



**Northeast
Nuclear Energy**

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The Northeast Utilities System

AUG 31 2000

Docket No. 50-336
B18206

Re: 10 CFR 50.73(a)(2)(i)

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

Millstone Nuclear Power Station, Unit No. 2
Licensee Event Report 2000-014-00
Low Oil Level in "C" HPSI Outboard Bearing

This letter forwards Licensee Event Report (LER) 2000-014-00, (Attachment 1), documenting a condition that was discovered at Millstone Unit No. 2 on August 3, 2000. This LER is being submitted pursuant to 10 CFR 50.73(a)(2)(i).

There are no regulatory commitments contained within this letter.

Should you have any questions regarding this submittal, please contact Mr. David W. Dodson at (860) 447-1791, extension 2346.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY


C. J. Schwarz
Station Director

Attachment (1): LER 2000-014-00

cc: H. J. Miller, Region I Administrator
J. I. Zimmerman, NRC Project Manager, Millstone Unit No. 2
S. R. Jones, Senior Resident Inspector, Millstone Unit No. 2

IE22

Docket No. 50-336
B18206

Attachment 1

Millstone Nuclear Power Station, Unit No. 2

LER 2000-014-00

LICENSEE EVENT REPORT (LER)

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

Estimated burden per response to comply with this mandatory information collection request: 50 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), 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. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

FACILITY NAME (1) <p style="text-align: center;">Millstone Nuclear Power Station</p>	DOCKET NUMBER (2) <p style="text-align: center;">05000336</p>	PAGE (3) <p style="text-align: center;">1 OF 3</p>
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TITLE (4)

LOW OIL LEVEL IN "C" HPSI OUTBOARD BEARING

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
08	03	2000	2000	-- 014 --	00	08	31	2000	FACILITY NAME	DOCKET NUMBER
OPERATING MODE (9)		1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)							
POWER LEVEL (10)		100	20.2201(b)		20.2203(a)(2)(v)		<input checked="" type="checkbox"/>		50.73(a)(2)(i)	50.73(a)(2)(viii)
			20.2203(a)(1)		20.2203(a)(3)(i)				50.73(a)(2)(ii)	50.73(a)(2)(x)
			20.2203(a)(2)(i)		20.2203(a)(3)(ii)				50.73(a)(2)(iii)	73.71
			20.2203(a)(2)(ii)		20.2203(a)(4)				50.73(a)(2)(iv)	OTHER
			20.2203(a)(2)(iii)		50.36(c)(1)				50.73(a)(2)(v)	Specify in Abstract below or in NRC Form 366A
			20.2203(a)(2)(iv)		50.36(c)(2)				50.73(a)(2)(vii)	

LICENSEE CONTACT FOR THIS LER (12)

NAME <p style="text-align: center;">David W. Dodson, Regulatory Compliance Supervisor</p>	TELEPHONE NUMBER (Include Area Code) <p style="text-align: center;">(860) 447-1791 ext. 2346</p>
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

SUPPLEMENTAL REPORT EXPECTED (14)				EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR
<input checked="" type="checkbox"/> YES	(If yes, complete EXPECTED SUBMISSION DATE).			<input checked="" type="checkbox"/> NO				

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

On August 3, 2000 with the plant in mode 1 at 100% power, during the routine surveillance of the "C" High-Pressure Safety Injection (HPSI) pump a determination was made that the outboard bearing housing was lacking the appropriate amount of oil. At the time of discovery, the pump was considered the operable HPSI pump for one of the Emergency Core Cooling Systems (ECCS). Per Technical Specification (TS) 3.5.2, two independent and separate ECCS subsystems are required to be OPERABLE, and to meet this requirement, each subsystem is required to have one OPERABLE HPSI pump. The follow-up investigation determined that the condition existed for the previous 28 days. With the reduced oil level in the outboard bearing, the "C" HPSI pump would not have been capable of performing its safety function for more than approximately 24 hours. The pump would potentially need to operate for significantly longer if its associated design basis accident did occur.

Upon discovery, the "C" HPSI pump was removed from service, and the "B" HPSI pump (swing pump) was lined up to the associated ECCS subsystem to bring the plant into compliance with the TS.

This condition is being reported in accordance with 10 CFR 50.73(a)(2)(i)(B), any operation or condition prohibited by the plant's Technical Specifications.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET	LER NUMBER (6)			PAGE (3)
Millstone Nuclear Power Station Unit 2	05000336	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 OF 3
		2000	-- 014 --	00	

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

I. Description of Event

On August 3, 2000 with the plant in mode 1 at 100% power, during the routine surveillance of the "C" High-Pressure Safety Injection (HPSI) pump [BQ] a determination was made that the outboard bearing housing was lacking the appropriate amount of oil. At the time of discovery, the pump was considered the operable HPSI pump for one of the Emergency Core Cooling Systems (ECCS). Per Technical Specification (TS) 3.5.2, two independent and separate ECCS subsystems are required to be OPERABLE, and to meet this requirement, each subsystem is required to have one OPERABLE HPSI pump. The follow-up investigation determined that the condition existed for the previous 28 days. With the reduced oil level in the outboard bearing, the "C" HPSI pump would not have been capable of performing its safety function for more than approximately 24 hours. The pump would potentially need to operate for significantly longer if its associated design basis accident did occur.

