

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)
Millstone Point Unit 2DOCKET NUMBER (2)
0 5 0 0 0 3 3 6 1 OF 0 2TITLE (4)
Neutron Detector Wiring Problem

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	1	17	8	4	0	0	4	0	0	0	2
0	1	17	8	4	0	0	4	0	0	0	2

OPERATING MODE (9)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §. (Check one or more of the following) (11)
1	20.402(b) <input checked="" type="checkbox"/> 50.73(a)(2)(iv) 73.71(b)
POWER LEVEL (10) 0 5 10	20.406(a)(1)(i) <input checked="" type="checkbox"/> 50.73(a)(2)(v) 73.71(c)
	20.406(a)(1)(ii) <input checked="" type="checkbox"/> 50.73(a)(2)(vii) OTHER (Specify in Abstract below and in Text, NRC Form 385A)
	20.406(a)(1)(iii) <input type="checkbox"/> 50.73(a)(2)(viii)(A)
	20.406(a)(1)(iv) <input type="checkbox"/> 50.73(a)(2)(viii)(B)
	20.406(a)(1)(v) <input type="checkbox"/> 50.73(a)(2)(ix)

LICENSEE CONTACT FOR THIS LER (12)
NAME: Thomas Filburn, Plant Engineer
TELEPHONE NUMBER: 2 0 3 4 4 7-1 7 9 1
AREA CODE: 2 0 3 4 4 7-1 7 9 1

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
D	I	G	D	E	T	W	1	2	0
				Y					

SUPPLEMENTAL REPORT EXPECTED (14)
☒ YES (If yes, complete EXPECTED SUBMISSION DATE) ☐ NO
EXPECTED SUBMISSION DATE (15) 0 7 1 5 8 4

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

During a routine start-up while at 50% power, irregularities were discovered in the response of the A & B Channels of the excore detectors. The unit was performing the Shape Annealing Factor Test as part of the power ascension testing program following the units fifth refueling outage. This testing pointed to Channels A and B of the excore detectors being improperly connected. The unit commenced a normal plant shutdown while the I&C department investigated the problem.

Upon investigation it was found that the field inputs to Channel A and B of the linear range (excore) detector drawers of the Reactor Protection System (RPS) were reversed. With 1½ hours Channel A was restored to a proper detector configuration, calibrated and aligned. With 3 channels now operable the shutdown was terminated at 47% power and the unit entered the Tech. Spec. action statement 3.3.1.1.2.b for one inoperable channel. Within 2 hours of the shutdown initiation Channel B cables were reversed, the channel calibrated, aligned and returned to operable status. The unit returned to 50% power and upon reaching equilibrium Reactor Engineering confirmed that all the linear range power range detectors and associated signals responded as desired.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO 3150-0104

EXPIRES 8/31/85

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
Millstone Point Unit 2	0 5 0 0 0 3 3 6 8 4	—	0 0 4	—	0 0 0 2	OF	0 2

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

While performing the Shape Annealing Factor Test as part of the Power Ascension Testing program, irregularities were discovered in the response of Channels A and B of the excore detectors. The unit was at 50% power, performing routine start-up functions at the time.

The unit commenced a normal plant shutdown in accordance with TSAS 3.03 while the I&C department investigated the problem. The investigation revealed that the field inputs to Channels A & B of the linear range (excore) detector drawers of the Reactor Protection System (RPS) were reversed.

Within 1½ hours Channel A was restored to a proper detector configuration, calibrated and aligned. With 3 channels operable the shutdown was terminated at 47% power and the unit entered TSAS 3.3.1.1.2.b. for one inoperable channel. Within 2 hours of the shutdown initiation, Channel B cables were reversed, the channel calibrated, aligned and returned to operable status.

The unit returned to 50% power and upon reaching equilibrium Reactor Engineering confirmed that all the linear range power range detectors and associated signals responded as desired.

As a verification of proper cable connection I&C used a Time Domain Reflectometer (TDR) to show that the shorter cable was connected to the lower signal amplifier while the longer detector cable was connected to the upper signal amplifier.

An investigation into the cause of detector switch has been completed. The Channel A and B cables were restored improperly following surveillance testing due to a faulty procedure. The procedure has since been revised to correct the connection details in the I&C procedure. Additionally, other I&C procedures will be reviewed to identify necessary improvements. Additional corrective actions are as follows:

1. The I&C Department will generate a department procedure for using the TDR to verify cable length. This procedure will be included in the operations pre-critical check list to be performed as directed by the I&C supervisor.
2. This event and its impact on reactor safety was discussed with departmental personnel. Particular attention was placed on the use and application of maintenance aids and work practices.
3. Northeast Utilities Nuclear Safety Department has been informed of this event and is evaluating it for applicability to other units within the Northeast Utilities System.
4. A step will be inserted in the power ascension testing program that will verify axial shape index response to CEA insertion. The upper and lower excore response will also be verified.

Similar LER's: 80-036/03L-0

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

Reference: Facility Operating License No. DPR-65
Docket No. 50-336
Reportable Occurrence RO-50-336/84-004/3L-0

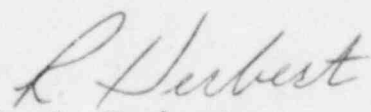
Gentlemen:

This letter forwards the Licensee Event Report 84-004/3L-0 required to be submitted within 30 days pursuant to paragraph 50.73(a)(2)(VII) an event where a single condition caused at least two independent channels to become inoperable in a single system designed to shutdown the reactor.

Very truly,

NORTHEAST NUCLEAR ENERGY COMPANY

FOR: E. J. Mroczka
Station Superintendent
Millstone Nuclear Power Station


BY: R. J. Herbert
Station Services Superintendent
Millstone Nuclear Power Station

EJM/TF:ejl

Attachment: LER RO 50-336/84-004/3L-0

cc: Dr. T. E. Murley, Region I

IE22
1/1