



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION II  
245 PEACHTREE CENTER AVENUE NE, SUITE 1200  
ATLANTA, GEORGIA 30303-1257

August 9, 2012

Mr. David A. Heacock  
President and Chief Nuclear Officer  
Virginia Electric and Power Company  
Innsbrook Technical Center  
5000 Dominion Boulevard  
Glen Allen, VA 23060-6711

**SUBJECT: NORTH ANNA POWER STATION - NRC EMERGENCY PREPAREDNESS  
INSPECTION REPORT 05000338/2012502 AND 05000339/2012502**

Dear Mr. Heacock:

On July 13, 2012, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your North Anna Power Station. The enclosed inspection report documents the inspection results, which were discussed on July 12, 2012, with members of station staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, no findings were identified.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response, if any, will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Website at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

**/RA/**

Brian Bonser, Chief  
Plant Support Branch 1  
Division of Reactor Safety

Docket No. 50-338, 50-339  
License No. NPF-4, NPF-7

Enclosure:  
Inspection Report 05000338/2012502 and  
05000339/2012502 w/Att. Supp. Info.

cc w/encl: (See page 2)

August 9, 2012

Mr. David A. Heacock  
President and Chief Nuclear Officer  
Virginia Electric and Power Company  
Innsbrook Technical Center  
5000 Dominion Boulevard  
Glen Allen, VA 23060-6711

SUBJECT: NORTH ANNA POWER STATION - NRC EMERGENCY PREPAREDNESS  
INSPECTION REPORT 05000338/2012502 AND 05000339/2012502

Dear Mr. Heacock:

On July 13, 2012, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your North Anna Power Station. The enclosed inspection report documents the inspection results, which were discussed on July 12, 2012, with members of station staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, no findings were identified.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response, if any, will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Website at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

**/RA/**

Brian Bonser, Chief  
Plant Support Branch 1  
Division of Reactor Safety

Docket No. 50-338, 50-339  
License No. NPF-4, NPF-7

Enclosure:  
Inspection Report 05000338/2012502 and  
05000339/2012502 w/Att. Supp. Info.

cc w/encl: (See page 2)

Distribution w/encl  
See page 3

(\*) See previous concurrence page

PUBLICLY AVAILABLE       NON-PUBLICLY AVAILABLE       SENSITIVE       NON-SENSITIVE  
ADAMS: X Yes      ACCESSION NUMBER:ML12223A199      X SUNSI REVIEW COMPLETE X FORM 665 ATTACHED

|              |              |                  |              |               |              |        |
|--------------|--------------|------------------|--------------|---------------|--------------|--------|
| OFFICE       | RI: DRS/PSB1 | HQ               | RII:         | RII: DRS/PSB1 | RII: DRP/BR5 |        |
| SIGNATURE    | RA/BB For MS | RA/ DJ Via Email | RA/BB for RC | RA/BB         | RA/GJM1 *    |        |
| NAME         | M. SPECK     | D. JOHNSON       | R. CLAGG     | B. BONSER     | G. MCCOY     |        |
| DATE         | 08/08/2012   | 08/06/2012       | 08/08/2012   | 08/08/2012    | 08/06/2012   |        |
| E-MAIL COPY? | YES NO       | YES NO           | YES NO       | YES NO        | YES NO       | YES NO |

OFFICIAL RECORD COPY DOCUMENT NAME: G:\DRSI\PSB1\EMERGENCY PREPAREDNESS\NORTH ANNA\INSPECTION PLAN AND INPUT\FY2012\2012 NA EXERCISE REPORT REV1.DOCX

cc w/encl:

Mr. Gerald T. Bischof  
Site Vice President  
North Anna Power Station  
Virginia Electric & Power Company  
Electronic Mail Distribution

Fred Mladen  
Director, Station Safety & Licensing  
Virginia Electric and Power Company  
Electronic Mail Distribution

Michael Crist  
Plant Manager  
North Anna Power Station  
Virginia Electric & Power Company  
Electronic Mail Distribution

Lillian M. Cuoco, Esq.  
Senior Counsel  
Dominion Resources Services, Inc.  
Electronic Mail Distribution

Tom Huber  
Director, Nuclear Licensing & Operations  
Support  
Innsbrook Technical Center  
Electronic Mail Distribution

Ginger L. Rutherford  
Virginia Electric and Power Company  
Electronic Mail Distribution

Virginia State Corporation Commission  
Division of Energy Regulation  
P.O. Box 1197  
Richmond, VA 23209

Attorney General  
Supreme Court Building  
900 East Main Street  
Richmond, VA 23219

Senior Resident Inspector  
North Anna Power Station  
U.S. Nuclear Regulatory Commission  
P.O. Box 490  
Mineral, VA 23117

Donald R. Taylor  
Licensing Supervisor  
North Anna Power Station  
P. O. Box 402  
Mineral, VA 23117-0402

Michael M. Cline  
Director  
Virginia Department of Emergency Services  
Management  
Electronic Mail Distribution

Executive Vice President  
Old Dominion Electric Cooperative  
Electronic Mail Distribution

County Administrator  
Louisa County  
P.O. Box 160  
Louisa, VA 23093

D. Heacock

3

Letter to David A. Heacock from Brian Bonser dated August 9, 2012.

