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VIRGINIA ELECTRIC AND POWER COMPANY

NORTH ANNA POWER STATION

P. O. BOX 402

MINERAL, VIRGINIA 25117

10 CFR 50.73

August 19, 1992

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

NAPS:MJB
Docket Nos. 50-338
50-339
License Nos. NPF-4
NPF-7

Dear Sirs,

The Virginia Electric and Power Company hereby submits the following Licensee Event Report applicable to North Anna Units 1 and 2.

Report No. 50-338,339/92-011-00

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: 60.0 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 UNITS 1 AND 2

DOCKET NUMBER (2)
050003381

PAGE (3)
04

TITLE (4) MISSED SURVEILLANCE REQUIREMENTS DUE TO PERSONNEL FAILURE DURING INITIAL PROCEDURE DEVELOPMENT

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)																	
0	7	2	4	9	2	0	1	1	0	0	0	8	1	9	9	2	0	5	0	0	0	3	3	8	1	0	0	4

OPERATING MODE (9)	POWER LEVEL (10)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5. (Check one or more of the following) (11)											
1	9	0	20.405(a)	20.405(c)	50.73(a)(2)(iv)	73.71(b)							
			20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)							
			20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vi)	OTHER (Specify in Attachment and on Form NRC Form 366A)							
			20.405(a)(1)(iii)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)	50.73(a)(2)(vii)(A)								
			20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(vii)(B)								
			20.405(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: 703894-2101
AREA CODE: 703

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 three single-space typewritten lines) (16)

On July 24, 1992, with Units 1 and 2 in Mode 1, a continuing evaluation of Technical Specification (TS) surveillance requirements was being performed as a corrective action for previous missed surveillances. While reviewing test procedures for the Emergency Core Cooling System (ECCS), it was noted that the test procedures did not include verifying the Safety Injection (SI) throttle valves are tagged in the proper position. Further review revealed that portions of the SI Accumulator MOV auto-open circuitry was not being properly tested. These events are reportable pursuant to 10 CFR 50.73 (a) (2) (i) (B) as missed surveillances.

The cause of these events is personnel error resulting in failure to initially develop appropriate procedures to ensure the SI throttle valves are tagged in the proper position and that all active circuit devices are tested.

These events posed no significant safety implications because the SI throttle valves were administratively controlled (i.e., locked) in the correct position and subsequent testing of the SI Accumulator auto-open circuits demonstrated that they were capable of performing their intended functions. Therefore, the health and safety of the general public were not affected at any time due to these events.

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 Units 1 and 2	DOCKET NUMBER (2) 0500033892	LER NUMBER (6)			PAGE (3) 02 OF 04
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
		92	011	0	

TEXT (if more space is required, use additional NRC Form 360A's) (17)

1.0 Description of the Event

On July 24, 1992, with Units 1 and 2 in Mode 1, a continuing evaluation of Technical Specification (TS) surveillance requirements was being performed as a corrective action for missed surveillances reported under LER 50-338,339/92-007-00. While reviewing the procedures that perform the surveillances of the Emergency Core Cooling System (ECCS), it was noted that the test procedures did not include verifying the Safety Injection (SI) throttle valves (EIS System Identifier BK, Component Identifier V) are tagged in the proper position as required by TS Surveillance Requirement 4.5.2.g.

On July 30, 1992, with Unit 1 in Mode 1, the TS surveillance review determined that a portion of the Safety Injection (SI) Accumulator (Component Identifier ACC) motor-operated valve (MOV) (Component Identifier 20) auto-open circuitry had not been tested as required by TS Surveillance Requirement 4.5.1.d.1. The surveillance is normally performed as the Reactor Coolant System (RCS) (EIS System Identifier AB) is being pressurized. When pressure is between 800-1000 psig, the test is performed. A jumper is installed around the K628 relay (Component Identifier RLY) which causes the MOV to open automatically. This tests all of the auto-open circuit except the K628 relay and ensures that the MOV will open. The K628 relay does not actuate until RCS pressure exceeds 2010 psig. The test procedure did not require verifying the relay was de-energized and its contacts closed after RCS pressure exceeded 2010 psig.

These events are reportable pursuant to 10 CFR 50.73 (a)(2)(i)(B) as missed surveillances.

2.0 Significant Safety Consequences and Implications

The SI throttle valves serve two purposes. The first is to ensure that SI/Charging Pumps (EIS System Identifier P) are not damaged by pump runout. The second is to balance the SI flow to the Reactor Coolant System. This flow balance assures sufficient flow to the core to meet the analysis assumptions following a LOCA in one of the RCS cold legs. Failure to verify that the SI throttle valves were tagged posed no significant safety implications because the valves were set during an SI Flow Balance Test and then locked in their required position.

The SI Accumulators ensure that a sufficient volume of borated water will be immediately forced into the reactor core in the event the RCS pressure falls below the pressure of the accumulator. This surge of water into the core provides the initial cooling mechanism during large RCS pipe ruptures. The auto-open circuitry for the SI Accumulator MOVs serves no safety function since TS require the MOVs to be de-energized above 2000 psig. The SI Accumulator MOVs are considered to be "operating bypasses" in the context of IEEE Std 279-1971, which requires that bypasses of a protective function be removed automatically whenever permissive conditions are not met. In

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TEXT CONTINUATION

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

2.0 Significant Safety Consequences and Implications (continued)

addition, the MOVs do not meet the single failure criteria. Because of these reasons, the valves are opened when the RCS pressure is between 800-1000 psig and power is removed from the MOV when RCS pressure exceeds 1000 psig. This ensures that the SI Accumulators will be able to perform their design function.

