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

Dominion

APR 1 4 2003

Docket No. 50-336
B18865

RE: 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 2003-001-00
Pressurizer Water Volume Periodically Exceeded The Technical Specifications Limit

This letter forwards Licensee Event Report (LER) 2003-001-00, which documents an event at Millstone Power Station, Unit No. 2, on February 17, 2003. This LER is being submitted pursuant to 10 CFR 50.73(a)(2)(i)(B) as 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. Paul Willoughby at (860) 447-1791, extension 3655.

Very truly yours,

DOMINION NUCLEAR CONNECTICUT, INC.

Stephen P. Sarver, Director
Nuclear Station Operations and Maintenance

Attachment (1): LER 2003-001-00

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

IE22

NRC FORM 366 (7-2001) U.S. NUCLEAR REGULATORY COMMISSION	APPROVED BY OMB NO. 3150-0104 EXPIRES 7-31-2004
LICENSEE EVENT REPORT (LER) (See reverse for required number of digits/characters for each block)	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.

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
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TITLE (4)
Pressurizer Water Volume Periodically Exceeded The Technical Specifications Limit

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
02	17	2003	2003	– 001	– 00	04	14	2003	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
	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)
Paul Willoughby, Supervisor, Licensing.	860-447-1791, Ext. 3655

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				

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

On February 17, 2003, at approximately 0945 with the plant in MODE 1 at approximately 100 percent power, it was identified that the surveillance procedure, SP 2402E, Pressurizer Level Calibration, did not contain the correct differential pressure values necessary to correctly measure the water level in the Millstone Unit No. 2 pressurizer. It was determined that the procedure error resulted in actual pressurizer level being approximately 4.7 percent higher than indicated level. Due to this error, the unit periodically exceeded the Technical Specification 3.4.4a requirement for pressurizer water volume to be maintained less than or equal to 1050 cubic feet (70 percent).

The apparent cause of this event was that the surveillance procedure was prepared using an Engineering transmittal that provided incorrect differential pressure values for the calibration of the two pressurizer level transmitters. This error resulted in a loss of configuration control by the Engineering organization.

The Engineering documents were revised to reflect the correct differential pressure calibration values for the pressurizer level transmitters. The results were subsequently incorporated into the surveillance procedure and on February 24, 2003 the two level transmitters were recalibrated to the correct values.

FACILITY NAME (1)	DOCKET (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Millstone Power Station - Unit No. 2	05000336	2003	001	00	2 OF 3

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

1. Event Description

On February 17, 2003, at approximately 0945 with the plant in MODE 1 at approximately 100 percent power, it was identified that the surveillance procedure, SP 2402E, Pressurizer Level Calibration, did not contain the correct differential pressure values necessary to correctly measure the water level in the Millstone Unit No. 2 (MP2) pressurizer [PZR]. It was determined that the procedure error resulted in actual pressurizer level being approximately 4.7 percent higher than indicated level.

Due to this error, the unit periodically exceeded the Technical Specification 3.4.4a requirement for pressurizer water volume to be maintained less than or equal to 1050 cubic feet (70 percent).

The pressurizer level is measured by two differential pressure transmitters [PT] that utilize filled reference legs to compensate for changes in pressurizer pressure. The transmitters provide input to indication; main control board and plant process computer, as well as control functions; charging pump controls, heater controls, and letdown valve controls based upon input from the pressurizer control program from the reactor regulating system (RRS). The RRS develops a program level setpoint based on the reactor coolant Tavg value. At full power operation this setpoint is 65 percent level. The setpoint is compared to the measured level by the pressurizer level controller. This controller is a proportional only type of control. Consequently, depending on the demand conditions within the process (pressurizer level) and subsequent response of the control elements (control loop, valves, etc.) there may exist at any given time an offset from the setpoint based on the proportional band of the controller. This controller offset, added to the 4.7 percent measurement offset induced in the level measurement by the calibration error, resulted in periodically exceeding the Technical Specification 3.4.4.a limit of 70 percent level.

