



Entergy Operations, Inc.  
1448 S.R. 333  
Russellville, AR 72801  
Tel 501 858-5000

December 19, 1995

2CAN129502

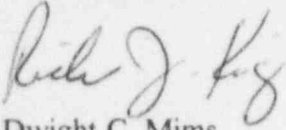
U. S. Nuclear Regulatory Commission  
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Washington, DC 20555

Subject: Arkansas Nuclear One - Unit 2  
Docket No. 50-368  
License No. NPF-6  
Licensee Event Report 50-368/95-007-00

Gentlemen:

In accordance with 10CFR50.73(a)(2)(i)(B), enclosed is the subject report concerning compliance with a Technical Specification requirement for Containment integrity.

Very truly yours,

  
for Dwight C. Mims  
Director, Nuclear Safety

DCM/tfs

enclosure

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cc: Mr. Leonard J. Callan  
Regional Administrator  
U. S. Nuclear Regulatory Commission  
Region IV  
611 Ryan Plaza Drive, Suite 400  
Arlington, TX 76011-8064

Institute of Nuclear Power Operations  
700 Galleria Parkway  
Atlanta, GA 30339-5957

**LICENSEE EVENT REPORT (LER)**

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNB 7714), 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.

FACILITY NAME (1) Arkansas Nuclear One - Unit 2 DOCKET NUMBER (2) 05000368 PAGE (3) 1 OF 4

TITLE (4) MANUAL VALVES NOT HAVING BEEN SECURED IN THE CLOSED POSITION DUE TO AN ERROR IN THE PROCEDURE CHANGE MANAGEMENT PROCESS DID NOT COMPLY WITH A TECHNICAL SPECIFICATION REQUIREMENT FOR CONTAINMENT INTEGRITY

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
11	22	95	95	007	00	12	19	95	FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9)	POWER LEVEL (10)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR: (Check one or more) (11)				
1		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)
	29	20.405(a)(1)(ii)		50.36(c)(2)	50.73(a)(2)(vii)	OTHER
		20.405(a)(1)(iii)	X	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	Specify in Abstract Below and in Text
		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 Thomas F. Scott, Nuclear Safety and Licensing Specialist TELEPHONE NUMBER (Include Area Code) 501-858-4623

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)

YES	NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
(if yes, complete EXPECTED SUBMISSION DATE)	X				

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

Prior to startup from a refueling outage, Local Leak Rate Testing (LLRT) of Containment Purge isolation valves was performed after the LLRT manual test valves were verified to be locked by the pre-heatup check list. Following testing, the manual valves were closed but not locked. Technical Specifications require these valves to be secured in their positions with the plant above Mode 5 in order to demonstrate Containment integrity. The valves were not discovered to be unlocked until the plant was in Mode 1. The condition was corrected upon discovery. Even though actual Containment integrity was maintained, the valves being unlocked constituted an operation prohibited by Technical Specifications. The root cause was attributed to an error in the procedure change management process. The procedure change that implemented the valve locks did not establish controls in other procedures that require valve manipulation so that the locked status would be restored following manipulation. Corrective actions include lessons learned training and revision of appropriate procedures. Interim administrative controls were established until the procedure revisions are completed.

**LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION**

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
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Arkansas Nuclear One - Unit 2	005000368	95	007	00	2 OF 4

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

**A. Plant Status**

At the time this condition was discovered, Arkansas Nuclear One Unit 2 (ANO-2) was operating in steady-state conditions at approximately twenty-nine percent power in startup from a refueling outage.

**B. Event Description**

On November 22, 1995, eight manual valves were found not to be secured in the closed position in accordance with a Technical Specification requirement for Containment [NH] integrity.

At ANO-2, the Containment Purge System [VA] contains both a supply and an exhaust penetration. Each penetration consists of a motor-operated valve inside Containment and two air-operated valves outside Containment. On each side of the first valve outside Containment, there are lines provided to allow Local Leak Rate Testing (LLRT) by pressurizing the space between the motor-operated valve and one of the air-operated valves and measuring the leakage. Each of the test lines contains two manual valves that are maintained closed and locked to establish Containment integrity as required by Technical Specification 3.6.1.1 when the plant is above Mode 5.

On November 6, 1995, with ANO-2 in Mode 5 during recovery from a refueling outage, Containment integrity was verified by completion of a procedure that included verification that each of the eight valves in the LLRT lines was closed and locked. On November 8, 1995, activities were initiated which resulted in the test valves being unlocked and opened to perform the LLRT of the Containment Purge penetrations. Following the tests, the manual valves were closed and caps installed on the ends of the lines by the Maintenance Technicians, but the valves were not locked. At 1651 hours on November 14, 1995, ANO-2 entered Mode 4, the time when Containment integrity was required. On November 22, 1995, a non-licensed Operator noticed that the eight test valves were closed but not locked. The condition was immediately corrected by locking the valves and performing an independent verification of their status.

