



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

October 22, 2010

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 05000338/2010501 AND 05000339/2010501**

Dear Mr. Heacock:

On September 29, 2010, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your North Anna Power Station, Units 1 and 2. The enclosed inspection report documents the inspection results, which were discussed on September 28, 2010, with Mr. M. Crist and other members of your 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. However, a licensee-identified violation which was determined to be of very low safety significance is listed in this report. NRC is treating this violation as non-cited violation (NCV) consistent with Section VI.A.1 of the NRC Enforcement Policy because of the very low safety significance of the violation and because it is entered into your corrective action program. If you contest this non-cited violation, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN.: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region II; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the North Anna Power Station.

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 05000338/2010-501 and 05000339/2010-501
w/Attachment: Supplemental Information

cc w/encl.: (See page 3)

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2

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3

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4

Letter to David A. Heacock from Brian Bonser dated

SUBJECT: NORTH ANNA POWER STATION - NRC EMERGENCY PREPAREDNESS
INSPECTION REPORT 05000338/2010501 AND 05000339/2010501

Distribution w/encl:

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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos.: 05000338, 05000339

License Nos.: NPF-4, NPF-7

Report No.: 05000338/2010-501 and 05000339/2010-501

Licensee: Virginia Electric and Power Company (VEPCO)

Facility: North Anna Power Station, Units 1 and 2

Location: Mineral, VA

Dates: July 19, 2010 through September 29, 2010

Inspectors: L. Miller, Senior Emergency Preparedness Inspector
J. Beavers, Emergency Preparedness Inspector
J. Reece, Senior Resident Inspector
R. Clagg, Resident Inspector

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

Enclosure

SUMMARY OF FINDINGS

IR 05000338/2010-501 and 05000339/2010-501; 07/19/2010 – 09/29/2010; North Anna Power Station, Units 1 and 2; Baseline Inspection.

The report covered an announced inspection by two emergency preparedness inspectors and two resident inspectors. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process."

A. NRC-Identified and Self-Revealing Findings

No findings were identified.

B. Licensee-Identified Violations

A violation of very low safety significance, which was identified by the licensee has been reviewed by the inspectors. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. This violation and the licensee's corrective action tracking numbers are listed in Section 4OA7 of this report.

Enclosure

REPORT DETAILS

1. REACTOR SAFETY

Cornerstone: Emergency Preparedness (EP)

1EP1 Exercise Evaluation

a. Inspection Scope

Prior to the inspection activity, 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 20, 2010, 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 Emergency Operations Facility (EOF).
- 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 22, 2010, to evaluate the licensee's self-assessment of its Emergency Response Organization (ERO) performance during the exercise and to ensure compliance with 10 CFR 50, Appendix E, Subsection IV.F.2.g.

The inspector 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.

1EP4 Emergency Action Level and Emergency Plan Changes

a. Inspection Scope

Since the last NRC inspection of this program area, Revision 53 of the North Anna Emergency Plan was implemented based on the licensee's determination, in accordance with 10 CFR 50.54(q), that the changes resulted in no decrease in the effectiveness of the Emergency Plan, and that the revised Emergency Plan continued to meet the requirements of 10 CFR 50.47(b) and Appendix E to 10 CFR Part 50. The inspector conducted a sampling review of the Emergency Plan changes and implementing procedure changes made between July 2009 and June 2010 to evaluate for potential decreases in effectiveness of the Emergency Plan. However, this review was not documented in a Safety Evaluation Report and does not constitute formal NRC approval of the changes. Therefore, these changes remain subject to future NRC inspection in their entirety.

The inspection was conducted in accordance with NRC Inspection Procedure 71114, Attachment 04, "Emergency Action Level and Emergency Plan Changes." The applicable planning standard (PS), 10 CFR 50.47(b)(4) and its related 10 CFR 50, Appendix E requirements were used as reference criteria.

The inspector reviewed various documents which are listed in the Attachment to this report. This inspection activity satisfied one inspection sample for the EAL and Emergency Plan changes on an annual basis.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification

a. Inspection Scope

The inspector sampled licensee submittals relative to the Performance Indicators (PIs) listed below for the period April 1, 2009, through March 31, 2010. 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, were 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.

