NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
McGuire Nuclear Station - Unit 2	0 5 0 0 0	1 OF 4

TITLE (4)
Chain and Lock Left Off Nuclear Service Water Valve

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 NAMES	DOCKET NUMBER(S)
0 1	2 3	8 5	8 5	0 0 1	0 0	0 2	2 2	8 5	MNS - Unit 1	0 5 0 0 0 3 6 9
										0 5 0 0 0

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	1 0 0	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
		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 Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iii)	X 50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
		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)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
	AREA CODE
Scott Gewehr - Licensing	7 0 4 3 7 3 - 7 5 8 1

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NPRDS	

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

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

On January 23, 1985, Valve 2RN-158 in the Nuclear Service Water (RN) System was found to not have its lock and chain installed. This valve is required to be locked open, or verified open on a monthly basis, by Technical Specifications (T/S). The lock and chain, which were found by the Senior Resident Inspector hanging nearby, were apparently omitted as a result of personnel error when an operator wrote the valve position as "Open" rather than "Locked Open" on a removal and restoration checklist. Corrective Actions will address ensuring that valve positions are identified correctly and that locked-valve requirements are proper and consistent. The health and safety of the public were not affected.

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1/1

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
McGuire Nuclear Station - Unit 2	0 5 0 0 0 3 7 0	8 5	— 0 0 1	— 0 0	0 2 OF 1 4

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

INTRODUCTION: On January 23, 1985 the lock and chain were discovered to be missing from valve 2RN-158 by an NRC Resident Inspector. This valve is required to be locked open, or verified to be open on a monthly basis, by Technical Specification 3/4.7.4. The lock and chain were left off because the valve position of 2RN-158 was incorrectly written as "OPEN", instead of "LOCKED OPEN" on the Restoration Checklist of procedure OP/O/A/6100/09 (Removal and Restoration of Equipment) completed on October 16, 1984.

Unit 2 was in Mode 1 at 100% power at the time 2RN-158 was found unlocked.

This incident is classified as a Personnel Error, because Nuclear Equipment Operator (NEO) A did not write down the correct valve position when completing the Restoration Checklist of procedure OP/O/A/6100/09.

EVALUATION: The required valve position of 2RN-158 was changed from "Open" to "Locked Open" to allow removing it from an Operations test procedure (RN Valve Verification). This procedure fulfills a Technical Specification (T. S.) surveillance requirement which states that all RN valves that service safety related equipment that are not locked, sealed, or otherwise secured in position must be verified to be in their correct position on a monthly basis. By locking 2RN-158, it no longer had to have its position verified on a monthly basis. Operations personnel verify locked valve positions on a six month basis per procedure, although it is not a T. S. requirement to do so. Without a lock On 2RN-158, the T. S. surveillance requirement was not satisfied.

Operations personnel believe the lock on valve 2RN-158 was left off the valve when the RN pump 2B was returned to service on October 16, 1984. While filling out the Restoration Checklist of OP/O/A/6100/09, the position for 2RN-158 was written as "Open" instead of "Locked Open" as required by OP/2/A/6400/06 (Nuclear Service Water Operating Procedure). No other work activity could be identified which occurred between October 16, 1984 and the time the missing lock was found that would have required the operation of 2RN-158; therefore, Operations personnel believe the lock was left off during the completion of the above restoration checklist.

When NEO A filled out the Restoration Checklist, he either copied the valve position incorrectly from the control copy of OP/2/A/6400/06 or he looked at the completed valve checklist of OP/2/A/6400/06 dated 10/7-8/83 to obtain the normal valve position of 2RN-158. The completed valve checklist dated 10/7-8/83 shows 2RN-158 as "Open". Station Directives state that "Procedures that are used in the station for conduct of work will be verified against the Control Copy or Master File Copy to ensure they are correct". This statement applies to any working copy of a procedure used in the conduct of work, including those used for reference. In this case, a checklist used as a reference to obtain the valve position of 2RN-158 should have been compared to the Control Copy at the time it was used. The valve checklist dated 10/7-8/83 was compared to the Control Copy on 10/7/83 but was not up to date with the Control Copy on 10/16/84, when the subject Restoration Checklist was made.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
McGuire Nuclear Station - Unit 2	0 5 0 0 0 3 7 0	8 5	0 0 1	0 0	0 3 OF 4

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

Operations personnel indicate that it is their practice to take the valve position from the Control Copy of the appropriate operating procedure when filling out the checklists of procedure OP/0/A/6100/09 (Removal and Restoration of Station Equipment). NEO A stated that it was his practice to use the Control Copy to obtain the valve position for Removal and Restoration Checklists (R&R), but he may have used the completed valve checklist on this occasion.

