

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) McGuire Nuclear Station - Unit 2										DOCKET NUMBER (2) 0 5 0 0 0 3 7 0 1				PAGE (3) 1 OF 5											
TITLE (4) Violation of Containment Integrity During Core Alterations																									
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	2	1	9	8	5	8	5	0	0	6	0	0	3	2	5	8	5	0	5	0	0	0	0	0	0
THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)																									
OPERATING MODE (9)		20.402(b)				20.408(c)				50.73(a)(2)(iv)				73.71(b)											
POWER LEVEL (10)		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)				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)(ix)															
LICENSEE CONTACT FOR THIS LER (12)																									
NAME Scott Gewehr - Licensing										TELEPHONE NUMBER 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	MANUFACTURER	REPORTABLE TO NPDs		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs															
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 February 19, 1985, Containment Integrity of McGuire Unit 2 was violated while core alterations were in progress. A valve in the Auxiliary Steam Supply System was disassembled for repair, creating a flow path from containment to the interior doghouse. The core alterations in progress at the time consisted of unlatching control rods, and did not involve fuel movement. The cause of this event is an Administrative Deficiency, because work which affected containment integrity was not adequately controlled. In this instance, the number of the valve to be repaired was entered incorrectly into a computer, and approval to begin work was granted based on that incorrect valve number. The health and safety of the public were not affected.

8504080101 850325
PDR ADCK 05000370
S PDRJE22
11

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES 8/31/85

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	6 -	0 0	0 2	OF	0 5

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

INTRODUCTION:

On February 19, 1985, the internals of valve 2SA-1 were removed for maintenance. 2SA-1 was required to be closed for containment integrity. The disassembled valve provided a possible flow path from containment through steam generator 2C to the interior doghouse. Core alterations (unlatching of Control Rods) were in progress for two days before the valve was discovered open. No fuel was moved during this time.

Unit 2 was in Mode 6 at the time of the event.

This incident is classified as an Administrative Deficiency, because an adequate method did not exist to control scheduling work that affected containment integrity. Contributing factors were: 1. the work request was incorrectly entered in the Project 2 outage planning computer program using the wrong valve identifier, and 2. clearance was given by Operations to begin work, based on this valve number.

EVALUATION:

On February 19, 1985, at approximately 10:00, valve 2SA-1 (main steam 2C to auxiliary feedwater pump turbine 2 isolation) was disassembled for maintenance. This created a possible flow path between inside containment and the interior doghouse. The valve was discovered disassembled on February 21, 1985 at 15:12. Between these times, core alterations were made. Technical Specification (T.S.) 3.9.4 requires that containment integrity be maintained during core alterations or movement of irradiated fuel within containment. (Core alterations are defined as "the movement or manipulation of any component within the reactor pressure vessel with the vessel head removed and fuel in the vessel. Suspension of core alteration shall not preclude completion of movement of a component to a safe conservative position".)

The pipe opening where the 2SA-1 internals were removed was taped closed with plastic for housekeeping when work was not being performed on the valve. A flow path existed into the doghouse (area open to atmosphere) through any leakage paths around the plastic. A flow path also existed through a 0.025 inch orificed line into a four inch steam line. From the steam line, three 0.105 inch orificed lines allowed a flow path to atmosphere.

Two possible flow paths into steam generator (S/G) 2C existed inside containment. The sludge lance cover plates were removed but the ports were taped closed with plastic for housekeeping. These plates cover four two inch ports and two six inch ports. A flow path also existed from containment atmosphere into the feedwater line of S/G 2C. 2CF-27, a sixteen inch check valve was disassembled for maintenance, but plastic was taped over the valve body for housekeeping. Operations personnel believe the containment purge ventilation system (VP) was operating throughout the time 2SA-1 was open. This created a slight vacuum within containment, ensuring any leakage would have been into containment.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

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

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

The following steps are used in scheduling work during an outage:

1. The Outage Coordination group makes a schedule of work to be performed during an outage. This schedule is made using a "Project 2" computer program.
2. The Operations Unit Coordinator reviews the schedule.
3. Planning personnel schedule work requests using the Outage Coordination group's schedule as a guideline.
4. Each work request is sent to the shift supervisor for clearance to begin work.

The following occurred when scheduling the work on 2SA-1:

1. The work request description for 2SA-1 was typed in Project 2 as "2SA-11".
2. Prior to core alterations, Operation staff personnel and Outage Coordination personnel reviewed the outage schedule using the Project 2 printout. The work on 2SA-1 was not identified as a potential containment integrity problem due to the incorrect entry.
3. Planning personnel scheduled the work request on February 18, 1985. The work request was sent to Operations for clearance to begin work.
4. Assistant Shift Supervisor A signed the "clearance to begin work" line on the work request.