SUBJECT: NORTH ANNA POWER STATION - NRC EMERGENCY PREPAREDNESS  
INSPECTION REPORT 05000338/2012502 AND 05000339/2012502

Distribution w/encl:

C. Evans, RII EICS (Part 72 Only)

L. Douglas, RII EICS (Linda Douglas)

OE Mail (email address if applicable)

RIDSNRRDIRS

PUBLIC

RidsNrrPMNorthAnna Resource

**U.S. NUCLEAR REGULATORY COMMISSION**

**REGION II**

Docket Nos.: 05000338, 05000339

License Nos.: NPF-4, NPF-7

Report No.: 05000338/2012502 and 05000339/2012502

Licensee: Virginia Electric and Power Company (VEPCO)

Facility: North Anna Power Station, Units 1 and 2

Location: Mineral, VA

Dates: July 9, 2012 through July 13, 2012

Inspectors: M. Speck, Senior Emergency Preparedness Inspector  
D. Johnson, Senior Emergency Preparedness Specialist  
R. Clagg, Resident Inspector

Approved by: Brian Bonser, Chief  
Plant Support Branch 1  
Division of Reactor Safety

Enclosure

## SUMMARY OF FINDINGS

IR 05000338/2012-502 and 05000339/2012-502; 07/9/2012 – 07/13/2012; North Anna Power Station, Units 1 and 2; Baseline Inspection.

The report covered an announced inspection by a senior emergency preparedness inspector, one senior emergency preparedness specialist, and one resident inspector. No findings of significance were identified. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

A. NRC-Identified and Self-Revealing Findings

None

B. Licensee-Identified Violations

None

## REPORT DETAILS

### 1. REACTOR SAFETY

Cornerstone: Emergency Preparedness

#### 1EP1 Exercise Evaluation

##### a. Inspection Scope

Prior to the arrival onsite, the inspectors conducted an in-office review of the exercise objectives and scenario submitted to the NRC to determine if the exercise would test major elements of the emergency plan as required by 10 CFR 50.47(b)(14).

The onsite inspection consisted of the following review and assessment:

- The adequacy of the licensee's performance in the biennial exercise, conducted on July 10, 2012, was reviewed and assessed regarding the implementation of the Risk Significant Planning Standards (RSPS) in 10 CFR 50.47 (b)(4), (5), (9), and (10) which address emergency classification, offsite notification, radiological assessment, and protective action recommendations respectively.
- The overall adequacy of the licensee's emergency response facilities with regard to NUREG-0696, "Functional Criteria for Emergency Response Facilities" and Emergency Plan commitments. The facilities assessed were the Control Room Simulator, Technical Support Center (TSC), Operations Support Center (OSC), and the Local Emergency Operations Facility (LEOF).
- Other performance areas, such as: the emergency response organization's (ERO) recognition of abnormal plant conditions; command and control, intra- and inter-facility communications; prioritization of mitigation activities; utilization of repair and field monitoring teams; interface with offsite agencies; and the overall implementation of the emergency plan and its implementing procedures.
- Past performance issues from NRC inspection reports and Federal Emergency Management Agency (FEMA)/Department of Homeland Security (DHS) exercise reports to determine the effectiveness of corrective actions as demonstrated during this exercise to ensure compliance with 10 CFR 50.47(b)(14).
- The post-exercise critique process and the presentation to the licensee's senior management conducted on July 12, 2012, to evaluate the licensee's self-assessment of its ERO performance during the exercise and to ensure compliance with 10 CFR 50, Appendix E, Subsection IV.F.2.g.

The inspectors reviewed various documents which are listed in the Attachment. This inspection activity satisfied one inspection sample for the exercise evaluation on a biennial basis.

Enclosure

b. Findings

No findings were identified.

## 4. OTHER ACTIVITIES

4OA1 Performance Indicator Verificationa. Inspection Scope

The inspector sampled licensee submittals relative to the Performance Indicators (PIs) listed below for the period July 1, 2011, through March 31, 2012. To verify the accuracy of the PI data reported during that period, PI definitions and guidance contained in NEI 99-02, "Regulatory Assessment Performance Indicator Guideline", Revision 6, was used to confirm the reporting basis for each data element.

Emergency Preparedness Cornerstone

- Emergency Response Organization Drill/Exercise Performance (DEP)
- Emergency Response Organization Readiness (ERO)
- Alert and Notification System Reliability (ANS)

For the specified review period, the inspector examined data reported to the NRC, procedural guidance for reporting PI information, and records used by the licensee to identify potential PI occurrences. The inspector verified the accuracy of the DEP through review of a sample of drill and event records. The inspector reviewed selected training records to verify the accuracy of the ERO PI for personnel assigned to key positions in the ERO. The inspector verified the accuracy of the PI for ANS reliability through review of a sample of the licensee's records of periodic system tests. Licensee procedures, records, and other documents reviewed within this inspection area are listed in the Attachment.

