

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



OCT 11 2001

Docket No. 50-423
B18497

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. 3
Licensee Event Report 2001-004-00
Failure of Neutron Flux Accident Monitoring Instrumentation

This letter forwards Licensee Event Report (LER) 2001-004-00, documenting an event that was discovered at Millstone Power Station, Unit No. 3 on August 23, 2001. This LER is being submitted to document a condition determined to be reportable in accordance with 10 CFR 50.73(a)(2)(i)(B).

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.



C. J. Schwarz
Master Process Owner - Operate the Asset

Attachment (1): LER 2001-004-00

cc: H. J. Miller, Region I Administrator
V. Nerses, NRC Senior Project Manager, Millstone Unit No. 3
NRC Senior Resident Inspector, Millstone Unit No. 3

IE22

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Attachment 1

Millstone Power Station, Unit No. 3

LER 2001-004-00

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) Millstone Power Station - Unit 3	DOCKET NUMBER (2) 05000423	PAGE (3) 1 OF 3
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TITLE (4)
Failure of Neutron Flux Accident Monitoring Instrumentation

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
08	23	2001	2001	004	00	10	11	2001	FACILITY NAME	DOCKET NUMBER
										05000
										05000

OPERATING MODE (9)	1	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)		
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)		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 David W. Dodson, Team Lead - Compliance	TELEPHONE NUMBER (Include Area Code) 860-447-1791
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX
									N

SUPPLEMENTAL REPORT EXPECTED (14)					EXPECTED SUBMISSION DATE (15)					
<input type="checkbox"/>	YES (If yes, complete EXPECTED SUBMISSION DATE).				<input checked="" type="checkbox"/>	NO		MONTH	DAY	YEAR

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

On August 23, 2001, with reactor power at 100 percent, Technical Specification 3.3.3.6 Action Statement a. was entered due to the Channel 1 Gamma Metrics Neutron Flux Monitor exhibiting erratic indication. The Channel 1 Gamma Metrics Neutron Flux Monitor was restored to operable status on August 24, 2001. Subsequent investigation identified that the Channel 1 Gamma Metrics Neutron Flux monitor began exhibiting the erratic behavior as early as August 12, 2001. As a result, the Channel 1 Gamma Metrics Neutron Flux Monitor was inoperable for more than 12 days. This exceeded the 7 day allowed outage time.

This issue is reportable in accordance with 10 CFR 50.73(a)(2)(i)(B), Operation or Condition Prohibited by Technical Specifications.

The cause of the erratic indication was a loose wiring lug fastener on the output of the isolator in the signal processor. The root cause for this event was identified as a Man-Machine Interface issue in that no alarm warning is available to the plant operators to immediately identify potential equipment problems. Daily monitoring of the Gamma Metrics Neutron Flux Monitoring Channels was established to ensure equipment operability.

During the time period that the Channel 1 Gamma Metrics Neutron Flux Monitor was inoperable, the redundant channel and additional backup indications were available to monitor neutron flux level. Sufficient indications would have been available for use by the plant operators to ensure the reactor remained subcritical following a design basis event. This event did not result in the loss of any safety function, and is of low safety significance.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET (2)	LER NUMBER (6)			PAGE (3)
Millstone Power Station - Unit 3	05000423	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 OF 3
		2001	-- 004	-- 00	

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

I. Event Description

On August 23, 2001, with reactor power at 100 percent, Technical Specification 3.3.3.6 Action Statement a. was entered due to the Channel 1 Gamma Metrics Neutron Flux Monitor [IP] exhibiting erratic indication. The Channel 1 Gamma Metrics Neutron Flux Monitor was restored to operable status on August 24, 2001. Subsequent investigation identified that the Channel 1 Gamma Metrics Neutron Flux Monitor began exhibiting the erratic behavior as early as August 12, 2001. As a result, the Channel 1 Gamma Metrics Neutron Flux Monitor was inoperable for more than 12 days. This exceeded the 7 day allowed outage time.

The Gamma Metrics Neutron Flux Monitor Channels 1 and 2 are required to be operable in Modes 1, 2, and 3 by Technical Specification 3.3.3.6, Accident Monitoring Instrumentation. Restoration of an inoperable Gamma Metrics Neutron Flux Monitor Channel is required within 7 days or a plant shutdown to Mode 3 is required within the next 6 hours and Mode 4 the following 6 hours.

Since the Channel 1 Gamma Metrics Neutron Flux Monitor was inoperable for more than 12 days, which is greater than the allowed outage time (7 days) plus shut down time to Mode 3 (6 hours), this is reportable in accordance with 10 CFR 50.73(a)(2)(i)(B), Operation or Condition Prohibited by Technical Specifications.

II. Cause of Event

The cause of the erratic indication by the Channel 1 Gamma Metrics Neutron Flux Monitor was a loose wiring lug fastener on the output of the isolator in the signal processor. The Channel 2 Gamma Metrics Neutron Flux Monitor was inspected and no loose wiring lug fasteners were discovered.

The Gamma Metrics Neutron Flux Monitor displays are located in the Main Control Room, but they are not on the Main Control Board. The human factor design of the Gamma Metrics Neutron Flux Monitor displays is adequate since the indications are not used during normal plant operation. Surveillance procedures were reviewed and determined to adequately address Technical Specification requirements.

The investigation of this event identified a Man-Machine Interface issue as the root cause. No alarm or warning function was provided for this instrumentation to aid the operators in identifying potential equipment problems.

III. Analysis of Event

The Gamma Metrics Neutron Flux Monitor Channels may be used post-accident to verify that the reactor is subcritical and remains subcritical. The ability to shut down the reactor and maintain it in a safe shutdown condition is one of the four safety functions of structures and systems listed by 10 CFR 50.72(b)(3)(v) and 10 CFR 50.73(a)(2)(v), Event or Condition That Could Have Prevented Fulfillment of a Safety Function. During the time period that the Channel 1 Gamma Metrics Neutron Flux Monitor was inoperable, Channel 2 Gamma Metrics Neutron Flux Monitor and additional backup indications were operable providing sufficient monitoring capability to verify the shutdown condition of the reactor, if required. This event did not result in a loss of a safety function, and is of low safety significance.

IV. Corrective Action

As a result of this event, daily monitoring of the Gamma Metrics Neutron Flux Monitor Channels was established to ensure equipment operability. Daily monitoring will continue until a deviation alarm between the Gamma Metrics Neutron Flux Monitor Channels is implemented.

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

V. Previous Occurrences

No previous similar events/conditions were identified.

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