



10 CFR 50.73

VIRGINIA ELECTRIC AND POWER COMPANY

NORTH ANNA POWER STATION

P. O. BOX 402

MINERAL, VIRGINIA 23117

January 19, 1990

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

Serial No. N-89-026
NAPS/DEQ:deq
et No. 50-338

License No. NPF-4

Dear Sirs:

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

Report No. LEK 89-019-00

This Report has been reviewed by the Station Nuclear 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

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LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 500 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (F-430), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)

NORTH ANNA POWER STATION, UNIT 1

DOCKET NUMBER (2)

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PAGE 13

TITLE (4)

CONTAINMENT EQUIPMENT ESCAPE AIR LOCK LEAKAGE

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)
1	2	8	8	9	0	1	9	0		0 5 0 0 0
1	2	8	8	9	0	1	9	9		0 5 0 0 0
OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5. (Check one or more of the following) (11)								
1		20.402(b) 20.405(c) 60.73(a)(2)(iv) 73.71(b)								
POWER LEVEL (10)		20.405(a)(1)(i) 60.36(c)(1) 60.73(a)(2)(v) 73.71(c)								
1 0 0		20.405(a)(1)(ii) 60.36(c)(2) 60.73(a)(2)(vi) OTHER (Specify in Abstract below and in Text, NRC Form 366A)								
		20.405(a)(1)(iii) X 60.73(a)(2)(i) 60.73(a)(2)(viii)(A)								
		20.405(a)(1)(iv) X 60.73(a)(2)(ii) 60.73(a)(2)(viii)(B)								
		20.405(a)(1)(v) 60.73(a)(2)(iii) 60.73(a)(2)(ix)								

LICENSEE CONTACT FOR THIS LER (12)

NAME

G. E. Kane, Station Manager

TELEPHONE NUMBER

AREA CODE

7 0 3 8 9 4 - 2 1 0 1

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE)	NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
<input type="checkbox"/>	<input checked="" type="checkbox"/>				

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single space typewritten lines) (16)

At 2230 hours on December 28, 1989, with Unit 1 at 100 percent power (Mode 1), Health Physics personnel performing their weekly survey rounds reported that the outer door of the containment equipment escape air lock was drawing in air. Prior to performing a Periodic Test to quantify the leakage, the inner door was noted as not being in the fully closed position and was subsequently closed, thus restoring containment integrity. This event has been determined to be reportable pursuant to 10CFR50.73(a)(2)(ii). A one hour report was made in accordance with 10CFR50.72(b)(ii). Additionally, an engineering calculation has determined that the leakage from the containment escape air lock door during this event was greater than the maximum leakage allowed by Technical Specifications 3.6.1.2 and 3.6.1.3. Consequently, this event is also reportable pursuant to 10CFR50.73(a)(2)(i)(B).

Investigation could not identify why the inner door was not fully closed. Procedural and system enhancements, recommended as a result of an event investigation, will be evaluated and implemented as necessary.

This event posed minimal significant safety implications because the containment remained subatmospheric throughout this event. The health and safety of the general public were not affected at any time during this event.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104
EXPIRES 8/31/00

FACILITY NAME (1) NORTH ANNA POWER STATION, UNIT 1	DOCKET NUMBER (2) 0500033889	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		89	019	00	02	OF	04

TEXT (If more space is required, use additional NRC Form 306A's) (17)

1.0 Description of the Event

At 2230 hours on December 28, 1989, with Unit 1 at 100 percent power (Mode 3), Health Physics personnel performing their weekly survey rounds reported that the outer door of the containment equipment escape air lock (EIS System Identifier NH, Component Identifier AL) was drawing in air.

Following discovery of the outer door leakage, actions were initiated to perform Periodic Test (PT) 62.3, "Equipment Hatch Escape Lock Door Seals Testing," to quantify the seal leakage. At 0040 hours on December 29, 1989, prior to performing PT-62.3, the inner door was noted as not being in the fully closed position and was immediately closed, thus restoring containment integrity. Since the Surveillance Requirement of Technical Specification 4.6.1.3 requires that both the inner and outer doors of the containment equipment air lock be demonstrated operable within 72 hours following closing, preparations continued to perform PT-62.3. At 0115 hours on December 29, 1989, the outer door failed to pass PT-62.3 and the Action Statement of Technical Specification 3.6.1.3 was entered for one containment escape air lock door being inoperable. The O-rings on the outer door were cleaned and reinserted and PT-62.3 was satisfactorily completed on the outer door. The outer door was opened to provide access to the inner door. The inner door was successfully tested in accordance with 1-PT-62.3. The outer door was subsequently reclosed and satisfactorily tested as required by 1-PT-62.3. The Action Statement of Technical Specification 3.6.1.3 was cleared at approximately 0315 hours on December 29, 1989.