Therefore, the health and safety of the general public were not affected at any time due to these events.

3.0 Cause of the Event

The cause of these events is personnel error resulting in failure to initially develop appropriate procedures to ensure the SI throttle valves are tagged in the proper position and that all active circuit devices are tested.

4.0 Immediate Corrective Actions

The Operations Shift Supervisor was immediately notified when it was identified that the surveillances had not been performed. The appropriate Action Statements were entered.

On July 24, 1992, Units 1 and 2 entered the twenty-four hour Action Statement of TS 4.0.3 to allow verification that the SI throttle valves were properly tagged. The system engineer who performed the Unit 2 SI Flow Balance Test provided verification that the SI throttle valves were properly tagged. A Unit 1 Containment entry was made and the SI throttle valves were verified properly tagged. The Action Statement was cleared on July 24, 1992.

On July 30, 1992, Unit 1 entered the twenty-four hour Action Statement of TS 4.0.3 to allow testing of the K628 relay. After verifying the contacts were closed and that the relay was de-energized, the Action Statement was cleared on July 30, 1992.

5.0 Actions to Prevent Recurrence

A periodic test procedure will be developed to verify the SI throttle valves are properly tagged before their next scheduled performance.

Verification that the K628 relay is de-energized and its contacts closed after RCS pressure exceeds 2010 psig will be incorporated into the appropriate periodic test procedures before their next scheduled performance.

A continuing evaluation of the TS Surveillance Requirements is being performed to ensure all surveillance requirements are met.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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FACILITY NAME (1)

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North Anna Power Station Units 1 and 2

YEAR

SEQUENTIAL
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NUMBER

0 | 5 | 0 | 0 | 0 | 3 | 3 | 8 | 9 | 2 | — | 0 | 1 | 1 | — | 0 | 0 | 0 | 4 | OF | 0 | 4

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

6.0 Similar Events

LER 50-338,339/90-009-03 described an event where full response time testing of the Source Rang Neutron Flux Reactor Trip preamplifiers, the Power Range Neutron Detector isolation amplifiers and the Overtemperature Delta Temperature Reactor Trip lag and lead/lag cards was not performed due to incorrect TS interpretation.

LER 50-339/91-001-00 documents an event where a set of contacts and associated wiring on the control room bench board switch for the Train A power operated relief valve (PORV) over pressure control circuitry had not been tested as required by TS surveillance requirement 4.4.3.2.1.b. The cause of the event was the incorrect interpretation of TS 4.4.3.2.1.b. Previous interpretations did not require testing of the contacts and associated wiring for the PORV control circuitry.

LER 50-338,339/92-007-00 documents missed surveillances of RCP bus undervoltage/underfrequency circuitry and SI input to reactor trip.

LER 50-338,339/92-009-01 documents missed surveillances of Containment Purge and Exhaust isolation circuitry and portions of the Pressurizer Power Operated Relief Valve position indication channel.

LER 50-338,339/92-014-00 documents missed surveillances of the undervoltage/degraded voltage trip circuitry for the emergency diesel generator load shedding scheme and the reactor coolant pump bus undervoltage and underfrequency sensors not being properly response time tested.

7.0 Additional Information

None.

NAPS LER N1/2-92-011-00

I. VERIFICATION OF ACCURACY

1. DR N-92-1594, dated July 24, 1992.
2. DR N-92-1615, dated July 30, 1992
3. 1-LOG-1, Unit Supervisor's Log, 0700 - 1900, dated July 24, 1992
4. 1-LOG-1, Unit Supervisor's Log, 0700 - 1900, dated July 30, 1992
5. North Anna Technical Specifications.

II. ACTION PLAN

1. A review of all surveillance requirements will be performed by June 30, 1993, to verify TS surveillance requirements are fully met. (Engineering)
2. A periodic test procedure will be developed to verify the SI throttle valves are properly tagged before their next scheduled performance. (Station Procedures)
3. A Procedure Revision has been submitted for 1-PT-56.3 to verify the K628 relay is de-energized and its contacts closed after RCS pressure exceeds 2010 psig. (Engineering)
4. A Procedure Revision will be submitted for 2-PT-56.3 to verify the K628 relay is de-energized and its contacts closed after RCS pressure exceeds 2010 psig by December 31, 1992. (Engineering)
5. An evaluation will be performed to determine if a Technical Specification Change Request should be submitted to delete the surveillance requirement verifying the SI throttle valves are tagged by December 31, 1992. (Licensing)
6. An evaluation will be performed to determine if a Technical Specification Change Request should be submitted to delete the SI Accumulator MOV auto-open surveillance requirement by December 31, 1992. (Licensing)
7. The Departments responsible for the procedures marked-up by Engineering will be assigned commitments to process procedure revisions before their next performance with all revisions completed by December 31, 1992. (Licensing)

III. COMMITMENTS (STATED OR IMPLIED)

1. A review of all surveillance requirements will be performed to verify TS surveillance requirements are fully met.
2. A periodic test procedure will be developed to verify the SI throttle valves are properly tagged before their next scheduled performance.
3. Verification that the K628 relay is de-energized and its contacts closed after RCS pressure exceeds 2010 psig will be incorporated into the appropriate periodic test procedures before their next scheduled performance.