

Vepco

VIRGINIA ELECTRIC AND POWER COMPANY

NORTH ANNA POWER STATION

P. O. BOX 402

MINERAL, VIRGINIA 23117

10 CFR 50.73

April 5, 1993

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

NAPS:MPW
Docket Nos. 50-338
License Nos. 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. 50-338/93-007-00

This Report has been reviewed by the Station Nuclear Safety and Operating Committee and will be forwarded to the Corporate Management Safety Review Committee for its 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. M. S. Lesser
NRC Senior Resident Inspector
North Anna Power Station

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PDR ADDCK 05000338
S PDR



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 RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), 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)
050003381

PAGE (3)
1 OF 03

TITLE (4) UNANALYZED CONDITION CONCERNING THE CONTAINMENT EQUIPMENT HATCH STRUCTURE MODIFICATION DUE TO AN INADEQUATE DESIGN BASIS TORNADO LOAD FABRICATION ANALYSIS

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)
03	08	93	93	007	00	04	05	93		050003381
OPERATING MODE (9)			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more of the following) (11)							
6			20.402(b)							
POWER LEVEL (10)			20.405(a)(1)(i)							
000			20.405(a)(1)(ii)							
			20.405(a)(1)(iii)							
			20.405(a)(1)(iv)							
			20.405(a)(1)(v)							
			20.405(a)(2)(i)							
			20.405(a)(2)(ii)							
			20.405(a)(2)(iii)							
			20.405(a)(2)(iv)							
			20.405(a)(2)(v)							
			20.405(a)(2)(vi)							
			20.405(a)(2)(vii)							
			20.405(a)(2)(viii)							
			20.405(a)(2)(ix)							
			20.405(a)(2)(x)							

LICENSEE CONTACT FOR THIS LER (12)

NAME
G. E. Kane

TELEPHONE NUMBER
AREA CODE
703894-2101

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

ABSTRACT (Limit to 1400 spaces, i.e., approximately 30 lines single-space typewritten lines) (16)

On March 8, 1993, at 1709 hours with Unit 1 defueled a four hour report was made to the NRC pursuant to 10CFR50.72(b)(2)(i) because of the Steam Generator Replacement Project (SGRP) modifications to the Unit 1 containment equipment hatch work platform which did not include design basis tornado loads in the analysis. If the modification failed during tornado loads the existing equipment hatch platform could collapse and a portion of the missile protection outside the equipment hatch door which protects the emergency personnel escape hatch would be lost. This condition existed since March 1992 when the platform modifications were completed while Unit 1 was operating in Mode 1 at 100 percent power. This event is reportable pursuant to 10CFR50.73 (a) (2) (ii) (A).

The cause of the event was personnel error. An inadequate review of the original design calculations, by the contracted architect engineers, failed to identify that design basis tornado loads were required in the analysis for the equipment hatch platform modifications.

No significant safety consequences resulted from the event because the equipment hatch platform and modifications were not subjected to any tornado wind loads. Therefore, the health and safety of the public were not affected at any time during this event.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), 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) 0500033893	LER NUMBER (6)				PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		93	007	00	02	OF	03

TEXT (If more space is required, use additional NRC Form 305A/s) (17)

1.0 Description of the Event

On March 8, 1993, at 1709 hours with Unit 1 defueled a four hour report was made to the NRC pursuant to 10CFR50.72(b)(2)(i) because of the Steam Generator Replacement Project (SGRP) modifications to the Unit 1 containment equipment hatch work platform (EIIS System NH) which did not include design basis tornado loads in the analysis. If the modification failed during tornado loads the existing equipment hatch platform could collapse and a portion of the missile protection outside the equipment hatch door which protects the emergency personnel escape hatch (EIIS System NH, Component DR) would be lost. This condition existed since March 1992 when the platform modifications were completed while Unit 1 was operating in Mode 1 at 100 percent power. This event is reportable pursuant to 10CFR50.73 (a)(2)(ii)(A).

To prepare for the Unit 1 SGRP the equipment hatch work platform was modified. Permanent additions were added to lengthen the platform by 6 feet and widen it by 5 feet. A permanent staircase was also erected. In addition, a temporary extension was added to accommodate the steam generator lower assembly.

The permanent and temporary platform extension modifications did not include tornado wind loads in the design analysis. These structures, as erected, would transfer load to the existing platform under a tornado wind load condition.

If a 360 mile per hour tornado wind load acted on the existing platform with the permanent and temporary platform extension modifications attached, failure of the work platform could occur. As a result a portion of the missile shield protecting the emergency personnel escape hatch would collapse.

2.0 Significant Safety Consequences and Implications

No significant safety consequences resulted from the event because the equipment hatch platform and modifications were not subjected to any tornado wind loads. The Updated Final Safety Analysis Report (UFSAR) estimates the probability of an occurrence in a year of a tornado at any point within a 50 mile radius of the station equal to 3.25×10^{-5} . At the equipment hatch platform this probability is further reduced by the shielding provided by the reactor containment building (EIIS System NH) to the north and by the high ground and clarifier building (EIIS System NE) to the south. As such, had a tornado occurred during the last operating cycle, when the extensions were connected to the existing platform, it is unlikely that the tornado winds would have impacted the hatch platform. Therefore, the health and safety of the public were not affected at any time during this event.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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FACILITY NAME (1)

DOCKET NUMBER (2)

LER NUMBER (6)

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North Anna Power Station Unit 1

YEAR

SEQUENTIAL
NUMBERREVISION
NUMBER

0500033893-007-0003 OF 03

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

3.0 Cause of the Event

The cause of the event was personnel error. An inadequate review of the original design calculations, by the contracted architect engineers, failed to identify that design basis tornado loads were required in the analysis for the equipment hatch platform modifications.

4.0 Immediate Corrective Actions

Upon confirmation of the incorrect load analysis a four hour report was made to the NRC pursuant to 10CFR50.72(b)(2)(i) at 1709 hours on March 8, 1993.

5.0 Additional Corrective Actions

The equipment hatch temporary extension and the stair tower have been disconnected from the existing platform and supported on independent foundations. These modifications allow the existing platform to maintain its structural integrity when subjected to tornado wind loads. The east and west extensions, permanent modifications, will remain in place.

6.0 Actions to Prevent Recurrence

The instructions for design change preparation are adequate and provide sufficient guidance for design reviews.

7.0 Similar Events

None

8.0 Additional Information

On March 8, 1993, Unit 2 was operating in Mode 1 at 100 percent power and was not affected by this condition.