

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1): NORTH ANNA POWER STATION, UNIT 2
 DOCKET NUMBER (2): 0 5 0 0 0 3 3 9 1 OF 0 4
 PAGE (3): 1 OF 0 4

TITLE (4): INADVERTENT START OF THE STEAM DRIVEN AUXILIARY FEEDWATER PUMP

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:
11	04	88	88	001	00	11	22	88			0 5 0 0 0
											0 5 0 0 0

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

OPERATING MODE (9): 1	20.402(b)	20.406(e)	<input checked="" type="checkbox"/> 50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10): 1,0,0	20.406(a)(1)(i)	50.36(i)(1)	50.73(a)(2)(v)	73.71(d)
	20.406(a)(1)(ii)	50.36(i)(2)	50.73(a)(2)(vi)	OTHER (Specify in Abstract below and in Text, NRC Form 306A)
	20.406(a)(1)(iii)	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
	20.406(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
	20.406(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(ix)	

LICENSEE CONTACT FOR THIS LER (12):
 NAME: G. E. Kane, Station Manager
 TELEPHONE NUMBER: 7 0 3 8 9 4 - 5 1 5 1

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

CAUSE	SYSTEM	COMPONENT	MANUFAC TURE	REPORTABLE TO NRRDS	CAUSE	SYSTEM	COMPONENT	MANUFAC TURE	REPORTABLE TO NRRDS

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

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

At 0633 hours on November 4, 1988, with Unit 2 at 100 percent power (Mode 1), the steam driven Auxiliary Feedwater (AFW) pump, 2-FW-P-2, was inadvertently started while being removed from service for preplanned maintenance. Since the Auxiliary Feedwater pump is part of the Engineered Safety Features System and starting 2-FW-P-2 was not preplanned, this event is reportable pursuant to 10CFR50.73(a)(2)(iv). A four hour report was made in accordance with 10CFR50.72(b)(2)(ii).

2-FW-P-2 was inadvertently started when its steam supply valve opened due to power being removed from the control circuit. The cause of the event was personnel error. The operator failed to follow the Maintenance Operating Procedure. As an immediate corrective action, steam supply to 2-FW-P-2 was isolated. As additional corrective actions, a memorandum was issued to operations personnel reemphasizing the importance of self verification prior to performing any task, and an augmented management oversight of operations was initiated. Also, a Human Performance Evaluation is being performed with regard to this event.

This event posed no significant safety implications because 2-MS-TV-211A failed open, as designed, when power was removed. 2-FW-P-2 also started, as designed, when steam was supplied. In addition, both motor driven auxiliary feedwater pumps were fully operable during this event. The health and safety of the public were not affected at any time during this event.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO 3150-0104
EXPIRES: 3/31/88

FACILITY NAME (1) NORTH ANNA POWER STATION, UNIT 2	DOCKET NUMBER (2) 0 5 0 0 0 3 3 9	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
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TEXT (If more space is required, use additional NRC Form 366A's) (17)

1.0 Description of Event

At 0633 hours on November 4, 1988, with Unit 2 at 100 percent power (Mode 1), the steam driven Auxiliary Feedwater (AFW) pump, 2-FW-P-2, (EIIIS System Identifier BA, Component Identifier P) was inadvertently started while being removed from service for preplanned maintenance. Since the Auxiliary Feedwater pump is part of the Engineered Safety Features System (EIIIS System Identifier JE) and starting 2-FW-P-2 was not preplanned, this event is reportable pursuant to 10CFR50.73(a)(2)(iv). A four hour report was made in accordance with 10CFR50.72(b)(2)(ii).

