

## LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Millstone Nuclear Power Station Unit 3										DOCKET NUMBER (2) 0 5 0 0 0 4 2 3				PAGE (3) 1 OF 0 3	
TITLE (4) Area Temperature Monitoring - CS-01															
EVENT DATE (5)			LER NUMBER (6)				REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)					
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES				DOCKET NUMBER (S)		
0 4	2 5	8 7	8 7	0 2 3	0 1	0 1	2 2	8 8					0 5 0 0 0		
OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)													
1		20.40.(b)				20.405(c)				50.73(a)(2)(iv)				73.71(b)	
POWER LEVEL (10)		20.405(a)(1)(i)				50.38(c)(1)				50.73(a)(2)(v)				73.71(c)	
1 0 0		20.405(a)(1)(ii)				50.38(c)(2)				50.73(a)(2)(vi)				Y OTHER (Specify in Abstract below and in Text, NRC Form 306A)	
		20.405(a)(1)(iii)				50.73(a)(2)(i)				50.73(a)(2)(vii)(A)					
		20.405(a)(1)(iv)				50.73(a)(2)(ii)				50.73(a)(2)(vii)(B)					
		20.405(a)(1)(v)				50.73(a)(2)(iii)				50.73(a)(2)(viii)					
		20.405(a)(1)(vi)				50.73(a)(2)(iv)				50.73(a)(2)(ix)				Special Report	
LICENSEE CONTACT FOR THIS LER (12)															
NAME Thomas Cleary - Engineer										TELEPHONE NUMBER AREA CODE 2 0 3 4 4 4 - 5 3 6 0					
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)															
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC					
SUPPLEMENTAL REPORT EXPECTED (14)												EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)												X NO			

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single space typewritten lines) (16)

This Special Report is being submitted pursuant to Plant Technical Specifications 3.7.14b and 6.9.2 which require that a Special Report be submitted to the NRC if one or more areas exceed the specified temperature limit by less than 20 degrees Fahrenheit for more than 8 hours. Containment Area CS-01 (inside crane wall) has exceeded the 120 degrees Fahrenheit specified limit. The pressurizer cubicle is the only area exceeding the limits.

Special Report LER 87-C23-00 (dated 5/26/87) stated that on 4/25/87 the pressurizer cubicle temperature exceeded the 120 degree Fahrenheit limits and that the temperature had been varying between approximately 115 to 125 degrees since, reaching a high of 127 degrees (for a two hour duration) during testing.

The root cause has been determined to be inherent to the design of the pressurizer cubicle. A revision to the Plant's Technical Specifications will be submitted. Thermal life calculations will be revised accordingly.

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## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		YEAR 8 7	SEQUENTIAL NUMBER 0 2 3	REVISION NUMBER 0 1	0 2	OF	0 3

TEXT (If more space is required, use additional NRC Form 366A's) (17)

This Special Report is being submitted pursuant to Plant Technical Specifications 3.7.14b and 6.9.2 which require that a Special Report be submitted to the NRC if one or more areas exceed the specified temperature limit by less than 20 degrees Fahrenheit for more than 8 hours. Containment Area CS-01 (inside crane wall) has exceeded the 120 degrees Fahrenheit specified limit. The pressurizer cubicle is the only area exceeding the limits.

Special Report LER 87-023-00 (dated 5/26/87) stated that on 4/25/87, while at 100% power in Mode 1, the temperature in the pressurizer cubicle exceeded 120 degrees Fahrenheit and that the temperature had continued to range from approximately 115 to 125 degrees since. Tests were performed utilizing various combinations of the Containment Air Recirculating (CAR) fans. No combination was effective in maintaining the pressurizer temperature within the specified limits. The pressurizer cubicle reached a high temperature of 127 degrees during the tests but was brought below 125 degrees within two hours. There have been two subsequent temperature excursions which exceeded 120 degrees Fahrenheit for more than eight hours. On 5/27/87 the temperature reached a high of 120.2 degrees Fahrenheit during testing. On 6/5/87 the temperature exceeded the 120 degree limit for a period of about nineteen and one-half hours.

A containment entry was made on 5/19/87 to investigate potential causes of the temperature excursions. A temperature control valve to the cooling unit for one of the three CAR fans was found stuck closed. The operators bypassed the valve, reducing the cooling unit outlet temperature significantly. The backdraft damper associated with the "C" CAR fan was tested and was found to be operable.

Further testing indicated that the stuck temperature control valve is not the root cause of the excursions. However, the pressurizer cubicle temperature was brought down to approximately 119 degrees F as a result of decreasing the "C" cooler temperature.

