

NORTHEAST UTILITIES



The Connecticut Light And Power Company
Western Massachusetts Electric Company
Holyoke Water Power Company
Northeast Utilities Service Company
Northeast Nuclear Energy Company

General Offices: Selden Street, Berlin Connecticut

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February 1, 1994
MP-94-85

DONALD B. MILLER, Jr.
SENIOR VICE PRESIDENT - MILLSTONE

Re: 10CFR50.73

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

Reference: Facility Operating License No. DPR-21
Docket No. 50-245
Licensee Event Report 93-005-01

Gentlemen:

This letter forwards Licensee Event Report 93-005-01 required to be submitted within thirty (30) days pursuant to 10CFR50.73(a)(2)(i).

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

Donald B. Miller, Jr.
Senior Vice President - Millstone Station

DBM/TD:bjo

Attachment: LER 93-005-01

cc: T. T. Martin, Region I Administrator
P. D. Swetland, Senior Resident Inspector, Millstone Unit Nos. 1, 2 and 3
J. W. Andersen, NRC Acting Project Manager, Millstone Unit No. 1

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LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) Millstone Nuclear Power Station Unit 1	DOCKET NUMBER (2) 05000245	PAGE (3) 1 OF 03
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TITLE (4)
Hydraulic Snubber HSS-039

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 NAME	DOCKET NUMBER
04	29	93	93	005	01	02	01	94		05000
									FACILITY NAME	DOCKET NUMBER
										05000

OPERATING MODE (9)	THIS REPORT IS BEING SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)										
	20.402(b)			20.405(c)			50.73(a)(2)(iv)			73.71(b)	
POWER LEVEL (10)	100	20.405(a)(1)(i)			50.36(c)(1)			50.73(a)(2)(v)			73.71(c)
		20.405(a)(1)(ii)			50.36(c)(2)			50.73(a)(2)(vii)			OTHER
		20.405(a)(1)(iii)			X 50.73(a)(2)(i)			50.73(a)(2)(viii)(A)			(Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iv)			50.73(a)(2)(ii)			50.73(a)(2)(viii)(B)			
		20.405(a)(1)(v)			50.73(a)(2)(iii)			50.73(a)(2)(ix)			

LICENSEE CONTACT FOR THIS LER (12)

NAME Drexel N. Harris, Site Licensing	TELEPHONE NUMBER (Include Area Code) (203) 437-5903
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS

SUPPLEMENTAL REPORT EXPECTED (14)				EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
X	YES (If yes, complete EXPECTED SUBMISSION DATE)	NO			06	30	94

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

On April 29, 1993, with the plant in Cold Shutdown, Hydraulic snubber HSS-039 was identified with an unacceptable end attachment to the "A" recirculation pump motor. The snubber is attached to the motor with a clevis and load pin. One of the two (2) cotter pins which holds the load pin in the clevis attachment was missing which allowed the load pin to shift and come out of one of the ears of the clevis. This condition was conservatively determined to make the snubber unavailable to perform its intended function, thus inoperable.

In addition to the above condition, there was evidence of fluid leakage and an unacceptable fluid level. This snubber was removed for functional testing and replaced with a spare snubber.

All other snubbers were inspected for the above conditions and corrected (if required) prior to startup.

The maintenance procedure utilized for the removal and installation of snubbers has been revised to ensure that there will not be a recurrence of the condition found with respect to cotter pins.

This event is reportable pursuant to 10CFR50.73(a)(2)(i)(B).

EXPIRES: 5/31/95

**LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION**

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MN88 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) Millstone Nuclear Power Station Unit 1	DOCKET NUMBER (2) 05000245	LER NUMBER (6)			PAGE (3) 02 OF 03
		YEAR 93	SEQUENTIAL NUMBER - 005 -	REVISION NUMBER 01	

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

I. Description of Event

On April 29, 1993, with the plant in Cold Shutdown, Hydraulic snubber HSS-039 was identified with an unacceptable attachment to the "A" recirculation pump motor. The snubber is attached to the motor with a clevis and load pin. One of the two (2) cotter pins which holds the load pin in the clevis attachment was missing which allowed the load pin to shift and come out of one of the ears of the clevis. This condition was conservatively determined to make the snubber unavailable to perform its intended function, thus inoperable.

II. Cause of Event

During an unrelated drywell inspection, this snubber was discovered to have a degraded end attachment on the motor of the "A" recirculation pump. This condition was the result of a missing cotter pin. Cotter pins are required to be bent or spread sufficiently to ensure the cotter pins do not fall out. The loss of a cotter pin allows the load pin to be free to move or work its way out of the clevis or end attachment. The load pin was found to have worked its way out of one ear of the clevis. HSS-039, with the load pin still through the snubber paddle and one ear of the clevis could not be determined operable in the as-found condition by functional testing.

The root cause of this event was the improper installation of the cotter pin.