**C. Root Cause**

The Technical Specification requirement for locking manual valves associated with Containment penetrations has been addressed at different times in such a way that the applicability to manual test, vent, and drain valves may be subject to different interpretations. Documentation supporting either position is available. ANO-2 elected to implement what was believed to be a conservative interpretation by considering test, vent, and drain manual valves as being Containment isolation valves subject to being maintained locked except when opened under administrative control. During the refueling outage that started in September 1995, these valves were added to a procedure requiring them to be maintained locked in the closed position and verified to be in that status each month. In the process of preparing and

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implementing this procedure revision, Operations personnel did not initiate changes to other procedures in which the valves are manipulated so that restoration to the locked status upon completion of the activity is specifically directed. Restoration instructions in procedures that cause manipulation of the affected valves were intended as the mechanism for re-establishing their locked status. Upon completion of the LLRT on the two penetrations, Maintenance Technicians restored the valves to the closed position and notified Operations as directed by their procedure. There was no direction in the Maintenance procedure to re-lock the valves. The root cause of this condition is attributed to a human error that occurred in the procedure change management process because impact of the procedure revision on other procedures was not properly considered and implemented.

#### D Corrective Actions

The affected valves were verified to be closed and locks were installed immediately upon discovery of the condition. Other test, vent, and drain valves required to be locked by the same procedure were verified to be locked.

Appropriate personnel in the ANO-2 Operations support group with responsibility for procedure revision were informed of lessons learned from this event regarding procedure change management.

Until all affected procedures can be reviewed and revised, interim administrative controls were instituted by the ANO-2 Operations staff to ensure that Containment manual isolation valves are restored to a locked status following manipulation.

The procedure used to perform LLRT of the Containment Purge penetrations will be revised by February 28, 1996, to add direction to restore manual valves to a locked status.

Operations, Maintenance, and Chemistry procedures will be reviewed to determine if any of the Containment penetration test, vent, and drain valves that are required to be maintained locked closed are manipulated by those procedures with the plant above Mode 5. Changes to the affected procedures will be made to ensure that specific guidance to restore the locked status at the completion of the evolution is in the procedure. These changes will be completed by March 31, 1996, for Operations and Chemistry procedures. Maintenance procedure review and change are expected to be completed by July 31, 1996.

ANO-2 Operations will review, and revise as necessary, the procedure being used to verify that manual Containment isolation valves are locked to determine if prerequisite conditions need to be established for performing the verification prior to entry into Mode 4. This revision will be completed by March 1, 1996.

Lessons learned from this event will be provided to ANO-2 Operations personnel during the next training cycle that ends on April 30, 1996.

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**E. Safety Significance**

The significance of this condition is limited to the potential for the manual Containment penetration test, vent, and drain valves to be opened without administrative controls while they were in an unlocked status. Their having remained in the closed position ensured that the site boundary radiation doses would have been limited to less than analyzed values if an accident were to have occurred during the period when compliance with the Technical Specification was not maintained. Successful completion of LLRTs for the penetrations prior to startup and the Containment Purge isolation valves being maintained deactivated in the closed position provide additional assurance of actual Containment integrity. Also, caps were in place on the ends of the LLRT test lines to provide another leakage barrier. The corresponding surveillance requirement (3.6.3.3) in Standard Technical Specifications - Combustion Engineering Plants, NUREG-1432 Revision 1, requires verification on a monthly basis that Containment manual isolation valves are closed. It does not require their being "secured in their positions." Therefore, the ANO-2 condition met the intent of Containment integrity having been maintained even though literal compliance with the ANO-2 Technical Specification surveillance requirement for the valves being "secured" was not satisfied.

**F. Basis for Reportability**

Technical Specification surveillance 4.6.1.1.a requires that primary Containment integrity be demonstrated at least once per thirty-one days. This is accomplished by verifying that all penetrations required to be closed during accident conditions that are not capable of being closed by operable Containment automatic isolation valves are closed by valves, blind flanges, or deactivated automatic valves secured in their positions, except when opened under administrative controls. Technical Specification 3.6.1.1 requires that Containment integrity be maintained with the plant above Mode 5. Since the unlocked LLRT valves did not meet the requirement that they be "secured in their positions" and the actions for Technical Specification 3.6.1.1 were not taken, this condition was an operation prohibited by Technical Specifications reportable per 10CFR50.73(a)(2)(i)(B).

**G. Additional Information**

There have been no previous similar events reported by ANO as Licensee Event Reports.

ANO Unit 1 Technical Specifications or procedures do not contain a requirement that manual valves associated with Containment penetrations be locked or secured in their positions.

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