

## U.S. NUCLEAR REGULATORY COMMISSION

## LICENSEE EVENT REPORT

CONTROL BLOCK / / / / / / (1) (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)  
/0/1/ /V/A/N/A/S/2/ (2) /0/0/-/0/0/0/0/0/-/0/0/ (3) /4/1/1/1/1/ (4) / / / (5)  
LICENSEE CODE LICENSE NUMBER LICENSE TYPE CAT

/0/1/ REPORT /L/ (6) /0/5/0/0/0/3/3/9/ (7) /1/1/2/0/8/3/ (8) /1/2/1/6/8/3/ (9)  
SOURCE DOCKET NUMBER EVENT DATE REPORT DATE

## EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

/0/2/ / On November 20, 1983, with Unit 2 in Mode 1, a fire damper in the Unit 2 Safe- /  
/0/3/ / guards Ventilation system was found failed in the closed position. This event is /  
/0/4/ / reportable pursuant to T.S. 6.9.1.9.b. On December 12, 1983, during an investi- /  
/0/5/ / gation of the event, it was determined the safeguards area flow rates had not /  
/0/6/ / been tested as required by T.S. 4.7.8-b.3 prior to a test conducted on December /  
/0/7/ / 9, 1983. This event is reportable pursuant to T.S. 6.9.1.9.b. /  
/0/8/ /

SYSTEM CODE	CAUSE CODE	CAUSE SUBCODE	COMPONENT CODE	COMP. SUBCODE	VALVE SUBCODE
/0/9/ /A/A/ (11)	/E/ (12)	/B/ (13)	/V/A/L/V/E/X/ (14)	/B/ (15)	/P/ (16)
LER/RO REPORT NUMBER	EVENT YEAR	SEQUENTIAL REPORT NO.	OCCURRENCE CODE	REPORT TYPE	REVISION NO.
(17)	/8/3/	/-/ /0/7/7/ /	/0/3/	/L/	/-/ /0/

ACTION TAKEN	FUTURE ACTION	EFFECT ON PLANT	SHUTDOWN METHOD	HOURS	ATTACHMENT SUBMITTED	NPRD-4 FORM SUB.	PRIME COMP. SUPPLIER	COMPONENT MANUFACTURER
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/A/ (18) /G/ (19) /Z/ (20) /Z/ (21) /0/0/0/0/ (22) /Y/ (23) /Y/ (24) /A/ (25) /X/9/9/9/ (26)

## CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

/1/0/ / The fire damper fusible link failed. The link was replaced and the fire damper /  
/1/1/ / restored to operable status. Testing required by T.S. 4.7.8.1.b.3 had not been /  
/1/2/ / included in original safeguards area ventilation tests. Procedures will be re- /  
/1/3/ / vised. A recently completed review of the T.S. surveillance program to ensure /  
/1/4/ / compliance with all requirements will be reviewed by management for adequacy. /

FACILITY STATUS	%POWER	OTHER STATUS	METHOD OF DISCOVERY	DISCOVERY DESCRIPTION (32)
/1/5/ /E/ (28)	/1/0/0/ (29)	/ NA / (30)	/A/ (31)	/ Operator Observation /

ACTIVITY RELEASED	CONTENT OF RELEASE	AMOUNT OF ACTIVITY (35)	LOCATION OF RELEASE (36)
/1/6/ /Z/ (33)	/Z/ (34)	/ NA /	/ NA /

PERSONNEL EXPOSURES NUMBER	TYPE	DESCRIPTION (39)
/1/7/ /0/0/0/ (37)	/Z/ (38)	/ NA /

PERSONNEL INJURIES NUMBER	DESCRIPTION (41)
/1/8/ /0/0/0/ (40)	/ NA /

LOSS OF OR DAMAGE TO FACILITY TYPE	DESCRIPTION (43)
/1/9/ /Z/ (42)	/ NA /

PUBLICITY ISSUED	DESCRIPTION (45)	NRC USE ONLY
/2/0/ /N/ (44)	/ NA /	/ / / / / / / / / / / / / / / /

NAME OF PREPARER E. Wayne Harrell

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PDR ADOCK 05000339  
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Description of Event

On November 20, 1983, with Unit 2 at 100 percent of Rated Thermal Power, an operator investigating a less than normal safeguards area differential pressure discovered that a fire damper in the safeguards exhaust duct had failed in the closed position. The closed fire damper rendered both safeguards area ventilation systems inoperable. This event is reportable pursuant to T.S. 6.9.1.9.b.

On December 9, 1983 a review of ventilation test procedures was begun to determine the maximum amount of time the fire damper could have been closed. On December 12, 1983, after completing the review, it was determined that Unit 2 safeguards area ventilation flow testing had not been performed (prior to a flow test performed on December 9, 1983) as required by T.S. 4.7.8.1.b.3. This event is reportable pursuant to T.S. 6.9.1.9.b.

Probable Consequences of Occurrence

The safeguards area contains two recirculation pumps, two low head safety injection pumps, and numerous associated valves. During the recirculation phase of the design basis LOCA, the safeguards area is subject to potential radioactive contamination from gland leakage. A single safeguards area exhaust duct line is connected to two safeguards exhaust fans in the Auxiliary Building which, during accident conditions, can be aligned to draw the safeguards area exhaust through the main ventilation iodine filter banks.