4OA5 Other Activities

.1 Closed: Unresolved Item (URI) 050000338, 339/2010002-03, Emergency Plan Minimum Staffing

The resident inspectors had previously opened URI 05000338, 339/2010002-03 in NRC Integrated Inspection Report 05000338/2010002 and 05000339/2010002 based on maintenance of the required minimum on-site staffing requirements in accordance with the licensee's Emergency Plan. The enforcement aspects of this finding are discussed in Section 4OA7. This URI is closed.

4OA6 Meetings, Including Exit

On July 23, 2010, the lead inspector presented the inspection results to Mr. M. Crist and other members of the North Anna staff. The inspector confirmed that no proprietary information was provided during the course of the inspection.

On September 29, 2010, the lead inspector re-exited with Mr. M. Crist and other members of the North Anna staff via teleconference. The closure of Unresolved Item (URI) 050000338, 339/2010002-03, Emergency Plan Minimum Staffing was discussed.

Enclosure

4OA7 Licensee-Identified Violation

- .1 The following finding of very low significance was identified by the licensee and is a violation of NRC requirements which meets the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600, for characterization as a Non-Cited Violation (NCV).

Title 10 CFR 50.54(q) states in part that a licensee authorized to possess and operate a nuclear power reactor shall follow and maintain in effect emergency plans which meet the standards in 10 CFR 50.47(b) and the requirements in appendix E of this part. The deficiency associated with this finding is that a 50.54(q) review was not performed to determine if there would be a potential reduction in the effectiveness of the site Emergency Plan because of a reduction in the minimum shift staffing requirements of the Emergency Plan. 10 CFR 50.47(b)(2) states in part that on-shift facility licensee responsibilities for emergency response are unambiguously defined, adequate staffing to provide initial facility accident response in key functional areas is maintained at all times. Contrary to the above between early December 2006 and January 2010, the licensee reduced the number of mechanical maintenance and electrical maintenance personnel on shift to below the minimum shift staffing requirements of the Emergency Plan without a 50.54(q) review. The finding is greater than minor because it is associated with the Emergency Preparedness cornerstone and potentially affected the program elements of 10 CFR 50.47(b)(2). The licensee corrected the deficiency when it was discovered and entered it into the corrective action program (CR364194).

ATTACHMENT: SUPPLEMENTAL INFORMATION

Enclosure

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel

P. Blasioli, Manager, Nuclear Protection Services and Emergency Preparedness
E. Collins, Manager Emergency Preparedness
M. Crist, Plant Manager
T. Huber, Director, Nuclear Engineering
S. Hughes, Manager, Nuclear Operations
P. Kemp, Manager, Organizational Effectiveness
M. Olin, Supervisor Nuclear Emergency Preparedness
G. Winks, Manager, Nuclear Training

ITEMS OPENED, CLOSED, AND DISCUSSED

Closed

05000338, 339/2010002-03 URI Emergency Plan Minimum Staffing (Section 4OA5.1)

LIST OF DOCUMENTS REVIEWED

Section 1EP1: Exercise Evaluation

Procedures

North Anna Power Station Emergency Plan, Rev. 35
EPIP-1.01, Emergency Manager Controlling Procedure, Rev. 45
EPIP-1.02, Response to notification of Unusual Event, Rev 15
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. 8
EPIP-2.01, Notification of state and Local Governments, Rev. 34
EPIP-2.02, Notification of NRC, Rev. 20
EPIP-3.02, Activation of Technical Support Center, Rev. 29
EPIP-3.03, Activation of Operation Support Center, Rev. 16
EPIP-3.04, Operation of Local Emergency Operations Facility, Rev. 16
EPIP-3.05, Augmentation of Emergency Response Organization, Rev. 4
EPIP-4.03, Dose Assessment Team Controlling Procedure, Rev. 16
EPIP-4.04, Emergency Personnel Radiation Exposure, Rev. 12
EPIP-4.05, Respiratory Protection and KI Assessment, Rev. 9
EPIP-4.07, Protective Measures, Rev. 18
EPIP-4.14, Inplant Monitoring, Rev. 8
EPIP-4.15, Onsite Monitoring, Rev. 13
EPIP-4.16, Offsite Monitoring, Rev. 18
EPIP-4.17, Monitoring of Emergency Response Facilities, Rev. 20
EPIP-5.03, Personnel Accountability, Rev. 20