III. Analysis of Event

This event is reportable pursuant to 10CFR50.73(a)(2)(i)(B). The condition of HSS-039 has been reviewed and found not to have degraded the integrity of the recirculation system. If subjected to cyclical seismic loads the reversing loadings could have caused the load pin to work further out of the clevis and could have resulted in the snubber being inoperable. No safety consequences resulted from this event since the snubber is installed to restrain against seismic events while allowing for freedom of movement thermally. Given the absence of seismic loads however, the recirculation system was not challenged by this condition.

This snubber was identified during the 1991 Refuel outage as having a problem with the motor end attachment paddle and cotter pin installation. Corrective maintenance was performed and a re-inspection was performed to verify the conditions noted above were corrected. This re-inspection did not identify any problems with the cotter pin at this time. During an extended cold shutdown outage in 1992, a Technical Specification Surveillance was performed on all hydraulic and mechanical snubbers. This inspection, also did not indicate there was any problem associated with the hydraulic snubber HSS-039 motor end attachment. Thus, the snubber was considered operable at that time.

In addition to the above condition, there was evidence of fluid leakage and an unacceptable fluid level. This snubber was removed for functional testing and replaced with a spare snubber. The snubber passed the functional test.

As a result of the conditions found, a visual examination was performed on all hydraulic snubbers for cotter pin engagement and fluid levels. The inspection did not identify any leakage and confirmed no significant change (i.e., \leq approx. 1/8") in fluid level reserves recorded during the January 1992 Technical Specification surveillance.

EXPIRES: 5/31/95

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) Millstone Nuclear Power Station Unit 1	DOCKET NUMBER (2) 05000245	LER NUMBER (8)	PAGE (3)						
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 15%;">YEAR</th> <th style="width: 15%;">SEQUENTIAL NUMBER</th> <th style="width: 15%;">REVISION NUMBER</th> </tr> <tr> <td style="text-align: center;">93</td> <td style="text-align: center;">— 005 —</td> <td style="text-align: center;">01</td> </tr> </table>	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	93	— 005 —	01	03 OF 03
YEAR	SEQUENTIAL NUMBER	REVISION NUMBER							
93	— 005 —	01							

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

The original investigation for the fluid leakage identified loose gland bolting as the probable cause for seal failure. Further investigation found the upper head packing to be degraded. Phone conversation with the manufacturer indicated the gland screws would not have contributed to this seal failure. This seal and (2) others with similar defects were sent to the manufacturer for further analysis. One seal was from a new unused rebuild kit of the same batch number and the other was out of an older spare snubber. The results of this analysis was received on November 9, 1993. The manufacturer, while not conclusive, determined the failure of the seal was a result of the manufacturing process.

The letter from the manufacturer received on November 9, 1993, addressed a potential manufacturing process defect associated with the software (seal) kits for Bergen Patterson, size 30 kips (HSSA-30) hydraulic snubbers. The processing defect could allow the snubber to leak under normal operating pressures. However, the letter identified that the defect would not affect accident conditions since it would seal itself under snubber activation or design loads. Thus, the concern is for a gradual decrease in fluid where there would be an insufficient amount to maintain functionality. The affected batch of software kits was purchased in 1988. This potential manufacturing process defect could affect the operability of 15 out of 16 size 30 Kip snubbers currently inservice. The 15 snubbers inservice have a good probability of being rebuilt with one of these seal kits since all 15 snubbers have been rebuilt at least once since 1989.

All snubbers are visually inspected each refuel outage for visible evidence of fluid leakage and fluid levels. Since 1989, when these kits may have been installed, any snubbers with evidence of fluid leakage or an unacceptable fluid level have been removed and functionally tested to determine operability. Four snubbers of this size have been identified with fluid leakage since 1989 and all passed the functional test.

A review of the history for the potentially affected snubbers indicates that most had several visual inspections with no leaking fluid noted. Also as noted above, a complete inspection of fluid levels was performed in April 1993 with no significant change in fluid levels noted.

An operability determination was promptly performed and concluded that there is reasonable assurance that the 30 kip Bergen Patterson snubbers are operable.

IV. Corrective Action

This snubber was replaced with a rebuilt spare and the load pin installed correctly.

A visual examination was performed of all other supports attached to "A" Recirculation pump. There is no evidence of damage or physical discrepancies.

Maintenance procedures have been revised to incorporate clarification on the installation of cotter pins and installation inspection criteria.

V. Additional Information

All 30 kip (16) Bergen Patterson snubbers are scheduled for rebuilding during the 1994 Refuel Outage. An analysis of the seals removed will be performed and the results forwarded to the manufacturer to determine if there are generic implications for seals in the same batch number.

All snubbers which were generically susceptible were examined and any deficiencies found were corrected. Technical Specification Section 4.6.1.1 states "When the cause of the rejection of a snubber is clearly established and remedied for that snubber and for any other snubbers that may be generically susceptible, that snubber may be exempted from being counted as inoperable". This failure need not be counted for determining the next inspection interval. Therefore the inspection interval remains at 18 months.

A supplement to this LER will be submitted to document our actions on this issue and provide the results of the analysis performed during the refuel outage.