The purpose of the safeguards ventilation exhaust system is to ensure that radioactive materials leaking from ECCS equipment within the pump room following a LOCA are filtered prior to reaching the environment. The system is also designed to limit the temperature during warm weather to a maximum of 120°F.

The closed fire damper in the safeguards area exhaust duct rendered the system inoperable. The safeguards area supply fan and a locally operated fan system which recirculates pump room area air and blows directly on the pump motors remained operable throughout the event. The fire damper was opened and temporary repairs made to the damper linkage within 30 minutes of discovery of the closed fire damper.

Flow testing conducted on December 9, 1983 showed that the flow through one of safeguards exhaust fans was within design flow and T.S. limits. The other fan exceeded design flow limits by approximately 8 percent and was adjusted to obtain acceptable flow.

How long the fire damper had been closed could not be determined. The UFSAR assumes the operation of this system when calculating offsite doses. The effects on offsite dose calculations of a failed safeguards ventilation system has not been calculated. The effects on pump room equipment temperatures is unknown.

#### Cause of Event

The fire damper fusible link, rated for 160 degrees Fahrenheit, appeared to have melted. The link had beaded solder on the broken end indicating that it had been exposed to a temperature of 160 degrees Fahrenheit. The cause of the failure is unknown.

The safeguards area exhaust fans were not tested because the Unit 2 exhaust fans had inadvertently been left out of two common Unit 1 and 2 safeguards area ventilation procedures.

#### Immediate Corrective Action

On November 20, 1983 the fire damper was opened immediately and secured in the open position using the remaining portion of the existing fusible link. On November 22, 1983, the fusible link was replaced with a new fusible link.

On December 9, 1983, when an initial review of the safeguards ventilation testing program indicated that the safeguards area exhaust fan flow rates might not have been tested, a review of past performance tests and a testing effort were started simultaneously. By 1630 on December 9, 1983, one safeguards area exhaust fan had successfully passed flow testing. At 1700 on December 9, 1983, a plant deviation was submitted that stated that based on the records review conducted up to that time no evidence of testing had been found.

The second fan tested on December 9, 1983, failed flow testing (flow too high). By 1900 on December 9, 1983, the second fan louvers had been adjusted and the fan flow tested satisfactorily. The applicable T.S. Action Statement, T.S. 3.7.8.1 was met. The records search, completed on December 12, 1983, failed to find any documented performance test on the Unit 2 safeguards area exhaust system flows.

#### Scheduled Corrective Action

Safeguards area ventilation surveillance procedures will be revised to incorporate flow testing of the Unit 2 safeguards area exhaust fans as required by T.S. 4.7.8.1.b.3.

A complete review of Technical Specification surveillance requirements to ensure all requirements were being met was made in the fall of 1982, and the spring of 1983. A management review of the Technical Specification surveillance review will be conducted to determine if the review was adequate.

#### Action Taken To Prevent Recurrence

Monthly safeguards area ventilation tests are currently performed to keep the Auxiliary Building HEPA filters and charcoal absorber assemblies dry. Prior to alignment to the filter banks a step will be added to procedures to shut down both safeguards area exhaust fans and then start one fan. Flow changes on the "B" stack flow recorder trace will be compared to an expected flow change trace attached to the procedure to qualitatively verify no flow blockage has occurred in safeguards exhaust duct. Experience has shown a very distinctive step change occurs in "B" stack flow when a safeguards fan is started. The step change does not occur if the safeguards fire damper is closed.

The fire damper failure described above is an isolated event and is not expected to recur. If the fire damper failure does recur, the testing described above will quickly identify the failure.

#### Generic Implications

The damper failure was an isolated event; however, the detection time of damper failure has generic concerns. A damper failure may not be detected for 18 months if only T.S. surveillance testing was performed. The testing described above will limit the time a damper failure can remain undetected to one month. The testing will be performed on both Unit 1 and 2 safeguards area exhaust systems.

# Vepco

VIRGINIA ELECTRIC AND POWER COMPANY

02 DEC 22 AM 11:09  
NORTH ANNA POWER STATION  
P. O. BOX 402

MINERAL, VIRGINIA 23117

December 16, 1983

Mr. James P. O'Reilly, Regional Administrator  
U. S. Nuclear Regulatory Commission  
Region II  
101 Marietta Street, Suite 2900  
Atlanta, Georgia 30303

Serial No. N-83-170

NO/RCS: 11

Docket No. 50-339

License No. NPF-7

Dear Mr. O'Reilly:

Pursuant to North Anna Power Station Technical Specifications, the Virginia Electric and Power Company hereby submits the following License Event Report applicable to North Anna Unit No. 2.

Report No.

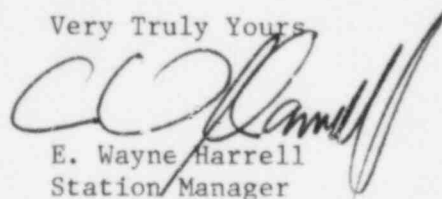
Applicable Technical Specifications

LER 83-077/03L-0

T.S. 6.9.1.9.b

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



E. Wayne Harrell  
Station Manager

Enclosures (3 copies)

cc: Document Control Desk (1 copy)  
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U.S. Nuclear Regulatory Commission  
Washington, D. C. 20555

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