10CFR50.73

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

November 29, 2005

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

Serial No.: 05-749
NAPS: MPW
Docket No.: 50-338, 339
License No.: NPF-4, 7

Dear Sirs:

Pursuant to 10CFR50.73, Virginia Electric and Power Company hereby submits the following Licensee Event Report applicable to North Anna Power Station Units 1 and 2.

Report No. 50-338, 339/2005-001-00

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

Sincerely,

J. M. Davis, Site Vice President
North Anna Power Station

Enclosure

Commitments contained in this letter: None

cc: United States Nuclear Regulatory Commission
Region II
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW, Suite 23T85
Atlanta, Georgia 30303-8931

Mr. J. T. Reece
NRC Senior Resident Inspector
North Anna Power Station

IE22

NRC FORM 366 (6-2004) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104 EXPIRES 6-30-2007

Estimated burden per response to comply with this mandatory collection request: 50 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 (3150-0066), Office of Management and Budget, Washington, DC 20503. If a means used to impose 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 | 2. DOCKET NUMBER | 3. PAGE |
|---|---|---|
| NORTH ANNA POWER STATION , UNIT 1 | 05000 338 | 1 OF 3 |

**4. TITLE**

Condition Prohibited by Technical Specification - Low Temperature Overpressure Protection

| 5. EVENT DATE | | | 6. LER NUMBER | | | 7. REPORT DATE | | | 8. OTHER FACILITIES INVOLVED | |
|---|---|---|---|---|---|---|---|---|---|---|
| MONTH | DAY | YEAR | YEAR | SEQUENTIAL NUMBER | REVISION NO. | MONTH | DAY | YEAR | FACILITY NAME | DOCUMENT NUMBER |
| 10 | 03 | 2005 | 2005 | -- 001 -- | 00 | 11 | 29 | 2005 | North Anna Power Station, Unit 2 | 05000339 |
| | | | | | | | | | FACILITY NAME | DOCUMENT NUMBER 05000 |

| 9. OPERATING MODE | 1 |
|---|---|
| 10. POWER LEVEL | 100% |

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

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | 20.2201(b) | | 20.2203(a)(3)(ii) | | 50.73(a)(2)(ii)(B) | | 50.73(a)(2)(ix)(A) |
| | 20.2201(d) | | 20.2203(a)(4) | | 50.73(a)(2)(iii) | | 50.73(a)(2)(x) |
| | 20.2203(a)(1) | | 50.36(c)(1)(i)(A) | | 50.73(a)(2)(iv)(A) | | 73.71(a)(4) |
| | 20.2203(a)(2)(i) | | 50.36(c)(1)(ii)(A) | | 50.73(a)(2)(v)(A) | | 73.71(a)(5) |
| | 20.2203(a)(2)(ii) | | 50.36(c)(2) | | 50.73(a)(2)(v)(B) | | OTHER |
| | 20.2203(a)(2)(iii) | | 50.46(a)(3)(ii) | | 50.73(a)(2)(v)(C) | | |
| | 20.2203(a)(2)(iv) | X | 50.73(a)(2)(i)(A) | | 50.73(a)(2)(v)(D) | | |
| | 20.2203(a)(2)(v) | | 50.73(a)(2)(i)(B) | | 50.73(a)(2)(vii) | | Specify in Abstract below or in NRC Form 366A |
| | 20.2203(a)(2)(vi) | | 50.73(a)(2)(i)(C) | | 50.73(a)(2)(viii)(A) | | |
| | 20.2203(a)(3)(i) | | 50.73(a)(2)(ii)(A) | | 50.73(a)(2)(viii)(B) | | |

**12. LICENSEE CONTACT FOR THIS LER**

| FACILITY NAME | TELEPHONE NUMBER (Include Area Code) |
|---|---|
| J. M. Davis, Site Vice President | (540) 894-2101 |

**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 | | 15. EXPECTED SUBMISSION DATE | MONTH | DAY | YEAR |
|---|---|---|---|---|---|
| YES (If yes, complete 15. EXPECTED SUBMISSION DATE) | X NO | | | | |


