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

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April 7, 1982

DOCKET NO. 50-336
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Mr. Ronald C. Haynes
Regional Administrator, Region I
Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, PA 19406

References: (1) B. H. Grier letter to W. G. Counsil, dated January 27, 1981, transmitting I&E Bulletin No. 81-01.

(2) W. G. Counsil letter to B. H. Grier, dated June 23, 1981.

Gentlemen:

MILLSTONE NUCLEAR POWER STATION, UNIT NO. 2
MECHANICAL SNUBBERS

In Reference (1), the NRC Staff requested that Northeast Nuclear Energy Company (NNECO) perform certain actions to determine the condition of mechanical snubbers, specifically those manufactured by International Nuclear Safeguards Corporation (INC), at Millstone Unit No. 2.

Reference (2) provided the Staff with a compendium of the correspondence regarding the actions taken by NNECO in response to Reference (1). This included the inspection of all inaccessible INC mechanical snubbers on safety related systems and the replacement of inoperable units. At that time NNECO reaffirmed its commitment to replace all accessible INC mechanical snubbers with snubbers of a different design prior to the Cycle 5 refueling outage. NNECO had also committed to replace all remaining inaccessible INC mechanical snubbers during the Cycle 5 refueling outage.

In fulfillment of those commitments, NNECO hereby informs the Staff that all accessible and inaccessible INC mechanical snubbers on safety related systems at Millstone Unit No. 2 have been replaced with snubbers of a different design. The following information is provided to the Staff in fulfillment of Item 4 of Reference (1).

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A total of 81 INC mechanical snubbers were replaced with snubbers of a different design since the May, 1981 outage. Table 1 provides a listing of the mechanical snubbers replaced prior to the Cycle 5 refueling outage and Table 2 provides a listing of those snubbers replaced during the refueling outage. Information included in both Tables includes model number, size, number of failures, snubber location, mode of failure and cause of failure.

In all cases, the INC mechanical snubber was replaced with a snubber of a different design.

All INC snubbers were visually examined. With the exception of one, all those snubbers listed in Tables 1 and 2 were stroke tested over the full range of tension and compression. Snubber No. DP537 located on Hanger number FSK-M-15-029 in the high pressure safety injection system was lost prior to stroke testing. This snubber was assumed to be frozen for the purposes of system operability evaluations. Of the remaining 80 INC snubbers which were stroke tested, four failures were identified.

Of the five failures identified or assumed, NNECO performed stress analyses and fatigue evaluations, where appropriate, for two cases. In the remaing cases, it was determined that detailed stress analyses were not required since the nature of the snubber failures was such that additional thermal stresses in the affected systems had not been induced.

The first case analyzed involved hanger number 408005 on the pressurizer safety and relief system. The stresses were determined to be below Code allowable values and the increase in usage factor was insignificant. The second case analyzed involved hanger number 416032 on the containment spray system. In this case, the stresses were also found to be well below code allowable values.

In all cases where inoperable snubbers were identified or assumed, NNECO has concluded that the integrity of the piping system has not been compromised and that continued safe operation of the affected system is assured.

During the Cycle 5 refueling outage, NNECO identified one additional INC mechanical snubber which had not previously been included in the list of mechanical snubbers under the Reference (1) review. This snubber was incorrectly identified as a rigid restraint in the input listing to a stress analysis problem. The snubber is correctly depicted on the piping system isometric. The snubber was stroke tested satisfactorily and replaced with a mechanical snubber of a different design. NNECO has concluded that this anomaly is an isolated occurrence.

NNECO also performed visual examinations and stroke tests on all mechanical snubbers manufactured by vendors other than INC which were installed prior to the issuance of Reference (1). This action was performed in accordance with Item 3 of Reference (1). The results of these tests are provided in Table 3. No failures of either the stroke test or visual examination were identified.

The docketing of this information completes NNECO's response to Reference (1). All commitments regarding the replacement of INC mechanical snubbers at Millstone Unit No. 2 have been fulfilled. No further action is planned in this matter.

