

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Millstone Point Unit 2										DOCKET NUMBER (2) 0 5 0 0 0 3 3 6				PAGE (3) 1 OF 0 3								
TITLE (4) Safety Analysis Error																						
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	2	3	8	5	8	5	0	0	1	0	0	0	2	2	0	8	5	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		20.402(b)				20.406(e)				50.73(a)(2)(iv)				73.71(b)								
POWER LEVEL (10)		20.406(a)(1)(i)				50.36(a)(1)				X 50.73(a)(2)(v)				73.71(c)								
1 0 0		20.406(a)(1)(ii)				50.36(a)(2)				50.73(a)(2)(vi)				OTHER (Specify in Abstract below and in Text, NRC Form 366A)								
		20.406(a)(1)(iii)				50.73(a)(2)(i)				50.73(a)(2)(vii)(A)												
		20.406(a)(1)(iv)				50.73(a)(2)(ii)				50.73(a)(2)(vii)(B)												
		20.406(a)(1)(v)				50.73(a)(2)(iii)				50.73(a)(2)(x)												
LICENSEE CONTACT FOR THIS LER (12)																						
NAME Joseph J. Parillo										TELEPHONE NUMBER												
										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 NPDOS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDOS												
A	I G	A L M	C 4 9 0	N																		
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)

An inconsistency was found between the Technical Specification requirement on Axial Shape Index (ASI) and the safety analysis assumptions on ASI that are input to the Millstone 2 Small Break Loss of Coolant (LOCA) analysis. The Unit 2 Small Break LOCA analysis was performed by Combustion Engineering. The event was declared immediately reportable by site procedures and falls under the 30 day reportable criteria of 50.73 (a), (2) V & VI.

The ASI inconsistency between Technical Specifications and Safety Analysis could have allowed plant operation in an unanalyzed region should a small break LOCA occur. Administrative controls were immediately implemented to preclude any unanalyzed operation until further corrective actions could be implemented.

Reanalysis has shown that when the correct ASI inputs are used in the small break LOCA model, Peak Clad Temperatures (PCT) increase from 1971 degrees F to 2035 degrees F, still within the 2200 degrees F 10CFR50.46 LOCA limits on PCT.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) Millstone Point Unit 2	DOCKET NUMBER (2) 0 5 0 0 0 3 3 6	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
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TEXT (If more space is required, use additional NRC Form 365A's) (17)

The Safety Analysis that supports Millstone 2 operation is in part supplied by Combustion Engineering (C-E). During the investigation phase of a potential Technical Specification change, C-E identified an inconsistency between the Millstone 2 Technical Specification Axial Shape Index (ASI) values and the ASI assumptions utilized in the small break Loss of Coolant analyses performed by C-E.

The most negative Axial Shape Index (ASI) input to the LOCA analysis was an ASI of $-.14$. Plant Technical Specifications allow a 100% power ASI of no more negative than $-.10$. Considering the $\pm .06$ ASI uncertainty assumed in the analysis, the plant could conceivably operate with an ASI of $(-.10) - (.06) = -.16$. This is not bounded by the $-.14$ ASI input to the small break LOCA model.

The error was reported on 1/23/85 and was declared an immediate report to the NRC and state by site procedures. Administrative controls at this time were put in place to preclude plant operation in the unanalyzed ASI region, until corrective actions could be taken. Subsequently, a calculation was performed to determine the effects on the small break LOCA of the more negative ASI value of $-.16$. The Peak Clad Temperature (PCT) during a postulated small break LOCA increased from 1971 degrees F to 2035 degrees F as a result of the more negative ASI of $-.16$. This increase still does not exceed the 10CFR50.46 limit for PCT, which is 2200 degrees F.

With this reanalysis in place and QA verified, administrative controls were removed on plant operation.

This incident was declared a 30 day report based on 10CFR50.73 (a)(2)(V) and (VI). This is because the ASI inconsistency could have allowed plant operation in unanalyzed ASI space, where the ability of plant safety systems to mitigate a small break LOCA were not analyzed.

This error was in place since Cycle 3 (1979). This was the last time a Technical Specification change to the ASI Limiting Condition for Operation (LCO) was issued. Three mitigating factors must be considered concerning this safety analysis inconsistency:

- 1) Actual plant operation in the unanalyzed ASI space during the time the error was in place, is extremely remote. Operation in the unanalyzed ASI space would indicate a severe abnormality in core power distribution.
- 2) The only way operation in the unanalyzed ASI space could occur is if the ASI uncertainty of $\pm .06$ assumed in the analysis was at or near the negative ASI uncertainty limit of $-.06$.
- 3) Even if operation did occur in the unanalyzed ASI space, reanalysis shows that plant safety systems were adequate to maintain PCT during a postulated small break LOCA to 2035 degrees F, below the 2200 degrees F 10CFR limit.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/85

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)															
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TEXT (If more space is required, use additional NRC Form 366A's) (17)

This inconsistency between Technical Specification ASI limits and Safety Analysis limits on ASI is not common to any other Millstone 2 safety analysis transient nor is it a generic problem applicable to any other nuclear unit.

In summary, the corrective actions were to perform an analysis to ensure that plant operation with current Technical Specifications meet all LOCA acceptance criteria. This analysis is complete.

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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MP-6660

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 50-336/85-001-0

Gentlemen:

This letter forwards the Licensee Event Report 85-001-0 required to be submitted within thirty (30) days pursuant to paragraph 50.73 (a) (2) (V) and (VI).

Yours truly,

NORTHEAST NUCLEAR ENERGY COMPANY

A handwritten signature in cursive script, reading 'E. J. Mroczka'. The signature is fluid and stylized, with the first and last names being clearly legible.

E. J. Mroczka
Station Superintendent
Millstone Nuclear Power Station

EJM/JJP:mo

Attachment: LER RO 50-336/85-001-0

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

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