The HPSI pumps use a Trico bubbler type oiler system with a 4 oz. glass reservoir and level adjuster. The level adjuster, referred to as the "spider" assembly, has a flat horizontal base with four 3/8" holes. The holes provide a flow path from the glass oil reservoir to the bearing housing. The spider assembly rests on a 1/8" high ledge encircling the internal diameter of the base container to ensure that make-up oil flow to the bearing housing is not restricted. The glass reservoir indicated the proper level, but observations by the operator during the surveillance run on the pump identified that there was little or no oil being distributed by the oil flinger ring. In the process of restoring the oil level in the bearing housing, the glass reservoir and spider assembly were removed from the base container. When the spider assembly was removed the residual oil in the base of the oiler immediately drained into the bearing housing.

The standard issue Trico oilers have side and bottom 1/4" threaded pipe connections for attachment. Depending on the particular application, either connection may be used. A pipe plug is installed in the unused connection. The HPSI oilers use the bottom connection for attachment to the bearing housings. It was determined that the center section of the flat base spider assembly was in contact with the 1/4" threaded pipe nipple connecting the oiler to the bearing housing. The pipe nipple was protruding in excess of 1/8" into the bottom of the Trico base, and restricting oil flow to the housing. The side tap application does not affect flow from the oiler.

On July 6, 2000, the bearing housing was drained and refilled with oil in accordance with the procedural recommendations made by the oiler manufacturer. The determination was made that the low oil condition was established at that time.

This condition is being reported in accordance with 10 CFR 50.73(a)(2)(i)(B), any operation or condition prohibited by the plant's Technical Specifications.

II. Cause of Event

The cause for the low oil level in the outboard bearing of the "C" HPSI pump was the flat base plate design of the spider assembly in the Trico oiler. The newer oilers from Trico come with a modified spider assembly that has a concave base plate instead of the flat base plate found in the unit installed on the "C" HPSI pump bearing housing.

III. Analysis of Event

The "C" HPSI pump performed an acceptance run of 15 minutes after the oil was "changed" on July 6, 2000, and again during the routine surveillance run on August 3, 2000. If a Design Bases event requiring this pump were to have occurred, the pump would have started and performed its intended function for several hours. The pump vendor provided information indicating the pump would run for about 24 hours with the residual oil left on the bearing after the oil was changed. The worst case Design Basis event needing this pump would require its operation for the duration of the accident, which would extend to significantly longer than 24 hours. If the pump

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET	LER NUMBER (6)			PAGE (3)
Millstone Nuclear Power Station Unit 2	05000336	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	3 OF 3
		2000	-- 014	-- 00	

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

failed, the alternate train would be capable of supplying the required function for the duration of the event. The alternate train was operable for the entire time the "C" HPSI pump bearing was low on oil. In addition, if available, the "B" HPSI swing pump could be lined up to replace the "C" HPSI pump in its associated subsystem. It was determined that the "B" HPSI pump was available and operable at all times since July 6, 2000. This would bring the plant back to a condition of having both subsystems available in a relatively short period of time after failure of the "C" pump is recognized. The low bearing oil condition existed for a relatively short period of time (less than 30 days). The likelihood of the associated Design Basis Accident occurring during this time period with the pump inoperable is low.

Therefore, this condition is considered to be of low safety significance.

IV. Corrective Action

As a result of this condition, the following actions have been performed.

1. Upon discovery, the "C" HPSI pump was removed from service, and the "B" HPSI pump (swing pump) was lined up to the associated ECCS subsystem to bring the plant into compliance with the TS.
2. The oil level was replenished in the "C" HPSI pump and the pump was run taking appropriate measurements to validate proper pump operability and bearing condition (i.e., vibration and temperature readings).
3. The spider assemblies for the "C" HPSI inboard and outboard bearing housings were changed from the flat type bottom to the newer design concave bottom spider supplied by the vendor.
4. All similar oiler assemblies on all safety related pumps were inspected for the bottom tap installation and where found the flat type bottom spiders were inspected to insure they did not obstruct oil flow to their associated bearings.
5. Unit 3 safety related pumps were inspected to identify any similar conditions. All similar oilers were installed using the side tap oiler configuration on Unit 3 safety related pumps.

Other corrective actions are being addressed via the Millstone Corrective Acton Program.

V. Additional Information

Similar Events

No previous similar conditions involving a Trico oiler assembly that restricted oil flow to an applicable safety related component were identified.

Energy Industry Identification System (EIIIS) codes are identified in the text as [XX].

ACTION ITEM TRACKING AND TRENDING INFORMATION

B18204

A/R Number _____ A/R Owed To: _____ A/R Due Date: _____

A/R Description _____

Document Cross References: _____

Type Code: _____ Responsible Group: _____ Due Date: _____

Assignment Subject: _____

Assign. # _____ Sch Ref _____ Unit _____ Mode _____ System _____

NRC Commitment: YES NO RCR # _____ RCR Linked To AITTS _____ (Initials/Date)

Text: _____

Type Code: _____ Responsible Group: _____ Due Date: _____

Assignment Subject: _____

Assign. # _____ Sch Ref _____ Unit _____ Mode _____ System _____

NRC Commitment: YES NO RCR # _____ RCR Linked To AITTS _____ (Initials/Date)

Text: _____

Type Code: _____ Responsible Group: _____ Due Date: _____

Assignment Subject: _____

Assign. # _____ Sch Ref _____ Unit _____ Mode _____ System _____

NRC Commitment: YES NO RCR # _____ RCR Linked To AITTS _____ (Initials/Date)

Text: _____

This correspondence closes out the following AR/Assignment:

AR No. _____	Assignment No. _____	RCR# _____
Completion Notes: _____		

