

Maine Yankee

RELIABLE ELECTRICITY FOR MAINE SINCE 1972

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November 14, 1989
MN-89-142

| 10 CFR 50.73 |

GDW-89-366

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D. C. 20555

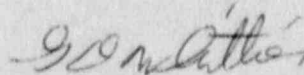
References: (a) License No. DPR-36 (Docket No. 50-309)

Subject: Maine Yankee Licensee Event Report 89-005-00, Emergency Core Cooling System (ECCS) Valve Not Fully Closed

Gentlemen:

Please find enclosed Maine Yankee Licensee Event Report 89-005-00. This report is submitted in accordance with the requirements of 10 CFR 50.73(a)(2)(i).

Very truly yours,



G. D. Whittier, Manager
Nuclear Engineering and Licensing

GDW:SJJ

Enclosure

cc: Mr. Richard H. Wessman
Mr. William T. Russell
Mr. Eric J. Leeds
Mr. Cornelius F. Holden
American Nuclear Insurers

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LICENSEE EVENT REPORT (LER)

Facility Name(1) Maine Yankee Atomic Power Company	Docket Number(2) 0 5 0 0 0 3 0 9 1 of 3	Page(3)
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Title(4)
Emergency Core Cooling System (ECCS) Valve Not Fully Closed

Event Date(5)		LER Number(6)		Report Date(7)			Other Facilities Involved(B)			
Month	Day	Year	Year	Sequential Number	Revision Number	Month	Day	Year	Facility Names	Docket Number(s)
10	15	89	89	- 0 0 5	- 0 0	11	14	89		

This Report is Submitted Pursuant to the Requirements of 10 CFR §
(Check one or more of the following) (11)

Operating Mode (9)	4	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
Power Level (10)	0 0 0	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 (Specify in
		20.405(a)(1)(iii)	X 50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	Abstract below
		20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	and in Text, NRC
		20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	Form 366A)

LICENSEE CONTACT FOR THIS LER (12)

NAME Scott McAllister, Senior Nuclear Safety Engineer	Telephone Number Area Code 2 0 7 8 8 2 6 3 2 1
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

Cause	System	Com-ponent	Manufac-turer	Reportable to NPRDS	Cause	System	Com-ponent	Manufac-turer	Reportable to NPRDS

Supplemental Report Expected (14)

(If yes, complete Expected Submission Date(15))	Yes	Submission Date	X	No
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ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

During plant heatup on October 15, 1989, while shutting down the Residual Heat Removal (RHR) system, operators identified leakage past the B train RHR pump suction valve, RH-7. During normal operation, the RHR pump serves as the B train Low Pressure Safety Injection (LPSI) pump. Technical Specifications require RH-7 to be locked shut for Emergency Core Cooling System (ECCS) operation. Additionally, RH-7 is one of the locked shut containment isolation barriers for the RHR penetration.

Investigation determined that the position indication slot was too short on the RH-7 handwheel pedestal. As a result, the position indication pin was restrained by the bottom of the slot, preventing full valve closure. The position indication pin has been removed.

Technical Specification requirements for containment integrity were met because the RHR containment penetration was isolated in accordance with the plant Technical Specifications for containment integrity. The ECCS function of the valve was met by the containment isolation valves and the A train RHR pump suction valve, RH-6.

ECCS valves with similar local position indication arrangements were checked and none were found with valve position adversely impacted. The position indication slots for three other valves have been elongated, to prevent impacting by the position indication pins. Post-maintenance functional testing requirements will be revised by the end of the 1990 refueling outage to ensure the position indication does not prevent full stroke valve operation.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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Maine Yankee Atomic Power Company					
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TEXT (If more space is required, use additional NRC Form 366A's) (17)

During plant startup on October 15, 1989, while shutting down the Residual Heat Removal (RHR) (BP) system, operators identified leakage past the B train RHR pump (P) suction valve (V), RH-7. During normal operation, the RHR pump serves as the B train Low Pressure Safety Injection (LPSI) (BP) pump. Technical Specifications require RH-7 to be locked shut for Emergency Core Cooling System (ECCS) operation. Additionally, RH-7 is one of the locked shut containment isolation barriers, outside containment, for the RHR penetration (PEN). Refer to the attached figure.

RH-7 is a manual valve operated remotely by reach rods. The handwheel mounting pedestal has a slot to provide local position indication. A position indication pin goes through the slot into a collar that moves up and down the threaded pedestal extension stem as the valve is opened and closed. The position indication pin impacted on the bottom of the slot, preventing full valve closure. The pin was removed and the valve was closed six more turns. Six turns equates to approximately 5% open. Further investigation revealed that the slot was too short for the full valve stroke.

Review of operating data and maintenance history determined that RH-7 had probably been in this condition since December 1988. At that time, the valve stem and the angle drive between the reach rod and the valve gear box were replaced. The post-maintenance functional test did not include verification that the position indication allowed full valve travel. The valve stem had been bent and several gear teeth in the angle drive had sheared due to excessive force when closing the valve. This indicates that prior to the maintenance, the valve was fully closed. There is no record of changing the handwheel pedestal or the pedestal extension stem.

Technical Specification requirements for containment integrity were met because the RHR containment penetration was isolated in accordance with the plant Technical Specifications for containment integrity. The RHR isolation motor operated valves (RH-M-1 and 2) (MOV) (ISV) were disabled and tagged shut, and the RHR recirculation valve (RH-4) (V) and a drain valve (RH-26) (V) in containment were locked shut. A single active failure could not compromise the integrity of the penetration.

Technical Specifications require RH-7 to be locked shut to isolate the pump from non-ECCS sources and to separate LPSI trains A and B. The pump suction was isolated from RHR by the containment isolation valves above. The A train pump RHR suction valve, RH-6, was locked shut maintaining separation of the LPSI pump suctions.

The condition of local position indication on similar ECCS valves was checked. The position indication pins on three other valves were found impacting on the ends of the position indication slots, however, no valves were found where the position indication arrangement adversely impacted on valve position. The position indication slots for the three other valves have been elongated, to prevent impacting by the position indication pins. Post-maintenance functional testing requirements will be revised by the end of the 1990 refueling outage to ensure the position indication does not prevent full stroke valve operation. Also, a recently developed procedure for reach rod maintenance includes requirements to ensure position indication matches actual valve position.

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		Year 89	Sequential Number - 0 0 5	Revision Number - 0 0 3	

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