At 0700 hours on December 29, 1989, Station Management discussed the containment escape air lock door events. Upon completion, the event was determined to be four hour reportable pursuant to 10CFR50.72(b)(iii)(C) and 30 day reportable pursuant to 10CFR50.73(a)(2)(ii). At 1000 hours on December 29, 1989, the Station Nuclear Safety and Operating Committee convened to reevaluate the events and discuss the engineering assessment of the event. At that time, the event was determined to be one hour reportable pursuant to 10CFR50.72(b)(ii). At 1040 hours, a one hour report was made in accordance with 10CFR50.72(b)(ii).

Prior to this event Unit 1 experienced a reactor trip on December 5, 1989. In preparation for Unit startup following the reactor trip, the containment equipment escape air lock was verified to be closed and sealed by satisfactory completion of 1-PT-62.3, 1-PT-62.2, "Containment Air Locks - Interlocks," 1-PT-61.2.3, "Containment Type B Test - Equipment Hatch," 1-PT-61.2.3.1, "Containment Type B Test - Equipment Hatch "AS FOUND" Leak Rate Test," on December 8, 1989. However, preceding unit startup, a ground occurred on the 'B' Reactor Coolant Pump (RCP) and the containment equipment escape air lock was removed on December 12, 1989 to facilitate replacement of the 'B' RCP motor. After completion of the 'B' RCP motor replacement, the containment escape air lock was reinstalled and verified on

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104
EXPIRES 8/31/88

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
NORTH ANNA POWER STATION, UNIT 1	0 5 0 0 0 3 3 8	8 9	— 0 1 9	— 0 0	0 3	OF	0 4

TEXT (If more space is required, use additional NRC Form 306A's) (17)

1.0 Description of the Event Cont'd.

December 17, 1989 to be sealed by satisfactory completion of 1-PT-61.2.3, "Containment Type B Test - Equipment Hatch.". In addition, on December 24, 1989, the Security Department performed an alarm test on the security door at the containment equipment escape air lock and did not observe increased noise levels due to escape air lock leakage.

An engineering calculation has determined that the leakage from the containment escape air lock door during this event was greater than the maximum leakage allowed by Technical Specifications 3.6.1.2 and 3.6.1.3. Consequently, this event is also reportable pursuant to 10CFR50.73(a)(2)(i)(B).

2.0 Significant Safety Consequences and Implications

This event posed minimal significant safety implications because the containment remained subatmospheric throughout this event. Therefore, there was no positive pressure differential to force any radioactive gas through the unsealed air locks. The health and safety of the general public were not affected at any time during this event.

3.0 Cause of the Event

Investigation could not identify why the inner door was not fully closed.

4.0 Immediate Corrective Action

As an immediate corrective action, a procedure deviation was written and approved to test the outer door of the containment equipment escape air lock in an attempt to quantify the leakage. Prior to testing the outer door, the inner door was identified as not being fully closed and was immediately closed, thus restoring containment integrity.

5.0 Additional Corrective Action

After the inner door was fully closed, the outer door of the containment equipment escape air lock was tested in accordance with the Technical Specifications. The outer door failed to pass the periodic test and the Action Statement of Technical Specification 3.6.1.3 was entered. The o-rings on the outer door were adjusted and PT-62.3 was satisfactorily completed on the outer door. The outer door was opened to provide access to the inner door. The inner door was successfully tested in accordance with 1-PT-62.3. The outer door was subsequently closed and satisfactorily tested as required by 1-PT-62.3. The Action Statement of Technical Specification 3.6.1.3 was subsequently cleared.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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EXPIRES: 8/31/88

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
NORTH ANNA POWER STATION, UNIT 1	05000338	89	019	00	04	OF 04	

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

5.0 Additional Corrective Action Cont'd.

The following procedural and system enhancements, resulting from an event investigation, will be evaluated and implemented as necessary:

1. Installing break away plastic seals to the inner and outer door operators of the equipment hatch escape air locks to provide positive indication of operator movement.
2. Revising appropriate periodic tests and operating procedures to document and verify the seals are properly installed and maintained intact.
3. Adding placecards to the equipment hatch escape air locks that address the need for Control Room notification when the doors are operated.

An engineering calculation was also performed in an attempt to quantify the leakage.

6.0 Actions to Prevent Recurrence

This is believed to be an isolated event. However, corrective actions identified from the event investigation will be evaluated and implemented as necessary to prevent recurrence of similar events.

7.0 Similar Events

On September 21, 1987, both Unit 2 containment air lock doors were discovered to be open in Mode 6 (Refueling) during control rod latching as a result of a procedure inadequacy and personnel error. This event was reported in LER N2/87-010-00.

8.0 Additional Information

Several followup inspections have been made to verify that both containment equipment air lock doors have remained closed. Also, Unit 2 was checked and no problems were identified.