

**Virginia Electric and Power Company
North Anna Power Station
P. O. Box 402
Mineral, Virginia 23117**

December 20, 2010

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555-0001

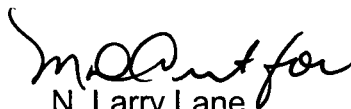
Serial No.: 10-650
NAPS: JHL
Docket No.: 50-338
License No.: NPF-4

Pursuant to 10CFR50.73, Virginia Electric and Power Company hereby submits the following Licensee Event Report applicable to North Anna Power Station Unit 1.

Report No. 50-338/2010-004-00

This report has been reviewed by the Facility Safety Review Committee and will be forwarded to the Management Safety Review Committee for its review.

Sincerely,



N. Larry Lane
Site Vice President
North Anna Power Station

Enclosure

Commitments contained in this letter: None

cc: U. S. Nuclear Regulatory Commission, Region II
Marquis One Tower
245 Peachtree Center Ave., NE, Suite 1200
Atlanta, Georgia 30303-1257

NRC Senior Resident Inspector
North Anna Power Station

IE22
NRR

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records and FOIA/Privacy Service Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

1. FACILITY NAME

NORTH ANNA POWER STATION, UNIT 1

2. DOCKET NUMBER

05000338

3. PAGE

1 OF 3

4. TITLE

Manual Reactor Trip due to Malfunction of the Rod Control In-Hold-Out Selector Switch

5. EVENT DATE

| MONTH | DAY | YEAR |
|-------|-----|------|
| 10 | 22 | 2010 |

6. LER NUMBER

| YEAR | SEQUENTIAL NUMBER | REV NO. |
|------|-------------------|---------|
| 2010 | -- 004 -- | 00 |

7. REPORT DATE

| MONTH | DAY | YEAR |
|-------|-----|------|
| 12 | 20 | 2010 |

8. OTHER FACILITIES INVOLVED

| FACILITY NAME | DOCUMENT NUMBER |
|---------------|--------------------------|
| FACILITY NAME | DOCUMENT NUMBER 05000 |

9. OPERATING MODE

2

11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)

| | | | |
|---|---|--|---|
| <input type="checkbox"/> 20.2201(b) | <input type="checkbox"/> 20.2203(a)(3)(i) | <input type="checkbox"/> 50.73(a)(2)(i)(C) | <input type="checkbox"/> 50.73(a)(2)(vii) |
| <input type="checkbox"/> 20.2201(d) | <input type="checkbox"/> 20.2203(a)(3)(ii) | <input type="checkbox"/> 50.73(a)(2)(ii)(A) | <input type="checkbox"/> 50.73(a)(2)(viii)(A) |
| <input type="checkbox"/> 20.2203(a)(1) | <input type="checkbox"/> 20.2203(a)(4) | <input type="checkbox"/> 50.73(a)(2)(ii)(B) | <input type="checkbox"/> 50.73(a)(2)(viii)(B) |
| <input type="checkbox"/> 20.2203(a)(2)(i) | <input type="checkbox"/> 50.36(c)(1)(i)(A) | <input type="checkbox"/> 50.73(a)(2)(iii) | <input type="checkbox"/> 50.73(a)(2)(ix)(A) |
| <input type="checkbox"/> 20.2203(a)(2)(ii) | <input type="checkbox"/> 50.36(c)(1)(ii)(A) | <input checked="" type="checkbox"/> 50.73(a)(2)(iv)(A) | <input type="checkbox"/> 50.73(a)(2)(x) |
| <input type="checkbox"/> 20.2203(a)(2)(iii) | <input type="checkbox"/> 50.36(c)(2) | <input type="checkbox"/> 50.73(a)(2)(v)(A) | <input type="checkbox"/> 73.71(a)(4) |
| <input type="checkbox"/> 20.2203(a)(2)(iv) | <input type="checkbox"/> 50.46(a)(3)(ii) | <input type="checkbox"/> 50.73(a)(2)(v)(B) | <input type="checkbox"/> 73.71(a)(5) |
| <input type="checkbox"/> 20.2203(a)(2)(v) | <input type="checkbox"/> 50.73(a)(2)(i)(A) | <input type="checkbox"/> 50.73(a)(2)(v)(C) | <input type="checkbox"/> OTHER |
| <input type="checkbox"/> 20.2203(a)(2)(vi) | <input type="checkbox"/> 50.73(a)(2)(i)(B) | <input type="checkbox"/> 50.73(a)(2)(v)(D) | <input type="checkbox"/> VOLUNTARY LER |

10. POWER LEVEL

0%

12. LICENSEE CONTACT FOR THIS LER

FACILITY NAME

F. Mladen, Director Station Safety and Licensing

TELEPHONE NUMBER (Include Area Code)

(540) 894-2108

13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

| CAUSE | SYSTEM | COMPONENT | MANUFACTURER | REPORTABLE TO EPIX | CAUSE | SYSTEM | COMPONENT | MANUFACTURER | REPORTABLE TO EPIX |
|-------|--------|-----------|--------------|--------------------|-------|--------|-----------|--------------|--------------------|
| | | | | | | | | | |

