

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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June 22, 1981

Docket No. 50-336

A01531



Mr. Boyce H. Grier, Director
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. Council, dated January 27, 1981, transmitting I&E Bulletin No. 81-01.
 - (2) W. G. Council letter to B. H. Grier, dated March 11, 1981.
 - (3) W. G. Council letter to B. H. Grier, dated March 27, 1981.
 - (4) W. G. Council letter to B. H. Grier, dated April 27, 1981.
 - (5) W. G. Council letter to B. H. Grier, dated May 18, 1981.
 - (6) W. G. Council letter to V. Stello, Jr., dated May 11, 1981.

Gentlemen:

Millstone Nuclear Power Station, Unit No. 2
I&E Bulletin No. 81-01, Mechanical Snubbers

By 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.

In References (2) and (3), NNECO provided the Staff with the results of visual examinations and manual stroke tests performed on accessible INC mechanical snubbers located on Category I, safety related systems. Reference (4) provided the Staff with a description of corrective actions which have been performed for five inaccessible INC mechanical snubbers located outside containment.

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As reported in Reference (5), NNECO commenced with a cold shutdown of Millstone Unit No. 2 on May 7, 1981, to perform visual examinations and manual testing of inaccessible INC mechanical snubbers located inside containment and INC mechanical snubbers located outside containment on non-Category I, safety-related systems. The Plant resumed power operation on May 18, 1981, and in accordance with Item 4 of Reference (1), NNECO hereby provides the following information concerning the results of the examinations completed during the outage.

A total of 105 INC mechanical snubbers were visually examined and manually stroke tested over the full range of tension and compression. Table 1 provides a listing of the mechanical snubbers tested, model number, size, number of failures, mode of failure, cause of failure and snubber location.

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

As was reported in Reference (5), NNECO performed stress analyses and, where appropriate, fatigue evaluations for all the systems and components on which inoperable INC mechanical snubbers were identified. The as-found snubber conditions, as determined by a manual stroke test, were utilized as input to these analyses and evaluations. The results of the analyses and evaluations confirmed that the structural integrity of the affected systems has not been compromised by the identified inoperable INC mechanical snubbers and that continued operation of the affected system is acceptable.

Analyses and evaluations were also performed to demonstrate that other supports and restraints on the same piping system were not over-loaded as a result of snubber failure. In those instances where thermal stresses exceeded the code allowables due to frozen snubbers or where supports and restraints were suspected of being over-loaded, visual examinations or non-destructive testing were performed. No indications were identified. This supports the conclusion that the integrity of the piping systems on which inoperable INC mechanical snubbers were identified has not been compromised.

Increases in the usage factors were identified for the Class I portions of the Pressurizer Safety and Relief, Safety Injection and Pressurizer Spray Systems due to inoperable INC mechanical snubbers, however, these were insignificant and do not affect the number of allowable cycles as delineated in the Plant Technical Specifications. Usage factors for the remaining Class I systems were not affected by the as found snubber conditions.

Snubber failure of the stroke test has been attributed to corrosion of the internals causing the snubber to jam. Since the corrosion process occurs over an extended period of time, NNECO expects the remaining INC mechanical snubbers, which have been demonstrated operable, to remain operable until the next refueling outage. It remains NNECO's intention to remove or replace the remaining accessible INC mechanical snubbers at Millstone Unit No. 2 with snubbers of a different design prior to the next refueling outage. The remaining inaccessible INC mechanical snubbers will be replaced during the next refueling outage.

There are no plans to perform mechanical snubber surveillance prior to the next refueling. However, the replacement program for the accessible INC mechanical snubbers described above will be completed prior to the next refueling outage.

If a snubber failure is identified during the replacement of the remaining accessible INC mechanical snubbers, the failure will be evaluated at that time and appropriate action will be taken.

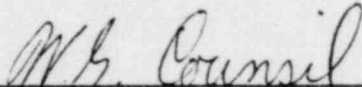
With the docketing of this information, together with References (2), (3), and (4), NNECO has addressed all the INC mechanical snubbers at Millstone Unit No. 2.

As requested in Reference (1), to assist the NRC in evaluating the value/impact of this Bulletin, NNECO has determined that \$300,000 has been expended in response to this Bulletin to date. This includes the preparation and review of reports required by the Bulletin as well as the repair/replacement program costs.

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

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY



W. G. Council
Senior Vice President

STATE OF CONNECTICUT)
) ss. Berlin
COUNTY OF HARTFORD)

June 22, 1981

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.

Sheila M. Oates
Notary Public

My Commission Expires March 31, 1985

TABLE 1

Millstone Nuclear Power Station, Unit No. 2

INC MECHANICAL SNUBBER INSPECTION - MAY, 1981

<u>Location</u>	<u>System</u>	<u>Model</u>	<u>Number Tested</u>	<u>Number Failed</u>	<u>Failure Mode</u>	<u>Cause of Failure</u>
1. Turbine Blg.	Feedwater	MSVA-2	8	7	Frozen	Internal Corrosion
		MSVA-3	2	2	Frozen	Internal Corrosion
2. Aux Blg.	Steam Gen. Blowdown	MSVA-2	1	0	--	--
	Steam Gen. Blowdown	MSVA-1	6	3	Frozen	Internal Corrosion
	Letdown	MSVA-1	1	0	--	--
	HPSI	MSVA-1	2	0	--	--
3. Containment	Safety Injection	MSVA-2	4	3	Frozen	Internal Corrosion
	Safety Injection	MSVA-3	2	2	Frozen	Internal Corrosion
	Pressurizer Safety and Relief	MSVA-1	4	2	Frozen	Internal Corrosion
	Pressurizer Safety and Relief	MSVA-2	39	8	Frozen	Internal Corrosion
		MSVA-3	6	0	--	--
	Pressurizer Safety and Relief	MSVA-4	1	0	--	--
	Pressurizer Spray	MSVA-2	7	2	Frozen	Internal Corrosion
	Shutdown Cooling	MSVA-3	2	2	Frozen	Internal Corrosion
	Containment Spray	MSVA-1	4	1	Failed Visual - Stroked Satisfactorily	

<u>Location</u>	<u>System</u>	<u>Model</u>	<u>Number Tested</u>	<u>Number Failed</u>	<u>Failure Mode</u>	<u>Cause of Failure</u>
	Containment Spray	MSVA-2	2	0	--	--
	Steam Gen. Blowdown	MSVA-1	10	2	Frozen	Internal Corrosion
	Charging	MSVA-1	1	1	Frozen	Internal Corrosion
	Charging	MSVA-2	1	1	Frozen	Internal Corrosion
	Reactor Coolant Pump Bleedoff	MSVA-1	1	1	Frozen	Internal Corrosion
	Letdown	MSVA-1	1	0	--	--

MSVA-1	750 Lb.
MSVA-2	3000 Lb.
MSVA-3	10000 Lb.
MSVA-4	20000 Lb.

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	Letdown	MSVA-1	1	0	--	--
	HPSI	MSVA-1	2	0	--	--
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	Steam Gen. Blowdown	MSVA-1	10	2	Frozen	Internal Corrosion
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	Charging	MSVA-2	1	1	Frozen	Internal Corrosion
	Reactor Coolant Pump Bleedoff	MSVA-1	1	1	Frozen	Internal Corrosion
	Letdown	MSVA-1	1	0	--	--
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MSVA-4	20000 Lb.					