



**Entergy
Operations**

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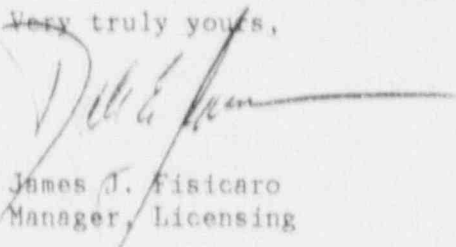
U. S. Nuclear Regulatory Commission
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SUBJECT: Arkansas Nuclear One - Unit 1
Docket No. 50-313
License No. DPR-51
Licensee Event Report No. 50-313/90-018-00

Gentlemen:

In accordance with 10CFR50.73(a)(2)(i)(B), attached is the subject report concerning procedural deficiencies which resulted in failure to perform adequate local leak rate tests of containment airlocks.

Very truly yours,


James J. Fisicaro
Manager, Licensing

JJF/IAT/sgw
Attachment

cc: Regional Administrator
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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Arkansas Nuclear One, Unit One DOCKET NUMBER (2) 05000313131 OF 04 PAGE (3) 1 OF 4

TITLE (4) Procedural Deficiencies Which Resulted in Failure to Perform Adequate Local Leak Rate Test of Containment Airlocks

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)							
Month	Day	Year	Sequential Number	Revision Number	Month	Day	Year	Facility Names		Docket Number(s)						
1	2	0	1	9	0	1	8	0	1	2	3	1	9	0	ANO-2	05000313131

OPERATING MODE (9) N THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more of the following) (11)

POWER LEVEL (10)	0	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
Larry A. Taylor, Nuclear Safety and Licensing Specialist	Area Code 501 964-5000

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

Cause	System	Component	Manufacturer	Reportable to NRCIS	Cause	System	Component	Manufacturer	Reportable to NRCIS

SUPPLEMENTARY REPORT EXPECTED (14)

<input type="checkbox"/> Yes (If yes, complete Expected Submission Date)	<input checked="" type="checkbox"/> No	EXPECTED SUBMISSION DATE (15)	Month	Day	Year
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ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

In December 1990, while reviewing the procedures used to perform local leak rate testing (LLRT) of the containment airlocks on ANO-1 and ANO-2 it was determined that the airlocks were not being tested correctly. The test of the ANO-1 personnel airlock did not properly test penetrations through the airlock barrel inner and outer bulkheads that contained pressure gauges. Also, neither procedure properly tested penetrations associated with a pressure equalizing valve located on the inner doors of the airlocks. The pressure gauges on the ANO-1 airlocks were removed and the penetrations were capped and seal welded. The inner door equalizing valves penetrations were capped and LLRT of the components were satisfactorily performed. The root cause of the procedural deficiencies was determined to be previous organizational weaknesses which resulted in inadequate reviews of the test procedure prior to approval and implementation. The procedural deficiencies were discovered as part of a comprehensive project implemented to verify the adequacy of containment leakage testing. The project includes a review of each containment penetration and related test procedures on both units at ANO and is scheduled to be completed by April 30, 1991.

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

A. Plant Status

At the time of discovery of these conditions Arkansas Nuclear One, Unit One (ANO-1) was in cold shutdown. Reactor Coolant System (RCS) [AB] temperature was 85 degrees Fahrenheit and the RCS was depressurized and vented. Arkansas Nuclear One, Unit Two (ANO-2) was operating at 100 percent of rated thermal power in Mode 1 (Power Operation).

B. Event Description

On December 1, 1990, while reviewing the procedure used to perform local leak rate testing (LLRT) of the ANO-1 containment personnel airlock, two apparent discrepancies regarding performance of the test were identified. The test procedure contained instructions requiring the removal of two low range (0-5 psig) pressure gauges installed on piping penetrating through the airlock barrel inner and outer bulkheads. Following removal of the gauges, caps were installed on the threaded piping penetrations and the barrel was pressurized to 59 psig to measure the leak rate. Following completion of the LLRT the gauges were reinstalled, however, a subsequent LLRT of the gauge penetrations was not being performed. Further review of the test procedure also revealed that prior to pressurization of the barrel for the leak test, the procedure required capping of a penetration through the airlock inner door associated with a pressure equalizing valve located on the reactor building side of the inner door. Following completion of the test the cap was removed from the penetration, however, a separate test of the leak tightness of the equalizing valve was not being performed.