EPIP-5.04, Access Control, Rev. 12
 EPIP-5.05, Site Evacuation, Rev. 16

Records and Data

Control Room, Technical Support Center, Operations Support Center, Joint Information Center - Documentation packages (logs, event notification forms, Protective Action Recommendations, Media releases, and Radiological Dose Assessments)

Condition Report

388460, PING-3B [EOF area radiation monitor] local beacon did not illuminate.
 388488, Simulator Master System Task abort occurred near the conclusion of the exercise.
 388549, CERC Reactor Core Analysis staff observed the simulator display for CH-RM-128 pegged high
 388578, North Anna and Innsbrook emergency-pager groups Network Computer system failed when activated for EP drill
 388595, Core Damage modeled in scenario was insufficient to yield off-site dose values
 388614, Operations did not notify the TSC of dispatching operators into the field
 388617, Control Room continued to eat and drink during the release
 388710, Methods used to control Emergency Response Organization (ERO) teams differ in process and rigor when dispatched from the OSC, RP, and Control Room
 388716, Command and Control - TSC, OSC, and CRS did not remove barriers to support completion of critical response tasks, isolation of 1-MS-18 and closing of 1-MS-SV-101A.
 388720, during the 7/20/2010 North Anna Biennial Exercise, exercise coordination and conduct weaknesses were identified.
 388725, During the 7/20/2010 North Anna Biennial Exercise Emergency response facility equipment issues were identified.
 388789, July 20, 2010, Emergency Preparedness Biennial Exercise, Objection 20, Demonstrate the ability to effectively coordinate and conduct an exercise was not met.
 388791, A Protective Action Recommendation (PAR) was developed and approved in the Local Emergency Operations Facility that reduced the previous PAR
 388830, 0-PT-114 was incorrectly signed off as acceptable for the emergency kits
 388876, Additional guidance needed to assist decision to restore letdown
 388882, Information provided NRC EP Inspector did not meet expectation
 388887, During the North Anna evaluated exercise conducted July 20, 2010, objective number 9, Demonstrate the ability to assess conditions and implement appropriate protective measures for emergency response personnel, including site access control, contamination control, exposure control, use of protective devices and, as appropriate, the process for authorizing the use of potassium iodide (KI), was not adequately demonstrated by the ERO and evaluated as NOT MET.
 389077, PAR notification timeliness

Section 1EP4: Emergency Action Level and Emergency Plan Changes

Change Packages for Plans and Procedures

EPIP-1.01, Emergency Manager Controlling Procedure, Rev. 45
 EPIP-1.02, Response to Notification of Unusual Event, Rev. 15
 EPIP-1.03, Response to Alert, Rev. 13

EPIP-1.04, Response to Site Area Emergency, Rev. 18
 EPIP-1.05, Response to General Emergency, Rev. 20

Section 4OA1: Performance Indicator Verification

Procedures

DNAP-2605, Emergency Preparedness Performance Indicators, Rev. 9

Records and Data

DEP opportunities documentation for 2nd, 3rd and 4th Quarters 2009, and 1st Quarter 2010
 Drill and exercise participation records of ERO personnel for 2nd, 3rd and 4th Quarters 2009, and 1st Quarter 2010
 Siren test data for 2nd, 3rd and 4th Quarters 2009, and 1st Quarter 2010
 Various ERO Personnel Qualification and Participation records

4OA7 Licensee-Identified Violation

Records and Data

Memorandum of Understanding Maintenance Work Schedules North Anna Power Station
 Tabulation of hours worked for mechanical and electrical maintenance personnel 2006-2009

LIST OF ACRONYMS

ANS	Alert and Notification System Reliability
DEP	Emergency Response Organization Drill/Exercise Performance
DHS	Department of Homeland Security
EOF	Emergency Operations Facility
ERO	Emergency Response Organization Readiness
FEMA	Federal Emergency Management Agency
OSC	Operations Support Center
PI	Performance Indicator
RSPS	Risk Significant Planning Standards
TSC	Technical Support Center