A historical review of the indicated pressurizer level was performed utilizing the plant process computer from the period of 4/30/01 to the time of condition discovery. The indicated pressurizer level was corrected by adding the measurement offset of 4.7 percent to obtain actual pressurizer level. This review shows that the corrected actual level, obtained using the above-described method, did exceed the Technical Specification limit of 70 percent for more than 6 hours (the allowed outage time for LCO 4.4.4a) in four cases. The review also showed that the corrected level did not exceed 73 percent during the period reviewed.

This event is being reported in accordance with 10 CFR 50.73(a)(2)(i)(B), any operation or condition prohibited by the plant's Technical Specifications.

2. Cause

The apparent cause of this event was that the surveillance procedure was prepared using an Engineering transmittal that provided incorrect differential pressure values for the calibration of the two pressurizer level transmitters. This error resulted in a loss of configuration control by the Engineering organization.

The Engineering calculation developed to determine the differential pressure inputs to be used in calibrating the pressurizer level transmitters, LT-110X and LT-110Y, did not address the Static Pressure effect associated with placing Rosemount differential pressure transmitters in high-pressure applications. Rather than updating this calculation, a separate Engineering document evaluated this static pressure effect and was used to provide input to the surveillance procedure. However, this separate Engineering document did not use the proper differential pressure inputs from the Engineering calculation, resulting in incorrect differential pressures being used in the surveillance procedure.

3. Assessment of Safety Consequences

The purpose of the maximum 70 percent pressurizer level Technical Specification limit is to avoid pressurizer overfill and the potential for two-phase or single phase liquid discharge out the pressurizer safety valves or the power operated relief valves following any analyzed moderate frequency event in FSAR Chapter 14. Liquid discharge out the pressurizer relief valves could lead to a more serious plant condition due to the potential for the loss of Reactor Coolant System (RCS) [AB] fission product barrier integrity.

The limiting moderate frequency events with respect to pressurizer overfill are the loss of external load event presented in Final Safety Analysis Report (FSAR) Section 14.2.1 and the loss of normal feedwater flow event presented in FSAR Section 14.2.7. The FSAR Section 14.2.1 loss of external load event transient results in approximately a 10 percent increase in pressurizer level. The FSAR section 14.2.7 loss of normal feedwater transient results in approximately 5 percent increase in pressurizer level. Operating the plant due to the condition described above, with an actual pressurizer level approximately 3 percent higher than the maximum value allowed by the Technical Specifications, will not result in pressurizer overfill or the potential for the loss of the RCS fission product barrier integrity for either of these events.

The initial pressurizer level does not have a significant impact on the calculated peak RCS pressure for the limiting moderate frequency event with respect to RCS pressurization, the loss of external load event. The maximum calculated RCS pressure for the loss of external load event is 2717 psia, and is limited by the opening set pressure and relief capacity of the pressurizer safety valves. Operating the plant due to the condition described above, with an actual pressurizer level approximately 3 percent higher than the maximum value allowed by the Technical Specifications, will not result in a significant increase in the peak RCS pressure for this event.

Additionally, operating the plant due to the condition described above, with the actual pressurizer level approximately 3 percent higher than the maximum value allowed by the Technical Specifications, would result in a slight increase in the maximum liquid mass inventory contained within the RCS. The impact of this increased RCS liquid mass will not result in a significant increase in the calculated containment pressure consequences of the main steam line break or loss of coolant accident.

Based upon the above discussion this event has a low safety significance.

4. Corrective Action

The Engineering documents were revised to reflect the correct differential pressure calibration values for the pressurizer level transmitters. The results were subsequently incorporated into the surveillance procedure and on February 24, 2003 the two level transmitters were recalibrated to the correct values.

5. Previous Occurrences

No previous similar events were identified.

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