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 1	0 5 0 0 0 3 6 9	1 OF 0 3

TITLE (4) Unathorized removal of Safety Injection, Main Feedwater, and Component Cooling system support/restraints.

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	0 9	8 4	8 4	— 0 0 1	— 0 0	0 2	1 5	8 4	McGuire Unit 2	0 5 0 0 0 3 7 0
										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)	0 9 4	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
		20.405(a)(1)(i)	50.36(c)(1)	X 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)	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
Phillip B. Nardoci, Licensing Engineer	7 0 4 3 7 3 - 7 4 3 2

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	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-spaced typewritten lines) (16)

During unrelated maintenance activity on September 16, 1983 in the Auxiliary Building, Maintenance personnel found a Unit 1 valve support clamp removed and the support removed from its normal position under valve 1KC-51A on the Component Cooling (KC) system. During a maintenance inspection on 733' Elevation on October 16, 1983, Maintenance personnel identified two Unit 1 Safety Injection (NI) system 1" diameter pipe support/restraints (S/Rs), one which was unbolted and one which was loosened from the clamp section of the S/R. During a housekeeping inspection on October 21, 1983, two Unit 2 support/restraints for a 2" diameter Main Feedwater (CF) pipe were found removed from their mountings and lying on the floor. During subsequent inservice inspection Maintenance personnel found two additional 2" diameter pipe S/Rs removed from the CF system.

These incidents are examples of an Admininstrative Deficiency in that the S/R Installation and Removal and Replacement Program was not properly implemented on these occasions. The support/restraints were reinstalled, repaired, or deleted as appropriate, and an inspection of all hangers in the CF system conducted. The "hanger installation and removal and replacement procedure" will be reviewed with all appropriate personnel to ensure proper implementation of the S/R control program.

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

On September 16, 1983 Maintenance personnel found Unit 1 Component Cooling system (KC) support/restraint (S/R) IMC-1683-KC-59-R5 pipe clamp removed and the S/R removed from its normal position under valve 1K-51A. Investigation revealed that this S/R would ordinarily be removed in order to perform maintenance work in either the Steam Generator Blowdown (BB) Demineralizer or the Waste Monitor Tank (WMT) post filter pit. Access to these pits is gained by removing the shield blocks. The jib boom crane to remove these blocks cannot swing from a position over one pit to a position over the other pit without removing the S/R. The last time the WMT post filter was changed prior to the discovery of this incident was in July 1983. Information obtained from Maintenance personnel involved with changing out the WMT post filters in July 1983 indicated the jib boom was not utilized during this operation. The block was lifted manually. The shield block was reinstalled using the same method. Records showed that no work had been performed in the BB demineralizer pit during this period. This was the only time that the WMT post filter was changed requiring removal of this S/R from the KC piping before it was found removed. It was not determined if any other maintenance activities occurred between July 4 and September 16, 1983 in this area that required the removal of this S/R. Unit 1 operated in Modes 1 thru 5 from July 4 to September 16, 1983 with this S/R removed.

Unit 1 Safety Injection (NI) system S/Rs 1MCA-NI-H214 and 1MCA-NI-H215 were discovered inoperable on October 16, 1983. One was unbolted and the other was loosened from the clamp section of the S/R. These NI S/Rs support a 1" diameter pipe in the vicinity of valve 1NI-3. The valve was replaced on August 20, 1983. The S/Rs were an interference to the cutting and welding activities associated with the valve replacement. Maintenance technicians who replaced the valve said that they were able to push the S/Rs far enough away from the work area to complete the cutting and welding without removing them. The physical configuration of the valve and pipe appear to make it possible to do the modification work without removing the S/Rs. Unit 1 has operated in Modes 1 thru 5 since this incident.

On October 16, 1983, an inspection team identified two Unit 2 S/Rs (S/Rs 2MCA-CF-H77, 2MCA-CF-H46) on a 2" diameter Main Feedwater system (CF) pipe that were removed and were believed to have been deleted by a CF system modification which was completed on August 2, 1983. On January 3, 1984 clamps for S/R 2MCA-CF-H271 were found removed and S/R 2MCA-CF-H277 was also found removed. A field inspection was made to record the S/R number, location and type, and upon review it was discovered that the four 2" diameter pipe S/Rs had not been deleted and were still a part of the CF S/R system. Investigation of this incident revealed that the four S/Rs were interference items and were removed for the implementation of the CF system modification during the Unit 2 outage in July 1983. Further investigation revealed that this incident occurred because construction personnel working on the modification removed these S/Rs without the proper documentation. Several crews of Construction personnel were involved in the work associated with the modification. Each of the crews thought that one of the other crews had the procedure to remove these interference S/Rs or that the removal of these interference S/Rs was covered under the modification's documentation. Unit 2 has operated in Modes 1,2,3,4, and 5 since the July 1983 outage.