To assist the NRC Staff in evaluating the value/impact of this Bulletin, NNECO has determined that approximately $740,000.00 has been expended in response to Reference (1) to date. This figure includes the preparation and review of reports required by the Bulletin as well as repair/replacement program costs. In addition, it is noted that approximately $12,000,000.00 in replacement power costs were incurred during the May 1981 outage for snubber testing and replacement.

We trust you find this information responsive to the Reference (1) requests.

Very truly yours,

NORTEAST NUCLEAR ENERGY COMPANY

W. G. Counsil
Senior Vice President

TABLE 1

MILLSTONE NUCLEAR POWER STATION UNIT NO. 2

INC MECHANICAL SNUBBER REPLACEMENT

ACCESSIBLE AREAS

SYSTEM	MODEL	NUMBER TESTED	NUMBER FAILED	FAILURE MODE	CAUSE OF FAILURE
LPSI	MSVA-2	3	0	-	-
HPSI	MSVA-2	4	0	-	-
	MSVA-3	1	0	-	-
SERVICE WATER	MSVA-2	2	0	-	-
	MSVA-3	3	0	-	-
RBCCW	MSVA-1	2	0	-	-
	MSVA-2	1	0	-	-
	MSVA-3	1	0	-	-
CONTAINMENT SPRAY	MSVA-1	1	0	-	-
SHUTDOWN COOLING	MSVA-2	2	0	-	-
TOTAL		20	0		

MSVA-1	750 LBS.
MSVA-2	3,000 LBS.
MSVA-3	10,000 LBS.

TABLE 2

MILLSTONE NUCLEAR POWER STATION, UNIT NO. 2

INC MECHANICAL SNUBBER REPLACEMENT

INACCESSIBLE AREAS

SYSTEM	MODEL	NUMBER TESTED	NUMBER FAILED	FAILURE MODE	CAUSE OF FAILURE
HPSI	MSVA-1	4	1	SNUBBER LOST	ASSUMED FAILED
SAFETY INJCETION	MSVA-2	1	0	-	-
CONTAINMENT SPRAY	MSVA-1	2	1	INTERMITTENT JAMMING	WOULD NOT STROKE THROUGH FULL RANGE
	MSVA-2	2	1	FROZEN	CORROSION
MAIN	MSVA-1	11	0	-	-
STEAM	MSVA-2	1	0	-	-
CVCS	MSVA-1	2	1	INTERMITTENT JAMMING	WOULD NOT STROKE THROUGH FULL RANGE
	MSVA-2	1	0	-	-
PRESSURIZER	MSVA-1	2	0	-	-
SAFETY AND	MSVA-2	27	1	FROZEN	CORROSION
RELIEF	MSVA-3	7	0	-	-
	MSVA-4	1	0	-	-
TOTAL		61	5		

MSVA-1	750 LBS.
MSVA-2	3,000 LBS.
MSVA-3	10,000 LBS.
MSVA-4	20,000 LBS.

TABLE 3

MILLSTONE NUCLEAR POWER STATION UNIT NO. 2

PSA MECHANICAL SNUBBER TESTS

1981/1982 REFUELING OUTAGE

MODEL NO.	CAPACITY	NUMBER TESTED	NUMBER FAILED
PSA- ⅛	350 LBS.	5	0
PSA-10	15,000 LBS.	6	0
TOTAL		11	

STATE OF CONNECTICUT)
) ss. Berlin April 7, 1982
COUNTY OF HARTFORD)

Then personally appeared before me W. G. Counsil, who being duly sworn, did state that he is Senior Vice President of Northeast Nuclear Energy Company, a Licensee herein, that he is authorized to execute and file the foregoing information in the name and on behalf of the Licensees herein and that the statements contained in said information are true and correct to the best of his knowledge and belief.

Notary Public
My Commission Expires March 31, 1983