

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) NORTH ANNA POWER STATION, UNITS 1 and 2	DOCKET NUMBER (2) 0 5 0 0 0 3 3 8	PAGE (3) 1 OF 04
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TITLE (4)
FAILURE TO TEST CONTAINMENT PERSONNEL AIRLOCK EQUALIZING VALVES

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)			
MON.	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES			DOCKET NUMBER(S)
									NORTH ANNA, UNIT 2			0 5 0 0 0 3 3 9
0	2	16	8	8	0	0	4	14				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) 11010	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(c)	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)	<input type="checkbox"/> 20.405(a)(1)(i)	<input type="checkbox"/> 50.38(c)(1)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)	<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 50.38(c)(2)	<input type="checkbox"/> 50.73(a)(2)(vi)	OTHER (Specify in Abstract below and in Text, NRC Form 365A)
	<input type="checkbox"/> 20.405(a)(1)(iii)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(vii)(A)		<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(vii)(B)		<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)	
	<input type="checkbox"/> 20.405(a)(1)(vi)	<input type="checkbox"/> 50.73(a)(2)(iv)										

LICENSEE CONTACT FOR THIS LER (12)
NAME: G. E. Kane, Station Manager
TELEPHONE NUMBER: 710 381 9415
AREA CODE: 710 381 9415

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS

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

ABSTRACT (Limit to 1470 bytes, i.e., approximately fifteen single-space typewritten lines) (16)

At 1030 hours on February 16, 1988, with Unit 1 and Unit 2 at 100 percent power (Mode 1), it was discovered that the emergency equalizing valves for the containment isolation inner air lock escape doors had not been adequately tested for leakage since the initial startup of both units. The containment air lock is tested every six months in accordance with 1/2-PT-62.1 (Containment Air Locks - Leakage Rate), but there is no specific procedure described for testing the emergency equalizing valves, which function as a part of the overall hatch pressure boundary. The valves were covered by blank flanges in accordance with the vendor manual and were not tested whenever the overall air lock leakage test was performed.

As an immediate corrective action, the emergency equalizing valves were satisfactorily leak-tested.

This event is reportable pursuant to 10CFR50.73(a)(2)(i)(B).

The health and safety of the public were not affected throughout this event.

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FACILITY NAME (1) NORTH ANNA POWER STATION, UNITS 1 & 2	DOCKET NUMBER (2) 0500033888	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		88	0117	00	02	OF 04

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

1.0 Description of Event

At 1030 hours on February 16, 1988, with Unit 1 and Unit 2 at 100 percent power (Mode 1), it was discovered that the emergency equalizing valves (EIS System Identifier RD, Component Identifier V, Vendor Identifier C310) for the containment isolation inner air lock escape doors had not been adequately tested for leakage since the initial startup of Unit 1 and Unit 2. Technical Specification 3.6.1.3 requires that an overall air lock leakage test be performed at least once every six months to determine the air lock's operability. Since the equalizing valves, which function as a part of the overall hatch pressure boundary, had not been adequately tested, the surveillance requirements of Technical Specification 3.6.1.3 had not been fully met. Therefore, this event is reportable pursuant to 10CFR50.73(a)(2)(i)(B).

During a document review to address a question by the Quality Assurance Department concerning bolting specifications, station engineers determined that the Unit 1 and Unit 2 emergency equalizing valves of the inner air lock escape doors would not be subjected to the test pressure because a blank flange is installed to isolate the equalizing valve prior to performing a pressure test on the hatch. The valves should have been tested during the overall containment air lock leakage test. The entire containment structure is leak-tested every 40 months according to 1/2-PT-61.1 (Reactor Containment Building Integrated Leak Rate).