Special Report LER 86-016-01 was submitted on 3/24/86 to report that the pressurizer cubicle temperature had been varying between approximately 119 degrees Fahrenheit to 125 degrees Fahrenheit consistently since 2/7/86. Therefore, an analysis was performed for continued operability for a sustained temperature of 125 degrees Fahrenheit within the pressurizer cubicle. A flow balance and system adjustment was performed on the containment ventilation system during a plant shutdown in April, 1986. This adjustment enabled the temperature in the pressurizer cubicle to remain within the Technical Specification limit.

Special Report 86-016-01 stated that since plant conditions indicated that the temperature would continue to range in and out of the present Technical Specification limit, a change to Plant Technical Specification Table 3.7-6 would be submitted. This change will create a new area, CS-03 - Containment Area Pressurizer Cubicle. Engineering will determine an appropriate temperature limit and revise thermal life calculations accordingly. Although the operating temperature in the pressurizer cubicle was lowered, the revision to Plant Technical Specifications is still considered appropriate because the operating temperature approaches the present Technical Specification limit.

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/08

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		YEAR 8 7	SEQUENTIAL NUMBER 0 2 3	REVISION NUMBER 0 1		OF	0 3

TEXT (If more space is required, use additional NRC Form 388A's) (17)

Special Report LER 87-023-00 stated that as further corrective action, the Containment Air Recirculating system would be inspected during the first refueling outage scheduled for the fall of 1987. All accessible portions of the Containment Air Recirculation system have been inspected with no apparent anomalies during the present refueling outage. A heating and ventilation consultant inspected those portions of the system which are within or could be viewed from radiologically accessible areas. Further inspection beyond this was considered unnecessary because the consultant indicated that the system is in very good shape, showing little or no signs of misalignments or damage due to vibration or outage/maintenance activities.

The Containment Air Recirculation fans were removed and disassembled to investigate a motor ground. The fans were inspected and found to be acceptable to meet their functional design.

It was determined that the temperature control valve for the "C" cooler was operating improperly due to vibration of the controller instrument stand. A new stronger instrument stand was installed as a plant modification. It is expected that this will enable the "C" cooler unit to operate more effectively.

Based on the inspections of Containment Air Recirculation that have revealed no anomalies, it has been concluded that the root cause of the temperature excursions within the pressurizer cubicle is inherent to the design of the Reactor Containment. The pressurizer is contained within a distinct enclosed area which is solely occupied by the pressurizer. The operating temperature of the pressurizer is 653 degrees F. The Plant Technical Specification temperature limit was based on expected operating temperatures. Actual operating temperatures have proven to be higher than the expected value. These higher temperatures have not affected the operability of any equipment. Based on the higher temperatures, thermal life calculations for components within the pressurizer cubicle will be revised.

The following is a list of affected equipment:

- 3RCS\*MV8000A - Pressurizer Relief Isolation Valve
- 3RCS\*MV8000B - Pressurizer Relief Isolation Valve
- 3RCS\*PCV455A - Pressurizer Power Operated Relief Valve
- 3RCS\*PCV456 - Pressurizer Power Operated Relief Valve
- 3RCS\*SV8095A - Reactor Vessel Head Vent Isolation Valve
- 3RCS\*SV8095B - Reactor Vessel Head Vent Isolation Valve
- 3RCS\*SV8096A - Reactor Vessel Head Vent Isolation Valve
- 3RCS\*SV8096B - Reactor Vessel Head Vent Isolation Valve

Temperature excursions within the pressurizer cubicle are being reported as a single occurrence in this report and will not be reported individually as they occur.

**NORTHEAST UTILITIES**



THE CONNECTICUT LIGHT AND POWER COMPANY  
WESTERN MASSACHUSETTS ELECTRIC COMPANY  
HOLYOKE WATER POWER COMPANY  
NORTHEAST UTILITIES SERVICE COMPANY  
NORTHEAST NUCLEAR ENERGY COMPANY

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January 22, 1988  
MP-11422

Plant Technical Specifications  
3.7.14b and 6.9.2

U. S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, D. C. 20555

Reference: Facility Operating License No. NPF-49  
Docket No. 50-423  
Licensee Event Report 50-423/87-023-01

Gentlemen:

This letter forwards Licensee Event Report 87-023-01, a Supplemental Special Report required to be submitted by January 31, 1988 pursuant to Plant Technical Specifications 3.7.14b and 6.9.2, and Licensee Event Report 87-023-00.

Yours truly,

NORTHEAST NUCLEAR ENERGY COMPANY

A handwritten signature in cursive script, reading 'Stephen E. Scafe'.

Stephen E. Scafe  
Station Superintendent  
Millstone Nuclear Power Station

SES/TC:mo

Attachment: LER 87-023-01

cc: W. T. Russell, Region I  
W. J. Raymond, Senior Resident Inspector

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