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

Dominion

MAY 2 2003

Docket No. 50-336
B18887

RE: 10 CFR 50.73(a)(2)(v)(A)
10 CFR 50.73(a)(2)(i)(B)

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

Millstone Power Station, Unit No. 2
Licensee Event Report 2003-003-00
The Charging System Did Not Perform Its Design Function
in Response to Falling Pressurizer Level

This letter forwards Licensee Event Report (LER) 2003-003-00, which documents an event at Millstone Power Station, Unit No. 2, which occurred on March 7, 2003. This LER is being submitted pursuant to 10 CFR 50.73(a)(2)(v)(A), an event or condition that could have prevented fulfillment of a safety function, and 10 CFR 50.73(a)(2)(i)(B), any operation or condition prohibited by the plant's Technical Specifications.

There are no regulatory commitments contained within this letter.

Should you have any questions regarding this submittal, please contact Mr. David W. Dodson at (860) 447-1791, extension 2346.

Very truly yours,

DOMINION NUCLEAR CONNECTICUT, INC.

Stephen P. Sarver, Director
Nuclear Station Operations and Maintenance

Attachments (1): LER 2003-003-00

cc: H. J. Miller, Region I Administrator
R. B. Ennis, NRC Senior Project Manager, Millstone Unit No. 2
Millstone Senior Resident Inspector

IE22

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Attachment 1

Millstone Power Station, Unit No. 2

LER 2003-003-00

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)
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TITLE (4)

The Charging System Did Not Perform Its Design Function in Response to Falling Pressurizer Level

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
03	07	2003	2003	- 003 -	00	05	02	2003	FACILITY NAME	DOCKET NUMBER 05000

		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply) (11)					
OPERATING MODE (9)	1	20.2201(b)		20.2203(a)(3)(ii)		50.73(a)(2)(ii)(B)	50.73(a)(2)(ix)(A)
POWER LEVEL (10)	100	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)	X	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
		20.2203(a)(2)(iv)		50.73(a)(2)(i)(A)		50.73(a)(2)(v)(D)	in NRC Form 366A
		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, Acting Manager, Licensing.	860-447-1791, Ext. 2346

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		07	05	2003

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

On March 7, 2003, at 1439 with the plant in MODE 1 at approximately 100 percent power, an automatic reactor trip occurred while performing Reactor Protective System matrix logic and trip path relay testing. The reactor trip resulted in Reactor Coolant System cooldown, and a drop in pressurizer level followed by the auto-starting of both standby charging pumps in addition to the one in operation. The combined flow of the three pumps fell and became erratic, varying from a high of 50 gpm to a low of 0 gpm. Because of this unexpected response, plant operators declared all three charging pumps inoperable and entered the Action Statement for Technical Specification 3.0.3. Pressurizer level was restored using a charging pump aligned to the alternate charging flow through the high pressure safety injection line, and a plant cooldown was commenced.

The Root Cause Evaluation Team Report of the March 7, 2003 failure of the Charging System to perform its design function is currently undergoing final review. A supplement to this Licensee Event Report, which contains the root cause(s) and the corrective actions, will be submitted by July 5, 2003.

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

1. Event Description

On March 7, 2003, at 1439 with the plant in MODE 1 at approximately 100 percent power, an automatic reactor trip occurred while performing Reactor Protective System matrix logic and trip path relay testing. The trip happened during monthly Reactor Protection System testing, and was caused by faulty wiring in the test circuit. The reportability aspects associated with the reactor trip are covered in Licensee Event Report 2003-002-00.

Following the trip, the automatic opening of both the Condenser Dump valves and the Atmospheric Dump Valves was impaired, so that six steam generator Safety Relief Valves lifted. The Reactor Coolant System (RCS) [AB] cooldown associated with the reactor trip resulted in a drop in pressurizer [PZR] level. The drop in pressurizer level auto-started both standby charging pumps. 'C' pump continued operating. As soon as the standby pumps started, the combined flow of the three pumps became erratic, varying from a high of 50 gpm to a low of 0 gpm. During this time, flow was observed coming from the tell tale on all three charging pump discharge relief valves, indicating that the relief valve bellows had failed. This was a result of the relief valves chattering. The relief valves, which discharge to their respective pump inlet lines, were operating at or close to the full recirculation mode. Because of this unexpected response, plant operators declared all three charging pumps inoperable and entered the Action Statement for Technical Specification 3.0.3.

The charging capability was established via the alternate charging path and with suction aligned to the Refueling Water Storage Tank, and pressurizer level was restored. Once charging flow and pressurizer level were restored, plant cooldown proceeded slowly (due to limited charging flow capability) resulting in a failure to reach MODE 5 within the time required by Technical Specification 3.0.3.

The failure of the Charging system is reportable under the provisions of 10 CFR 50.73(a)(2)(v)(A), an event or condition that could have prevented fulfillment of a safety function. This condition lead to a loss of the primary method of inventory control. Although there is an alternative method to charging (i.e. by RCS depressurization and the use of high pressure safety injection pumps for injection), this condition is still reportable in accordance with NUREG-1022, Rev. 2, regardless of whether or not an alternate safety system could have been used to perform the safety function.

The failure to reach MODE 5 within the time allowed by Technical Specification 3.0.3 is reportable in accordance with 10 CFR 50.73(a)(2)(i)(B), operation or condition prohibited by Technical Specifications.

2. Cause

The Root Cause Evaluation Team Report of the March 7, 2003 failure of the Charging System to perform its design function is currently undergoing final review. A supplement to this Licensee Event Report, which contains the root cause(s), will be submitted by July 5, 2003.

3. Assessment of Safety Consequences

Assessment of safety consequences is undergoing final review. A supplement to this Licensee Event Report, which contains the safety consequences, will be submitted by July 5, 2003.

4. Corrective Action

The corrective actions are undergoing final review. A supplement to this Licensee Event Report, which contains the corrective actions, will be submitted by July 5, 2003.

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

5. Previous Occurrences

No previous similar events were identified.

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