



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION II
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET, SW, SUITE 23T85
ATLANTA, GEORGIA 30303-8931

December 27, 2006

Virginia Electric and Power Company
ATTN: Mr. David A. Christian
Senior Vice President and
Chief Nuclear Officer
Innsbrook Technical Center
5000 Dominion Boulevard
Glen Allen, VA 23060

SUBJECT: NORTH ANNA POWER STATION - NRC INSPECTION REPORT NO.
50-338/2006-501 AND 50-339/2006-501

Dear Mr. Christian:

On December 8, 2006, 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 December 8, 2006, with Mr. D. Stoddard, Site Vice President, 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.

A Licensee identified severity level IV violation is listed in this report. However, because it has been entered into your corrective action program, the NRC is treating this issue as a non-cited violation (NCV) in accordance with Section VI.A.1 of the NRC's Enforcement Policy. If you contest any NCV in the enclosed report, 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 and its enclosure 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

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(ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Brian R. Bonser, Chief
Plant Support Branch 2
Division of Reactor Safety

Docket Nos. 50-338, 50-339
License Nos. NPF-4, NPF-7

Enclosure: NRC Inspection Report No. 50-338/2006-501 and 50-339/2006-501
w/Attachment: Supplemental Information

cc w/encl:
Chris L. Funderburk, Director
Nuclear Licensing and
Operations Support
Virginia Electric and Power Company
Electronic Mail Distribution

D. Stoddard
Site Vice President
North Anna Power Station
Electronic Mail Distribution

Executive Vice President
Old Dominion Electric Cooperative
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Supreme Court Building
900 East Main Street
Richmond, VA 23219

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U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos: 50-338, 50-339

License Nos: NPF-4, NPF-7

Report Nos: 05000338/2006501 AND 05000339/2006501

Licensee: Virginia Electric and Power Company

Facility: North Anna Power Station

Location: 1024 Haley Drive
Mineral, VA 23117

Dates: December 4-8, 2006

Inspectors: L. Miller, Senior Emergency Preparedness Inspector
(Section 1EP1, 1EP4)
J. Kreh, Emergency Preparedness Inspector
(Section 1EP1, 4OA1)
J. Reece, Senior Resident Inspector (Section 1EP1)
G. Wilson, Resident Inspector (Section 1EP1)

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

Enclosure

SUMMARY OF FINDINGS

IR 05000338/2006501 and 05000339/2006501;12/04-08/2006;North Anna Power Station Units 1 and 2; Emergency Preparedness 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," Revision 3, dated July 2000.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Emergency Preparedness

None

B. Licensee-Identified Violations.

One Violation of very low-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 corrective action are listed in Section 4OA7 of this report.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstone: Emergency Preparedness

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). This inspection activity represents one sample on a biennial cycle.

The onsite inspection consisted of the following review and assessment:

- The adequacy of the licensee's performance in the biennial exercise conducted on December 5, 2006, was reviewed and assessed regarding the implementation of the Risk Significant Planning Standards (RSPSs) in 10 CFR 50.47 (b) (4), (5), (9), and (10), which are 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), the Operations Support Center (OSC) and Emergency Operations Facility (EOF).
- Other performance areas besides the RSPS, 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 effectiveness of corrective actions as demonstrated during this exercise to ensure compliance with 10 CFR 50.47(b)(14).
- The post-exercise critique conducted November 8, 2006, to evaluate the licensee's self-assessment of its ERO performance during the exercise and to ensure compliance with 10 CFR 50 Appendix E.IV.F.2.g.

The inspectors reviewed various documents which are listed in the Attachment to this report.

b. Findings

No findings of significance were identified.

1EP4 Emergency Action Level (EAL) and Emergency Plan Changes

a. Inspection Scope

The inspector's review of revisions to the emergency plan, implementing procedures and EAL changes was performed to determine that changes had not decreased the effectiveness of the plan. The inspectors also evaluated the associated 10 CFR 50.54(q) reviews associated with non-administrative emergency plan, implementing procedures and EAL changes. The Radiological Emergency Plan Revision 67 and Revision 68 were reviewed and covered the period from November 2005 to November 2006.

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 criteria contained in NUREG-0654, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Regulatory Guide 1.101 were also used as references. This inspection activity represents one sample on an annual basis.