An administrative error is assigned because an adequate program to prevent scheduling work that could affect containment integrity did not exist. Because Operations and Outage Coordination personnel use the Project 2 printout to identify work that could affect containment integrity, a typographical error can lead to a violation of containment integrity. Planning personnel do not check work requests for containment integrity problems when scheduling the work. Planning depends on the Operations or Outage Coordination group to notify them if a particular work request will affect containment integrity.

Once the work on 2SA-1 was scheduled, the assistant shift supervisor was the only control point to stop the work. Operations personnel state that it is not realistic to expect a shift supervisor to catch every work request that could cause a containment integrity problem because: 1. there are a large number of containment penetrations and different ways to isolate each one (the procedure used to verify containment integrity, PT/2/A/4700/02C, is 62 pages long) and 2. the shift supervisor has a large number of work requests on which to give clearance during an outage. The shift supervisors must depend on the Outage Coordination group, the Unit Coordinator, and Planning to control scheduling work on equipment that can potentially affect containment integrity.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

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

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

Assistant Shift Supervisor A stated that when he saw the work request on 2SA-1, he did not realize it could affect containment integrity. He saw that 2SA-1 could be worked on using an existing block tag out so he signed the clearance line on the work request.

CORRECTIVE ACTION:

Immediate: Core alterations were secured. Valve 2SA-1 was reassembled and closed.

Subsequent: The entry in Project 2 was corrected to read "2SA-1".

The following note was added to the current outage's Project 2 work request entries that involve containment integrity:

"Potential Containment Integrity Item".

Outage Coordination personnel were instructed to double check Project 2 entries as they are made in the future.

Planned: In future outages, the Outage Coordination group will include a note below Project 2 work request entries that involve work on potential containment integrity items. Procedures PT/1 or 2/A/4700/02C will be used to identify these items. The note will be included when making the original Project 2 entry to minimize the chance that a typographical error would prevent including this note.

A step will be added to PT/1 and 2/A/4700/02C to say "Route a copy of this enclosure to the unit coordinator to prevent scheduling work that could affect this penetration".

Planning personnel will be instructed to ensure that work requests which include the note "Potential Containment Integrity Item" on the Project 2 schedule are not scheduled during core alterations.

Operation shift supervisors will be instructed to check with the Unit Coordinator or check PT/1 or 2/A/4700/02C when giving clearance on work requests prior to or during core alterations. If work affecting containment integrity is scheduled, this will increase the probability that the shift supervisor will catch it.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/85

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

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

SAFETY ANALYSIS:

The VP system ensured any leakage was into containment. If containment pressure had increased above atmospheric pressure, the flow path through containment was limited outside containment by a 0.025 inch orifice and by plastic taped over the hole where 2SA-1 was removed. Inside containment, the flow path was limited by plastic taped over the S/G 2C penetrations. The core alterations made during the time containment integrity was violated consisted of unlatching control rods. No fuel or rods were moved.

The health and safety of the public were not affected.

DUKE POWER COMPANY

P.O. BOX 33189
CHARLOTTE, N.C. 28242

HAL B. TUCKER
VICE PRESIDENT
NUCLEAR PRODUCTION

TELEPHONE
(704) 373-4531

March 25, 1985

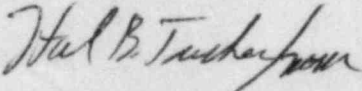
Document Control Desk
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Subject: McGuire Nuclear Station, Unit 2
Docket No. 50-370
LER 370/85-06

Gentlemen:

Pursuant to 10 CFR 50.73 Sections (a)(1) and (d), attached is Licensee Event Report 370/85-06 concerning a Violation of Containment Integrity During Core Alterations, which is submitted in accordance with §50.73 (a)(2)(i) and (a)(2)(v). This event was considered to be of no significance with respect to the health and safety of the public.

Very truly yours,



Hal B. Tucker

SAG/mjf

Attachment

cc: Dr. J. Nelson Grace, Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

Mr. W. T. Orders
NRC Resident Inspector
McGuire Nuclear Station

INPO Records Center
Suite 1500
1100 Circle 75 Parkway
Atlanta, Georgia 30339

M&M Nuclear Consultants
1221 Avenue of the Americas
New York, New York 10020

American Nuclear Insurers
c/o Dottie Sherman, ANI Library
The Exchange, Suite 245
270 Farmington Avenue
Farmington, CT 06032

IE22
11