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

These incidents are examples of an administrative deficiency in that the S/R Installation and Removal and Replacement Program was not properly implemented on these occasions. In order to remove any S/R from service, a Construction Procedure (CP) or a Mechanical Maintenance Procedure (MP) must be used to document the removal and installation. The specific procedures for the removal/installation of S/Rs are Construction Procedure "Removal of Pipe Hangers", and Maintenance Procedure "Hanger Installation and Removal and Replacement Procedure".

During the investigation it was learned that these S/Rs were apparently interference items and were removed for the purpose of performing work. No programmatic deficiencies were identified in the S/R Control Program by the investigation, rather it was implementation of the program that caused the problems. Since construction/maintenance personnel did not notify the appropriate personnel prior to removing these S/Rs, no procedure was issued; therefore, no record of removing the S/Rs existed. Construction/maintenance personnel failed to properly reinstall these S/Rs upon completion of their work.

S/R 1MC-1683-KC-R5 was reinstalled on valve 1KC-51A and the pipe clamp replaced on September 16, 1983. S/R 1MCA-NI-H215 was reinstalled, and the nuts on 1MCA-NI-H214 tightened on November 21, 1983. S/R's 2MCA-CF-H46, 2MCA-CF-H77, and 2MCA-CF-H271 were re-installed, 2MCA-CF-H277 deleted, and an inspection of all the hangers on the CF system conducted. The "Hanger Installation and Removal and Replacement Procedure" will be reviewed with all appropriate personnel to ensure proper implementation of the S/R control program.

Duke Power Company performed a System Operability Evaluation on the affected portion of the Unit 1 KC system and concluded that without S/R MC-1683-KC-59-R5 that sufficient margins of safety existed to declare the system operable. A System Operability Evaluation performed on the affected section of the Unit 1 NI system concluded that sufficient margins of safety existed without S/R 1MCA-NI-H215 and with 1MCA-NI-H214 loosened

The 2" diameter CF bypass pipe is used primarily during unit startup. Duke Power determined that S/R 2MCA-CF-H277 was not necessary, and therefore the omission of this S/R had no effect on the operability of the CF system. It was further determined that the removal of 2MCA-CF-H271 had no effect on system operability. A System Operability Evaluation performed on the affected portion of the Unit 2 CF system concluded that without S/R 2MCA-CF-H46 and 2MCA-CF-H77, this portion of the CF system was vulnerable, had a siesmic event occurred. This type of event has been analyzed as part of the FSAR analysis and is within the design basis of the plant. The system was capable of operation in normal conditions and in emergency conditions excluding siesmic events. Had a rupture occurred in the area of the CF pipe where 2MCA-CF-H46 or 2MCA-CF-H77 should have been installed, capabilities existed to isolate the rupture. Valve 2CF-154 is a check valve that would have terminated flow from the Steam Generator B. Motor operated valves 2CF-150, 2CF-155, 2CF-157, and 2CF-151 could have been closed to isolate flow from the feedwater pumps. Had the rupture occurred between check valve 2CF-154 and Steam Generator B, the feedwater pumps would have had ample capacity to supply all Steam Generators until such time that the rupture could be identified and isolated.

Therefore, the health and safety of the public were unaffected.

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February 15, 1984

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

Subject: McGuire Nuclear Station, Units 1 and 2
Docket Nos. 50-369 and 50-370
LER 369/84-01

Gentlemen:

Pursuant to 10 CFR 50.73 Sections (a)(1) and (d), attached is Licensee Event Report 369/84-01 concerning unauthorized removal of Safety Injection, Main Feedwater, and Component Cooling system support/restraints which is submitted in accordance with §50.73 (a)(2)(v). This event was considered to be of no significance with respect to the health and safety of the public.

Due to administrative delays this report is being submitted one week late. We regret any inconvenience this may have caused.

Very truly yours,

H.B. Tucker/DM

Hal B. Tucker

PBN:glb

Attachment

cc: Mr. James P. O'Reilly
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