replacement with butt-welded fittings. However, upon disassembly and inspection of the socket joint, the braze bond was found to be deficient. Conservatively assuming that there had been no bond strength, (no braze bond material), analysis of the affected socket joint shows a potential for pipe separation under seismic conditions. A pipe separation at this location could create a service water spray hazard to the motor of the 'B' MDAFW pump that has a potential to render the pump unavailable. The 'A' MDAFW pump and turbine driven auxiliary feedwater pump would have been unaffected by the break.

This historical condition potentially affects the credited design function of the auxiliary feedwater system coincident with a seismic event. Technical specifications 3.7.1.2, Auxiliary Feedwater System, requires restoration of an inoperable auxiliary feedwater pump within 72 hours. Installation of the affected joint with the deficient braze bonding is thought to be original construction. The inoperability of the 'B' MDAFW pump would constitute a condition that is prohibited by the plant's technical specifications and is being reported pursuant to reporting criteria of 10 CFR 50.73(a)(2)(i)(B).

2. Cause

This condition is historical in nature and the apparent cause for the condition was a poor work practice during original installation.

The affected socket joint and piping in the 3 inch tee remained intact until the socket was cut away and disassembled during inspection. Disassembly of the joint showed that the silver braze had cracked and was not fully bonded to surfaces within the piping socket. The joint was quartered axially to examine the condition of each of the tee's brazes. In addition, the corresponding piping tee on the opposite train ('B' train) ESF supply was also removed and axially quartered. These inspected brazes were concluded satisfactory, with the exception of the one affected piping socket that is described by this condition.

3. Assessment of Safety Consequences

These preliminary conclusions are based on conservative engineering analysis, which is under review. Final conclusions including safety significance will be addressed in a supplement to this report.

There was no actual unavailability of safety related equipment or systems, piping failure or flow diversions, that resulted from this condition. The 'A' MDAFW pump and turbine driven auxiliary feedwater pump would have been unaffected by the break. No loss of safety functions of structures, systems or components occurred. The consequences of this condition would be limited to the possibility of pipe separation from a seismic event, since normal system transients and loss of power transients have not resulted in a separation of the affected piping.

FACILITY NAME (1)	DOCKET (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Millstone Power Station - Unit 3	05000423	2004	- 002 -	00	3 OF 3

NARRATIVE *(If more space is required, use additional copies of NRC Form 366A)* **(17)**

4. Corrective Action

The corrective action to prevent recurrence of this specific condition has been completed during the refueling outage. The 'A' and 'B' ESF supply header tees were cut out and replaced with new 3 inch butt-welded piping and branch weldolets.

A multi-year program is continuing to replace major portions of the brazed joint service water system piping to preclude similar brazed joint failures. The corrective actions associated with this condition are being addressed in accordance with the Millstone Corrective Action Program.

5. Previous Occurrences

No previous similar events/conditions were identified.

Energy Industry Identification System (EIIS) codes are identified in the text as [XX].