The inspectors reviewed various documents which are listed in the Attachment to this report.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator (PI) Verification

a. Inspection Scope

The inspectors reviewed the licensee's procedure for developing the data for the Emergency Preparedness PIs which are: (1) Drill/Exercise Performance (DEP); (2) ERO Drill Participation; and (3) Alert and Notification System (ANS) Reliability. The inspectors examined data reported to the NRC for the period July 2005 to September 2006. Procedural guidance for reporting PI information and records used by the licensee to identify potential PI occurrences were also reviewed. The inspectors verified the accuracy of the PI for ERO DEP through review of a sample of drill and event records. The inspectors reviewed selected training records to verify the accuracy of the PI for ERO drill participation for personnel assigned to key positions in the ERO. The inspectors verified the accuracy of the PI for ANS reliability through review of a sample of the licensee's records of periodic system tests.

The inspection was conducted in accordance with NRC Inspection Procedure 71151, "Performance Indicator Verification." The applicable PI, 10 CFR 50.9 and Nuclear Energy Institute (NEI) 99-02, Revisions 3 and 4, "Regulatory Assessment Performance

Indicator Guidelines,” were used as reference criteria. This inspection activity represents three samples on an annual basis.

The inspectors reviewed various documents which are listed in the Attachment to this report.

b. Findings

No findings of significance were identified.

4OA5 Other

At the request of Region II’s Division of Reactor Safety, the Division of Preparedness and Response (DPR) of the Office of Nuclear Security and Incident Response (NSIR) has reviewed the Surry Power Station emergency plan, revision 50, minimum staffing requirements (Table 5.1) against NUREG-0654, Table B-1 to determine whether Note (3) can be cleared of the statement, “Concurrence for change to position title and resource pool used to staff position provided by NRC via letter dated July 22, 1993” and whether Note (2) can be cleared of the statement, “Approval for the Augmentation time for this individual provided via per NRC letter dated May 18, 1990.”

NRC’s review found that the licensee’s emergency response plans have previously been found to adequately meet the standard required by 10 CFR 50.47(b)(2). The licensee may change the names of the position title along with the resource pool with the requirement that the candidates are qualified, as the licensee has acknowledged adhering to their emergency plan. Furthermore, with review of Table 5.1 regarding the subject note (1), the NRC concluded that the table continues to meet the criteria in Table B-1 of NUREG-0654, and therefore the Planning Standards of 10 CFR 50.47(b) and the requirements within Appendix E of 10 CFR Part 50. The determination has been made that the statement “Concurrence for change to position title and resource pool used to staff position provided by NRC via letter dated July 22, 1993” can be cleared. However, any changes must continue to meet the Planning Standards outlined in 10 CFR 50.47(b) and the requirements within Appendix E of 10 CFR Part 50.

Upon review of the specific changes to the North Anna Emergency Plan and the detailed functional analysis of the two response positions provided by the Virginia Electric and Power Company on May 18, 1990, it has been determined that the changes are consistent with the provisions of 10 CFR 50.47(b), Appendix E to 10 CFR Part 50, and Supplement 1 to NUREG-0737. As a result of the review it has been determined that the change in question did not decrease the effectiveness of the Emergency Plan. DPR will not alter the Region’s previous conclusion that the licensee’s plans meet the standard required by 10 CFR 50.47(b)(2).

4OA6 Meetings, including Exit

On December 8, 2006, the lead inspector for the emergency preparedness inspection presented the inspection results to Mr. D. Stoddard, Site Vice President, and other members of his staff. The inspectors confirmed that proprietary information was not provided or taken during the inspection.

4OA7 Licensee-identified Violations

The following violation of very low concern was identified (Severity Level IV) 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 being dispositioned as an NCV.

- 10 CFR 50.54(q) states in part that the “licensee may make changes to these plans without Commission approval only if the changes do not decrease the effectiveness of the plans. Proposed changes that decrease the effectiveness of the approved emergency plans may not be implemented without application to and approval by the Commission.” Contrary to the above, on October 06, 2000, the licensee made changes to their Emergency Plan with Revision 23, which resulted a decrease in effectiveness (DIE) of the emergency plan. The change replaced the licensee’s previous “standard” minimum Protective Action Recommendation (PAR) based on NRC and FEMA guidance, which used the “keyhole” approach (i.e., evacuate all sectors to 2 miles and downwind sectors 2-5 miles) with an evacuation to 5 miles in all directions. The change may be overly conservative in such a way as to place members of the public at unnecessary risk during evacuation of an area unaffected by a radiological release which would be more appropriately recommended for sheltering. These changes were not submitted to the NRC for approval prior to implementation. This finding is documented in the licensee's corrective action program as N-2006-0568.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel

D. Stoddard, Site Vice President
P. Kemp, Director Station Safety & Licensing (Acting)
L. Lane, Director Operations & Maintenance
B. McBride, Manager Emergency Preparedness
J. Costello, Supervisor Emergency Preparedness
J. Rayman, Emergency Preparedness
J. Leberstien, Technical Consultant - Licensing

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

None

Discussed

None

LIST OF DOCUMENTS REVIEWED

Section 1EP1: Exercise Evaluation

Emergency Plans and Implementing Procedures

North Anna Power Station Emergency Plan, Rev. 31 and 32
EPIP-1.01, Emergency Manager Controlling Procedure, Rev. 42
EPIP-1.02, Response to Unusual Event, Rev. 13
EPIP-1.03, Response to Alert, Rev. 16
EPIP-1.04, Response to Site Area Emergency, Rev. 16
EPIP-1.05, Response to General Emergency, Rev. 18
EPIP-3.02, Activation of Technical Support Center, Rev. 23
EPIP-3.03, Activation of Operational Support Center, Rev. 14
EPIP-5.03, Personnel Accountability, Rev. 18

Emergency Plans and Implementing Procedures

EPIP-1.06, Protective Action Recommendations, Rev. 6
EPIP-2.01, Report of Emergency to State and Local Governments, Rev. 29
EPIP-3.04, Activation of the Local Emergency Operations Facility, Rev. 15
EPIP-4.03, Dose Assessment Team Controlling Procedure, Rev. 12
EPIP-4.07, Protective Measures, Rev. 17
EPIP-4.09, Source Term Assessment, Rev. 18
EPIP-4.18, Monitoring of LEOF, Rev. 13

12/05/2006 Exercise Documentation

Report of Emergency to State and Local Governments, Messages 1-8
Recovery Manager log
TSC logs
Electronic event chronology
Licensee News Releases

Corrective Actions

CR001832, North Anna Emergency Plan Rev. 17 implemented some changes without prior NRC approval.
N-2006-0568, North Anna Protective Action Recommendations (PARs) evacuation five miles 360 degrees
CR005285, Siren Poll PT, Siren #30 power cut-off in error
CR005221, Emergency Response Binder in LEOF contained outdated version of EPIP-6.2
CR005222, Emergency Plan, Rev. 32, Page 10, 11, 16 Greek symbol for micro printed as a box
CR005223, Potential inconsistency with turnover guidance for emergency communicators
CR005224, TSC Drawing Repository needs a generic login
CR005229, Need swing gates at Emergency Response Facilities to enhance radiological controls

CR005231, State DEM Radio Control Circuit for State repeater is inoperable.
CR005236, TSC personnel having to swipe cards multiple times in Accountability card reader
CR005268, Development of beyond license condition strategies
CR005295, DNAP-2605, Emergency Preparedness Performance Indicators, does not evaluate the accuracy of EPIP-2.01 Attachment 2 Item 11

Section 1EP4: Performance Indicator (PI) Verification

E-Plan Changes

Change packages for the following:
North Anna Power Station Emergency Plan, Rev. 31 and 32
EPIP-1.01, Emergency Manager Controlling Procedure, Rev. 42
EPIP-1.02, Response to Unusual Event, Rev. 13
EPIP-1.03, Response to Alert, Rev. 16
EPIP-1.04, Response to Site Area Emergency, Rev. 16
EPIP-1.05, Response to General Emergency, Rev. 18
EPIP-3.02, Activation of Technical Support Center, Rev. 23
EPIP-3.03, Activation of Operational Support Center, Rev. 14
EPIP-5.03, Personnel Accountability, Rev. 18

Section 4OA1: Performance Indicator (PI) Verification

Procedures, Records, and Data

DNAP-2605, Emergency Preparedness Performance Indicators, Rev. 4
Summary data for ANS testing, 2005-2006
Detailed data for ANS testing conducted on 02/15/2006, 08/16/2006, 09/20/2006
Records of drill participation by 15 selected ERO personnel, 2005-2006
Evaluations of drills for State and Local Communicators, 12/2005 (various dates)
Records of ERO training drill conducted 05/23/2006 (including drill scenario, critique report, offsite notification messages, PI evaluations)

LIST OF ACRONYMS

ANS	Alert and Notification System
DEP	Drill/Exercise Performance
DHS	Department of Homeland Security
EAL	Emergency Action Level
EOF	Emergency Operations Facility
ERO	Emergency Response Organization
FEMA	Federal Emergency Management Agency
NEI	Nuclear Energy Institute
PARs	Protective Action Recommendations
PI	Performance Indicator
PS	Planning Standard
RSPS	Risk Significant Planning Standard
TSC	Technical Support Center