14. SUPPLEMENTAL REPORT EXPECTED☐ YES (If yes, complete 15. EXPECTED SUBMISSION DATE) ☒ NO**15. EXPECTED SUBMISSION DATE**

| MONTH | DAY | YEAR |
|-------|-----|------|
| | | |

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)

On October 22, 2010, Unit 1 was in Mode 2, with the reactor critical at zero percent power, with personnel performing physics testing in accordance with periodic test (PT) procedure 1-PT-94.0, Refueling Nuclear Design Check Tests. During physics testing, the rod control in-hold-out selector switch was not functioning properly when control rods were moved in the outward direction. At 0636 hours, a conservative decision was made to manually trip the Unit 1 reactor, by opening the reactor trip breakers, in order to perform repairs on the rod control in-hold-out selector switch. The rod control in-hold-out selector switch was subsequently replaced. On October 22, 2010, at 0946 hours, a non-emergency four-hour report was made to the NRC in accordance with 10 CFR 50.72(b)(2)(iv)(B) due to actuation of the Reactor Protection System. This event is reportable per 10 CFR 50.73(a)(2)(iv)(A) for a condition that resulted in manual actuation of the Reactor Protection System. This event posed no significant safety consequences because the control rods remained capable of being tripped. Therefore, the health and safety of the public were not affected by this event.

LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET

| | | | | | |
|---|------------------------------|------------------|--------------------------------------|----------------------|-----------------------|
| 1. FACILITY NAME NORTH ANNA POWER STATION UNIT 1 | 2. DOCKET 05000 - 338 | 6. LER NUMBER | | | 3. PAGE 2 OF 3 |
| | | YEAR 2010 | SEQUENTIAL NUMBER --004 -- | REV NO. 00 | |

NARRATIVE (If more space is required, use additional copies of NRC Form 366A) (17)

1.0 DESCRIPTION OF THE EVENT

On October 22, 2010, Unit 1 was in Mode 2, with the reactor critical at zero percent power, with personnel performing physics testing in accordance with periodic test (PT) procedure 1-PT-94.0, Refueling Nuclear Design Check Tests. During testing, the rod control in-hold-out selector switch (EIS System AA, Component HS) was observed to not be functioning properly when control rods were moved in the outward direction. At 0636 hours, a conservative decision was made to manually trip the Unit 1 reactor, by opening the reactor trip breakers (EIS System AA, Component BKR), in order to perform repairs on the rod control in-hold-out selector switch.

A non-emergency four-hour report was made to the NRC on October 22, 2010 at 0946 hours, due to a Reactor Protection System actuation in accordance with 10 CFR 50.72(b)(2)(iv)(B). This event is reportable per 10 CFR 50.73(a)(2)(iv)(A) for a condition that resulted in the manual actuation of the Reactor Protection System.

2.0 SIGNIFICANT SAFETY CONSEQUENCES AND IMPLICATIONS

This event posed no significant safety consequences because the control rods remained capable of being tripped. All systems, components and plant parameters responded as expected following the reactor trip. Therefore, the health and safety of the public were not affected by this event.

3.0 CAUSE

The direct cause of the malfunctioning rod control in-hold-out switch was attributed to dirt on the push buttons of the switch which resulted in sluggish operation.

In February 2010, a work order was initiated for a sporadic sticking issue of the rod control in-hold-out selector switch during the performance of 1-PT-17.1, Rod Operability. The rod control in-hold-out selector switch was successfully used during subsequent quarterly rod operability tests and ramp of the unit. An error in the work management process prevented the rod control in-hold-out selector switch from being replaced during the 2010 Fall refueling outage. This was a missed opportunity. This issue was entered into the Corrective Action Program to determine and correct process issues.

4.0 IMMEDIATE CORRECTIVE ACTION(S)

Control Room personnel responded to the reactor trip in accordance with emergency procedure 1-E-0, Reactor Trip or Safety Injection. Control Room personnel stabilized the plant using 1-ES-0.1, Reactor Trip Recovery.

**LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET**

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|---|------------------------------|------------------|--------------------------------------|----------------------|-----------------------|
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| | | YEAR 2010 | SEQUENTIAL NUMBER --004 -- | REV NO. 00 | |

NARRATIVE (If more space is required, use additional copies of NRC Form 366A) (17)

5.0 ADDITIONAL CORRECTIVE ACTIONS

The rod control in-hold-out selector switch was subsequently replaced.

An extent of condition review was performed to ensure that no other corrective work orders had been inappropriately cancelled. The review identified one additional corrective work order that was inappropriately cancelled to an open PM work order. A Condition Report was written to generate a replacement corrective work order.

6.0 ACTIONS TO PREVENT RECURRENCE

Actions to prevent recurrence from the Apparent Cause Evaluation are being tracked in the Central Reporting System.

7.0 SIMILAR EVENTS

None

8.0 ADDITIONAL INFORMATION

Unit 2 was operating in Mode 1 at 100% power at the time of this event and remained at approximately 100% power for the duration of the event.