The Control Copy of OP/2/A/6400/06 required that 2RN-158 be "Locked Open". The most recently completed valve checklists are kept in the same folders as the Control Copy. (The completed checklists are kept to allow traceability of when the valve positions were last verified per the operating procedure.) In this case, the valve checklist completed on 10/7-8/83 and the one completed 3/6-30/84 were in the Control Copy folder. Only valves whose required position changed (added requirement of being locked) were checked on the 3/6-30/84 checklist (including 2RN-158). Both checklists were kept with the Control Copy so that a complete checklist would be available. It is Operations practice that when a new rewrite of a valve checklist is issued, only the valves whose required positions have changed will be checked. The new checklist is kept with the Control Copy along with the most recently completed checklists. If a large percentage of the valve positions have changed, the entire new checklist will be completed and older checklists may be removed from the Control Copy folder.

Procedure OP/0/A/6100/09 (Removal of Station Equipment) was used correctly to close valve 2RN-158 to isolate RN pump 2B for maintenance. When returning RN pump 2B to service, OP/0/A/6100/09 (Restoration of Station Equipment) was used, at a different time and by a different person than.

After the Restoration Checklist was written, it was reviewed by Control Room Operation C. Control Room Operation C stated that it is not always his practice to compare the Restoration Checklist to the associated operating procedures valve checklist. He stated normal review would consist of comparing the Restoration Checklist to the Removal Checklist to ensure all valves that were removed from service are restored to service. In most cases, this would be adequate since the restored valve position is the opposite from the removal position, so the required restored position would be easy to determine. Explicit directions do not exist to explain what needs to be reviewed on R&R checklists. The Restoration Checklist was also approved by Shift Supervisor D.

NEO A apparently either did not notice the lock and chain or did not realize that it belonged to 2RN-158 (other valves are located near 2RN-158). The valve position "Open" was Independently verified by NEO B. Since the Restoration Checklist did not say "Locked Open", the independent verification did not catch the error.

Corrective Action: After it was verified that 2RN-158 was in its proper position, and a lock and chain installed, a check was made of other valves outside containment which are required to be locked. Other valves were found which were not locked as required. In most cases it was either subsequently determined that a lock was not necessary, or other controls existed to ensure that the valve was not manipulated in error; such as the handwheel being removed. In no case did the omission of the lock have an adverse effect on safety.

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McGuire Nuclear Station - Unit 2	0 5 0 0 0 3 7 0	8 5	— 0 0 1	— 0 0	0 4 OF 4

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

Appropriate procedures will be reviewed, and revised as necessary, to reflect proper and consistent locked-valve requirements. Operators will be instructed to use the Control Copy of procedures to obtain proper valve positions.

Safety Analysis: All valves found to be missing their locks were in their correct positions. The health and safety of the public were not affected.

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HAL B. TUCKER
VICE PRESIDENT
NUCLEAR PRODUCTION

TELEPHONE
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February 22, 1985

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

Subject: McGuire Nuclear Station, Unit 2
Docket No. 50-370
LER 370/85-01

Gentlemen:

Pursuant to 10 CFR 50.73 Sections (a)(1) and (d), attached is Licensee Event Report 370/85-01 concerning a valve in the Nuclear Service Water System which was not locked as required, which is submitted in accordance with §50.73 (a)(i). This event was considered to be of no significance with respect to the health and safety of the public.

Very truly yours,

H. B. Tucker/mjf

Hal B. Tucker

SAG/mjf

Attachment

cc: Dr. J. Nelson Grace, Regional Administrator
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IE22
1/1