

# Vepco

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

10 CFR 50.73

April 10, 1992

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

Serial No. N-92-14  
NAPS:MPW  
Docket No. 50-339  
License No. NPF-7

Dear Sirs:

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

Report No. 50-339/92-006-00

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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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-53), 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 2	DOCKET NUMBER (2) 050003391	PAGE (3) 1 OF 13
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TITLE (4)  
REFUELING BARRIER TO A HIGH RADIATION AREA NOT LOCKED

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	22	92	92	006	00	04	10	92			05000011
											05000011

OPERATING MODE (9) 6

POWER LEVEL (10) 000

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5. (Check one or more of the followings) (11)

20.402(b)	20.405(c)	50.73(a)(2)(V)	75.71(b)
20.405(a)(1)(I)	50.73(c)(1)	50.73(a)(2)(V)	75.71(c)
20.405(a)(1)(B)	50.73(c)(2)	50.73(a)(2)(VI)	OTHER (Specify in Attachment and in Text NRC Form 300A)
20.405(a)(1)(R)	<input checked="" type="checkbox"/> 50.73(a)(2)(I)	50.73(a)(2)(VII)(A)	
20.405(a)(1)(N)	50.73(a)(2)(F)	50.73(a)(2)(VII)(B)	
20.405(a)(1)(V)	50.73(a)(2)(R)	50.73(a)(2)(X)	

LICENSEE CONTACT FOR THIS LER (12)

NAME: G. E. Kane, Station Manager

TELEPHONE NUMBER: 703 894-2101

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 fifteen single-space typewritten lines) (16)

On March 22, 1992, with Unit 2 in a scheduled refueling outage (Mode 6), a high radiation area barrier on the 262 foot elevation of Unit 2 Reactor Containment was discovered unlocked during fuel movement. Transient high dose rates on the order of 10 to 12 R/hour were experienced in this area during fuel transfer through the canal. It was determined that the barrier had been left open for approximately one hour. Four irradiated fuel assemblies were transferred while the barrier was unlocked. This condition is prohibited by Technical Specification 6.12.2 and therefore is reportable pursuant to 10 CFR 50.73 (a) (2) (i) (B).

The cause of the event was personnel error. The refueling barrier was not verified locked prior to fuel transfer. A contributing factor was the lack of adequate administrative controls for establishment and periodic verification of refueling barriers.

This event posed no significant safety implications since no work was performed in this area during fuel transfers. A review of dosimetry for personnel in containment indicated that no abnormally high doses were attributable to unauthorized entry into the unlocked area. The health and safety of the general public was 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-590), 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 2	DOCKET NUMBER (2)  05000339	LER NUMBER (6)		PAGE (3)	
		YEAR 92	SEQUENTIAL NUMBER 006	REVISION NUMBER 00	02 OF 03

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

1.0 Description of the Event

On March 22, 1992, with Unit 2 in a scheduled refueling outage (Mode 6), a high radiation area barrier on the 262 foot elevation of Unit 2 Reactor Containment was discovered unlocked during fuel movement. Transient high dose rates on the order of 10 to 12 R/hour were experienced in this area during fuel transfer through the canal. It was determined that the barrier had been left open for approximately one hour. Four irradiated fuel assemblies were transferred while the barrier was unlocked. This condition is prohibited by Technical Specification 6.12.2 and therefore is reportable pursuant to 10 CFR 50.73 (a) (2) (i) (B).

On March 22, 1992, health physics personnel were dispatched to the containment building to re-establish refueling barriers prior to fuel movements. Barriers on 291', 262', 241' and 216' elevations of containment were installed. The Refueling Senior Reactor Operator contacted health physics to ensure the barriers were secured prior to fuel movement. Fuel assembly reload commenced and a roving health physics technician discovered the refueling barrier at the 262 foot elevation unlocked one hour later. A periodic re-verification of the refueling barriers was not required by station procedures. Re-verification of all other barriers was performed satisfactorily. A subsequent survey indicated that the dose rates in the area, accessible via the unlocked barrier, were found to be in the range of 10 to 12 R/hour when fuel assemblies were transferred through the canal. Dose rates returned to background levels once the fuel assembly had passed through the area.

2.0 Significant Safety Consequences and Implications

This event posed no significant safety implications since no work was performed in this area during fuel transfers. Based on the highest dose rate measured and the average time for fuel assembly transfer, an individual stationed in the area could have received a maximum whole body dose of 1.34 Rem. However, the digital alarming dosimeter would have alerted the worker when dose rates increased due to the initial fuel assembly transfer and immediate egress from the area would have occurred. The health and safety of the general public was not affected at any time during this event.

3.0 Cause of the Event

The cause of the event was personnel error. The refueling barrier was not verified locked prior to fuel transfer. A contributing factor was the lack of adequate administrative controls for establishing refueling barriers and periodically verifying they are locked.

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.

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		YEAR 92	SEQUENTIAL NUMBER 006	

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

4.0 Immediate Corrective Actions

The high radiation area door was immediately locked and all other refueling barriers were verified secured. A Station Deviation Report was also submitted.

5.0 Additional Corrective Actions

A review of personnel exposure records from dosimeters indicated that doses received were consistent with work being performed in the reactor containment.

Operations Procedure 2-OP-4.1, Unit 2 Refueling Operations, was changed to provide additional guidance on verifying the establishment of refueling barriers. All Operations and Health Physics personnel associated with refueling activities were briefed on the changes to 2-OP-4.1 and the safety significance involved with refueling barriers.

The barriers were verified secure once each shift by the Health Physics staff during refueling operations. A checkoff and signoff sheet similar to the refueling operations procedure is included in the refueling radiation work permit package.

6.0 Actions to Prevent Recurrence

An evaluation will be performed on painting the walls, floors, and overhead areas of the refueling barrier zones with a color scheme which would raise the workers awareness that they are in the refueling zone and that the potential for high doses during fuel movement exists.

Operations Procedure 1-OP-4.1, Unit 1 Refueling Operations, will be revised to provide additional guidance on verification of refueling barriers prior to the next refueling outage.

7.0 Similar Events

None

8.0 Additional Information

Unit 1 was operating at 95 percent power (Mode 1) and was not affected by this event.