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

On October 3, 2005, with Unit 2 in Mode 5 for a scheduled refueling outage it was determined that all required actions for Low Temperature Overpressure Protection (LTOP) System controls were not implemented. A second independent means to prevent more than one low head safety injection (LHSI) pump and charging pump from being capable of injecting into the Reactor Coolant System (RCS) was not being performed. The procedures controlling the LHSI and charging pumps operations only required the pumps to be placed in pull to lock. The Technical Specifications (TS) Bases states two independent means are required to prevent a pump start such that a single failure or single action will not result in an injection to the RCS. This condition was applicable to Units 1 and 2. This event is reportable pursuant to 10 CFR 50.73 (a)(2)(i)(A) for a condition prohibited by the TS. This event posed no significant safety implications since the LTOP System design basis pressure and temperature limit curve were never violated. Therefore, the health and safety of the public were not affected by this event.

## 1.0 DESCRIPTION OF THE EVENT

The Low Temperature Overpressure Protection (LTOP) System controls Reactor Coolant System (RCS) (EIIS System-AB) pressure at low temperature so integrity of the reactor coolant pressure boundary is not compromised by violating the LTOP System design basis pressure and temperature limit curve. LTOP prevention is most critical during shutdown when the RCS is water solid and a mass or heat input transient can cause a very rapid increase in RCS pressure when little time is available for operator action to mitigate the event. Technical Specification (TS) applicability includes Mode 4 when any RCS cold leg temperature is less than or equal to 280 degrees Fahrenheit, Mode 5, and Mode 6 when the reactor vessel head is on.

The potential for a low temperature overpressure event is minimized by limiting the mass input capability. To limit the coolant input capability a maximum of one low head safety injection (LHSI) pump and a maximum of one charging pump are verified capable of injecting into the RCS.

On October 3, 2005, with Unit 2 in Mode 5 for a scheduled refueling outage it was determined that all required actions for Low Temperature Overpressure Protection (LTOP) System controls were not implemented. A second independent means to prevent more than one low head safety injection (LHSI) pump (EIIS System-BP, Component-P) and charging pump (EIIS System-BQ, Component-P) from being capable of injecting into the Reactor Coolant System (RCS) was not being performed. The Technical Specifications (TS) Bases states two independent means are required to prevent a pump start such that a single failure or single action will not result in an injection to the RCS. The procedures controlling the LHSI and charging pumps operations only required the pumps to be placed in pull to lock. They did not require the breakers (EIIS Systems-BP and BQ, Component-BKR) to be racked out under administrative control. The procedures also did not include an alternate method of control using at least two independent means to prevent an inadvertent injection into the RCS. This condition had existed since implementation of the Improved Technical Specifications (ITS) in August 2002.

## 2.0 SIGNIFICANT SAFETY CONSEQUENCES AND IMPLICATIONS

This event posed no significant safety implications since the LTOP System design basis pressure and temperature limit curve were never violated. Therefore, the health and safety of the public were not affected by this event. This event is reportable pursuant to 10 CFR 50.73 (a)(2)(i)(A) for a condition prohibited by TS.

## 3.0 CAUSE

During the process of converting the original TS to the ITS, the requirement to implement two independent means to prevent an inadvertent injection into the RCS was not identified and therefore changes to the affected procedures that implement the Technical Specification requirements of LCO 3.4.12 were not completed.

## 4.0 IMMEDIATE CORRECTIVE ACTION(S)

With Unit 2 in Mode 5 for a refueling outage, Operations personnel entered the action for TS 3.4.12. The Unit 2 discharge motor operated valves (EIIS Systems-BP and BQ, Component-ISV) for the LHSI and charging pumps were verified closed.

## 5.0 ADDITIONAL CORRECTIVE ACTIONS

Operating and Emergency procedures for both units were revised to require a second independent action to prevent injection into the RCS. Maintenance Operating Procedures will be revised prior to their next required use.

## 6.0 ACTIONS TO PREVENT RECURRENCE

The station has been using the ITS for over three years and this is the first incident where a condition identified in the TS Bases was not adequately addressed by the implementing procedures resulting in a condition prohibited by TS. The event is considered an isolated case. Revisions to the procedures controlling the LHSI and charging pumps operations will ensure the actions required by TS 3.4.12 are satisfied.

## 7.0 SIMILAR EVENTS

None

## 8.0 ADDITIONAL INFORMATION

None