The inspector reviewed various documents which are listed in the Attachment. This inspection activity satisfied one inspection sample for each of the three (3) Emergency Preparedness PIs, i.e., DEP, ERO, and ANS, on an annual basis.

b. Findings

No findings were identified.

4OA6 Meetings, Including Exit

On July 12, 2012, the lead inspector presented the inspection results to Mr. R. Garver and other members of the plant staff. The inspectors confirmed that proprietary information was not provided during the inspection.

ATTACHMENT: SUPPLEMENTAL INFORMATION



## **SUPPLEMENTAL INFORMATION**

### **KEY POINTS OF CONTACT**

#### Licensee personnel

P. Blasioli, Manager, Nuclear Protection Services and Emergency Preparedness  
E. Collins, Manager, Nuclear Emergency Preparedness  
M. Crist, Plant Manager  
R. Garver, Director, Nuclear Safety and Licensing (acting)  
P. Kemp, Project Manager  
J. Leberstien, Technical Consultant, Licensing  
F. Mladen, Director, Nuclear Engineering (acting)  
M. Olin, Supervisor Nuclear Emergency Preparedness  
D. Plogger, EP Specialist  
R. Wesley, Manager, Nuclear Training  
L. Wilson, Supervisor, Nuclear Security Operations

### **ITEMS OPENED, CLOSED, AND DISCUSSED**

None

### **LIST OF DOCUMENTS REVIEWED**

#### 1EP1 Exercise Evaluation

##### Procedures

North Anna Power Station Emergency Plan, Rev. 37  
CPIP-3.1, CERC and CEOF Activation, Rev. 20  
CPIP-3.2, North Anna LEOF Activation, Rev. 19  
CPIP-6.0, LEOF Recovery Manager Guidance, Rev. 11  
EP-AA-400, Drill and Exercise Program  
EPIP-1.01, Emergency Manager Controlling Procedure, Rev. 47  
EPIP-1.03, Response to Alert, Rev. 18  
EPIP-1.04, Response to Site Area Emergency, Rev. 18  
EPIP-1.05, Response to General Emergency, Rev. 20  
EPIP-1.06, Protective Action Recommendation, Rev. 9  
EPIP-2.01, Notification of state and Local Governments, Rev. 36  
EPIP-2.02, Notification of NRC, Rev. 21  
EPIP-3.02, Activation of Technical Support Center, Rev. 31  
EPIP-3.03, Activation of Operational Support Center, Rev. 18  
EPIP-3.04, Operation of Local Emergency Operations Facility, Rev. 16  
EPIP-3.05, Augmentation of Emergency Response Organization, Rev. 6  
EPIP-4.03, Dose Assessment Team Controlling Procedure, Rev. 17  
EPIP-4.04, Emergency Personnel Radiation Exposure, Rev. 13  
EPIP-4.07, Protective Measures, Rev. 20  
EPIP-4.34, Field Team Radio Operator Instructions, Rev. 7  
EPIP-5.03, Personnel Accountability, Rev. 20  
EPIP-5.05, Site Evacuation, Rev. 16

Records and Data

Control Room, Technical Support Center, Operational Support Center, Local Emergency Operations Facility, Joint Information Center, Central Emergency Response Center - Documentation packages (logs, event notification forms, Protective Action Recommendations, Media releases, and Radiological Dose Assessments  
2010, 2011, and 2012 Emergency Exercise and drill scenario documents

Corrective Action Program documents

474172, LEOF damper will not open  
481264, PING-3B (LEOF area radiation monitor) pressure/flow failed to stabilize  
481267, TSC computer operating erratically  
481283, Incorrect rad data file loaded on simulator  
481285, EP radio did not transmit  
481290, Siren polling delayed after activation  
481293, Unanticipated DEP PI classification  
481339, Unanticipated PI notification  
481495, Rumor control functions not timely

Section 4OA1: Performance Indicator VerificationProcedures

EP-AA-103, Emergency Preparedness Performance Indicators, Rev. 2

Records and Data

DEP opportunities documentation for 3<sup>rd</sup> and 4<sup>th</sup> quarter 2011 and 1<sup>st</sup> quarter 2012  
Drill and exercise participation records of ERO personnel for 3<sup>rd</sup> and 4<sup>th</sup> quarter 2011 and 1<sup>st</sup> quarter 2012  
Siren test data for 3<sup>rd</sup> and 4<sup>th</sup> quarter 2011 and 1st quarter 2012  
CR 443990 and CR462944 documenting siren issues  
Selected ERO personnel participation records

**LIST OF ACRONYMS USED**

|      |                                     |
|------|-------------------------------------|
| ANS  | Alert and Notification System       |
| CFR  | Code of Federal Regulations         |
| DEP  | Drill and Exercise Performance      |
| DHS  | Department of Homeland Security     |
| ERO  | Emergency Response Organization     |
| FEMA | Federal Emergency Management Agency |
| LEOF | Local Emergency Operations Facility |
| NEI  | Nuclear Energy Institute            |
| NRC  | Nuclear Regulatory Commission       |
| OSC  | Operations Support Center           |
| PARS | Publicly Available Records          |
| PI   | Performance Indicator               |
| RSPS | Risk Significant Planning Standard  |
| TSC  | Technical Support Center            |