Prior to this event, maintenance was scheduled to be performed on 2-FW-P-2 and 2-MS-TV-211A (EIIIS Component Identifier V), one of two parallel steam supply trip valves for 2-FW-P-2. Maintenance Operating Procedure 2-MOP-31.03, "Auxiliary Feedwater Pump 2-FW-P-2", provides instructions for removing 2-FW-P-2 from service for maintenance. In preparation for the preplanned maintenance, 2-MOP-31.03 was deviated to require closure of additional valves and omission of various steps due to the scope of the maintenance. Also, a tagging report was written, and tags were prepared and approved. The tagging report included a tag for opening the power supply breaker for 2-MS-TV-211A prior to performing maintenance, because 2-MOP-31.03 does not address maintenance on 2-MS-TV-211A. Opening of this breaker was not included in the deviation made to 2-MOP-31.03.

The operator assigned to hang the tags for 2-FW-P-2 was instructed to follow 2-MOP-31.03, as deviated. The operator then obtained the tags, satisfied the initial conditions of 2-MOP-31.03, and placed the first two tags directed by 2-MOP-31.03. While in the vicinity of the power supply breaker for 2-MS-TV-211A, the operator hung the tag and opened the breaker. (This was not the sequence required by 2-MOP-31.03, since 2-MOP-31.03 was not deviated to require hanging the tag and opening the power supply breaker for 2-MS-TV-211A). Removing power from the control circuit for 2-MS-TV-211A caused the valve to fail open and simulated an auto start signal for 2-FW-P-2. The loss of power to the control circuit for 2-MS-TV-211A also caused one train of steam generator blowdown system trip valves (EIIIS System Identifier WI, Component Identifier V) to close.

Following the event, 2-FW-P-2 was secured and the blowdown trip valves were reopened. Also, maintenance was completed and 2-FW-P-2 and 2-MS-TV-211A were returned to service on November 4, 1988.

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

2.0 Significant Safety Consequences and Implications

This event posed no significant safety implications because 2-MS-TV-211A failed open, as designed, when power was removed. 2-FW-P-2 also started, as designed, when steam was supplied. In addition, both motor driven auxiliary feedwater pumps were fully operable during this event. The health and safety of the public were not affected at any time during this event.

3.0 Cause of the Event

The cause of the event was personnel error. The operator failed to follow the procedure. Also, a pre job briefing was not performed to caution the operator to manually isolate 2-MS-TV-211A prior to opening the power supply breaker.

4.0 Corrective Actions

As an immediate corrective action, 2-FW-P-2 was secured. Also, the power supply breaker for 2-MS-TV-211A was reenergized and the blowdown trip valves were reopened.

5.0 Additional Corrective Actions

The following additional corrective actions have been performed:

- ° A memorandum was issued to operations personnel reemphasizing the importance of self verification prior to performing any task.
- ° Senior operations personnel were assigned over a several week period to spend time with each shift in a "management oversight" role. This effort will make a self assessment of the way operations are conducted, with special emphasis on tagging evolutions, and determine if improvements are necessary.
- ° The importance of following procedures was discussed with the operator.

Also, a Human Performance Evaluation is being performed with regard to this event. Any additional corrective actions identified as a result of this review will be evaluated and implemented as necessary.

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

6.0 Actions to Prevent Recurrence

To prevent recurrence of similar events, the tagging process will be enhanced to partially automate the process for generating equipment tags. This enhanced process will reduce the operator administrative workload, help standardize the tagging process, and reduce the chance of errors. Also, any significant recommendations identified by the Human Performance Evaluation review will be implemented as appropriate.

7.0 Similar Events

Inadvertent starting of an auxiliary feedwater pump has not previously occurred at North Anna Power Station

8.0 Additional Information

Unit 1 was at 100 percent power (Mode 1) throughout this event and was not affected.



VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION
P. O. BOX 402
MINERAL, VIRGINIA 22117

November 22, 1988

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

Serial No. N-88-032
NO/DEQ: nih
Docket No. 50-339

License No. NPF-7

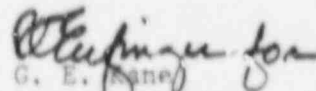
Dear Sirs:

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

Report No. LER 88-001-00

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

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