The personnel air lock is the primary point of entry and exit for people and tools for the containment structure. It consists of a horizontal cylinder with circular gasketed doors at each end. In the center of each door is an 18-inch diameter, manually operated emergency escape hatch. Each emergency escape hatch has a chain-driven equalizing valve. The emergency escape hatches are not interlocked to each other or to the main doors. Prior to opening the inside (outside) emergency escape hatch door, its associated equalizing valve is opened to equalize the air pressure inside the air lock with the air pressure inside (outside) containment. The Containment Air Locks - Leakage Rate surveillance, 1/2-PT-62.1, states that the emergency equalizing valves of the containment isolation inner air lock escape doors are to remain closed throughout the leak-rate test.

The Chicago Bridge and Iron (CBI) vendor manual (Air Locks and Closures) instructs that a blank flange with a gasket be installed over the open end of the equalizing valve so that the valve opening will remain covered during testing. Prior to performing the test, strongbacks are installed on the inner air lock escape door because the test pressure places a force on the door in the opposite direction of its post-accident design configuration. The North Anna containment air lock surveillance was incorrect because some air locks designed by CBI require the handwheel on the inner escape door to be rotated to the

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NORTH ANNA POWER STATION, UNITS 1 & 2	05000338	88	017	00	03	OF 04

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

open position in order to install the strongbacks. Rotating the handwheel will open the emergency equalizing valve automatically, and therefore, the valve would have to be blank flanged in order to test the air lock. At North Anna, the strongbacks can be installed without having to rotate the handwheel to the open position. Therefore, the equalizing valves will remain closed and the blank flanges do not have to be installed.

Following a review of 1/2-PT-62.1 (Containment Air Locks - Leakage Rate) and other test documents, it was determined that there is no procedure for testing the emergency equalizing valves on the containment isolation inner air lock escape doors when the overall air lock leakage test is performed. On February 17, 1988, the emergency equalizing valves were satisfactorily leak-tested.

2.0 Safety Consequences and Implications

No significant safety consequences resulted from this event. The potential for the containment isolation inner air lock door to have a leak rate greater than the allowable limit was present, but the outer hatch door provided a redundant isolation. The results of the integrated leak rate test, 1/2-PT-61.1, performed every 40 months, were satisfactory. The equalizing valves are 3-inch diameter Jamesbury ball valves and require no regular maintenance as specified in the CBI vendor manual. Available recorded maintenance history for these valves was reviewed and no problems were found. Results of the leak test performed on February 17, 1988, on these valves were satisfactory. This implies that the valves were likely to have been leak-tight for the entire unmonitored period.

3.0 Cause of the Event

The cause of the event was an incorrect procedure described in the Chicago Bridge and Iron Company vendor manual and in 1/2-PT-62.1 as well as failure of station personnel to identify the problem during subsequent test procedure reviews.

4.0 Immediate Corrective Action

As an immediate corrective action, the emergency equalizing valves were satisfactorily leak-tested.

5.0 Additional Corrective Action

As an additional corrective action, the Containment Air Locks - Leakage Rate surveillance, 1/2-PT-62.1, will be revised to delete the requirement that the emergency equalizing valves be blank flanged during testing.

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NORTH ANNA POWER STATION, UNITS 1 & 2	05003388	88	-01	-00	04	OF 04

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

6.0 Similar Events

There are no similar reportable events.

Vepco

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION
P. O. BOX 402
MINERAL, VIRGINIA 23117

April 14, 1988

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

Serial No. N-88-011
NO/MSL: nih
Docket No. 50-338
50-339

License No. NPF-4
NPF-7

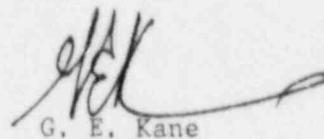
Dear Sirs:

The Virginia Electric and Power Company hereby submits the following Licensee Event Report applicable to North Anna Units 1 and 2.

Report No. LER 88-017-00

This report has been reviewed by the Station Nuclear Safety and Operating Committee and will be forwarded to Safety Evaluation and Control for their review.

Very Truly Yours,



G. E. Kane
Station Manager

Enclosure

cc: U. S. Nuclear Regulatory Commission
101 Marietta Street, N. W.
Suite 2900
Atlanta, Georgia 30323

Mr. J. L. Caldwell
NRC Senior Resident Inspector
North Anna Power Station