An evaluation of these discrepancies was performed and it was concluded that the LLRT of the airlock barrel was being performed incorrectly and that the test results did not accurately reflect the actual as-left leak tightness of the component. Based on this, the ANO-1 airlock was declared to be inoperable. Since ANO-1 was in a plant condition that did not require the establishment or maintenance of containment integrity at the time of discovery of this finding, no immediate actions were necessary to address this concern. Actions were initiated to revise the LLRT procedure to correct the discrepancies and ensure an adequate leak test was performed prior to establishing containment integrity.

As the result of the discovery of the discrepancies with the ANO-1 containment airlock LLRT procedure, a review of the procedure for performing LLRT of the ANO-2 containment personnel airlock and emergency escape airlock was initiated. On December 6, 1990, a similar discrepancy regarding capping of the inner door equalizing valve prior to performance of the LLRT on the ANO-2 airlocks was identified. It was determined that both of these airlocks were also being tested incorrectly. A visual inspection of the airlocks was performed and no pressure gauges similar to those installed on ANO-1 was found.

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		Year 9 0 --	Sequential Number 0 1 8 --	Revision Number 0 0	

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

C. Root Cause

The root cause of this event was determined to be previous organizational weaknesses which resulted in reliance on personnel who were not adequately trained or knowledgeable in areas such as LLRT testing methods and 10CFR50, Appendix J requirements for the development and implementation of the testing procedures. As a result the procedures were approved and implemented without recognition of the deficiencies.

D. Corrective Actions

ANO-1

A plant modification was developed and implemented to remove the pressure gauges and cap the penetrations through the airlock bulkheads. Four pressure gauge penetrations were capped and seal welded. The procedure used for LLRT of the airlock was revised to delete reference to removal of the pressure gauges during testing. To address the problem related to testing of the inner door equalizing valve penetration, the test procedure was revised to require a separate test of the equalizing valve after completion of the airlock barrel LLRT. The equalizing valve and airlock barrel were tested satisfactorily prior to establishing containment integrity.

ANO-2

Upon discovery of the testing deficiencies with the equalizing valves on the ANO-2 personnel airlock and emergency escape airlock, the inner doors to both airlocks were declared to be inoperable and the appropriate Technical Specification action statement was entered. The equalizing valve penetrations on both airlock inner doors were capped and a LLRT of the airlock barrels was performed with acceptable results. The caps were left installed on the equalizing valve penetrations and the inner doors were declared to be operable.

The procedure used for LLRT of the airlocks was revised to include provisions for adequately testing the equalizing valves.

The LLRT deficiencies discussed in this report were discovered while performing procedure reviews as part of a comprehensive project intended to verify the adequacy of containment leakage testing. This project, ANO Business Plan Item D.5.R, includes a review of each containment penetration and related test procedures on both units at ANO for adequacy and is scheduled to be completed by April 30, 1991.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

E. Safety Significance

The procedural discrepancies resulted in an inadequate LLRT of the ANO-1 personnel airlock barrel and inner door and the inner doors for the ANO-2 personnel airlock and emergency escape airlocks. Therefore, the actual integrity, i.e., leak tightness of these components during previous plant operation is not known. The significance of the failure to correctly test the equalizing valves on the inner doors is minimized by the fact that although the valves might have leaked, the outer doors were periodically tested satisfactorily and should have remained capable of minimizing leakage from the containment building if required. Additionally, the design of these valves is such that they tend to seat more tightly with increasing containment pressure.

The low range pressure gauges which were installed on the ANO-1 personnel airlock were pressure tested to approximately 80 psig without rupturing or leaking. This test verified that the gauges would have maintained their integrity if they had been exposed to maximum postulated containment pressure during an accident and, therefore, would not have created a leakage pathway from containment to the environment.

F. Basis for Reportability

The failure to perform adequate LLRT of the containment airlocks was considered to be a condition prohibited by Technical Specifications as is reportable per 10CFR50.73(a)(2)(1)(B).

G. Additional Information

A similar event involving discrepancies related to LLRT was reported in LER 50-368/86-017-00.

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