



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET SW SUITE 23T85
ATLANTA, GEORGIA 30303-8931**

October 27, 2003

Virginia Electric and Power Company
ATTN.: Mr. David A. Christian
Sr. Vice President and
Chief Nuclear Officer
Innsbrook Technical Center - 2SW
5000 Dominion Boulevard
Glen Allen, VA 23060-6711

**SUBJECT: NORTH ANNA POWER STATION - NRC INTEGRATED INSPECTION
REPORT NO. 05000338/2003004 AND 05000339/2003004**

Dear Mr. Christian:

On September 27, 2003, the US Nuclear Regulatory Commission (NRC) completed an inspection at your North Anna Power Station, Units 1 and 2. The enclosed integrated inspection report documents the inspection findings which were discussed on October 15, 2003, with Mr. Jack Davis 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 selective procedures and records, observed activities, and interviewed personnel.

This report documents an NRC-identified finding of low safety significance (Green) which was determined to involve a violation of NRC requirements. However, because of the very low safety significance and because it is entered into your corrective action program, the NRC is treating this finding as a non-cited violation (NCV) consistent with Section VI.A of the NRC Enforcement Policy. Additionally, two licensee-identified violations which were determined to be of very low safety significance is listed in this report. If you contest any NCV in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the United States 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 2.790 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 Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

//RA//

Kerry D. Landis, Chief
Reactor Projects Branch 5
Division of Reactor Projects

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

Enclosures: Inspection Report 05000338/2003004 and 05000339/2003004
w/Attachment Supplemental Information

cc w/encl.:
Stephen P. Sarver, Manager
Nuclear Licensing and
Operations Support
Virginia Electric and Power Company
Electronic Mail Distribution

D. A. Heacock
Site Vice President
North Anna Power Station
Virginia Electric and Power Company
Electronic Mail Distribution

Richard H. Blount, II
Site Vice President
Surry Power Station
Virginia Electric and Power Company
Electronic Mail Distribution

Executive Vice President
Old Dominion Electric Cooperative
Electronic Mail Distribution

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

Lillian M. Cuoco, Esq.
Senior Nuclear Counsel
Dominion Nuclear Connecticut, Inc.
Electronic Mail Distribution

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

VEPCO

3

Distribution w/encls.:
C. Evans, EICS
S. Monarque, NRR
L. Slack, RII
RIDSNNRRDIPMLIPB
PUBLIC

PUBLIC DOCUMENT (circle one): YES

OFFICE	RII:DRP	RII:DRP	RII:DRS	RII:DRS	RII:DRP	RII:DRS	RII:DRP
SIGNATURE	MJM2	JAC6	MSL1/FOR	MEE/FOR	MTW	RFA	LXG1
NAME	MMorgan	JCanady	MScott	WSartor Jr	MWidmann	RAiello	LGarner
DATE	10/23/03	10/23/03	10/23/03	10/23/03	10/23/03	10/24/03	10/24/03
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY

DOCUMENT NAME: C:\ORPCheckout\FileNET\ML033040114.wpd

U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos.: 50-338, 50-339

License Nos.: NPF-4, NPF-7

Report No.: 05000338/2003004 and 05000339/2003004

Licensee: Virginia Electric and Power Company (VEPCO)

Facilities North Anna Power Station, Units 1 & 2

Location: 1022 Haley Drive
Mineral, Virginia 23117

Dates: June 29, 2003 - September 27, 2003

Inspectors: M. Morgan, Senior Resident Inspector
J. Canady, Resident Inspector
R. Aiello, Senior Reactor Engineer (Section 1R11.2)
M. Scott, Senior Reactor Inspector (Section 1R12.1)
W. Sartor, Jr., Senior Emergency Preparedness Inspector (Sections 1EP2,
1EP3, 1EP4, 1EP5, 4OA1, and 4OA3)
M. Widmann, Senior Resident Inspector (V. C. Summer)

Approved by: K. Landis, Chief
Reactor Projects Branch 5
Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000338/2003-004, IR 05000339/2003-004; 06/29/2003 - 09/27/2003; North Anna Power Station Units 1 & 2; Event Followup.

The report covered a three month period of inspection by resident inspectors and announced inspections by regional senior reactor inspector, a senior reactor engineer and senior emergency preparedness inspector. One Green non-cited violation (NCV) was identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609 "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. 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

Green. The inspectors identified a non-cited violation of 10 CFR 50.54(q), 50.47(b)(4), and Section IV.B of Appendix E of 10 CFR 50. On June 27, 2003, the licensee failed to classify and declare an Notification of Unusual Event in accordance with emergency plan implementing procedures following the unplanned release of a toxic gas which could affect safety of station personnel.

The finding is greater than minor because it affected the Emergency Preparedness Cornerstone objective of ensuring the emergency response organization's performance to implement adequate measures to protect public health and safety during an emergency. The finding is associated with a risk significant planning standard and determined to be of very low safety significance using Manual Chapter 0609, Appendix B "Emergency Preparedness Significance Determination Process," Sheet 2 which specifies that failure to declare an Notification of Unusual Event is Green (Section 4OA3).

B. Licensee-Identified Violations

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

Enclosure

Report Details

Summary of Plant Status

Unit 1 began the inspection period at 100% power and remained at full power throughout the reporting period. The unit remained online throughout the passing of Hurricane Isabel, and conditions did not warrant entry into any emergency action levels.

Unit 2 began the inspection period at 100% power. Power was reduced to 63% during the passing of Hurricane Isabel on September 18, 2003, due to a limited load on the grid that resulted from the power outages caused by the storm. The unit remained online during the hurricane and conditions did not warrant entry into any emergency action levels. The unit was returned to full power after the storm and remained at full power for the rest of the reporting period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R01 Adverse Weather

a. Inspection Scope

The inspectors reviewed procedure 0-AP-41, "Severe Weather Conditions," and provided 24-hour onsite monitoring of licensee's activities associated with Hurricane Isabel that arrived at the plant site during the night of September 18, 2003. From tours of outside areas and discussions with licensee personnel the inspectors assessed the adequacy of procedural actions regarding high winds and flooding, including their impact on safety-related systems. Maximum sustained winds were about 50 miles per hour (mph) with gusts to 70 mph. Both units remained online throughout the hurricane and conditions did not warrant entry into any emergency action levels. The licensee found it necessary to reduce the power on Unit 2 to 63% due to a limited load on the grid that resulted from power outages caused by the storm.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment

a. Inspection Scope

The inspectors performed a partial walkdown of the Unit 2 B Low Head Safety Injection System (LHSI). During the local and main control room tour of the LHSI system, the inspectors assessed the portion of the system for signs of valve leakage, electrical power availability, proper component labeling, and hanger and support material condition. Documents reviewed included Procedure 2-OP-7.1A, "Valve Checkoff–Low

Enclosure

Head Safety Injection System;" and Plant Drawings 12050-FM-096A, "Safety Injection System," sheets 1 & 2 of 3.

b. Findings

No findings of significance were identified.

1R05 Fire Protection

a. Inspection Scope

The inspectors assessed the implementation of the fire protection program using Virginia Power Administrative Procedure (VPAP)-2401, "Fire Protection Program." The inspectors checked the control of transient combustibles and the material condition of the fire detection and fire suppression systems in the following six areas:

- Fuel Oil Pump House Area;
- Service Water Chemical Addition Building Area;
- Diesel-Driven Fire Pump Hous /Technical Support Area;
- Spillway Emergency Diesel Generator Building Area;
- Unit 1 Switchgear Room Areas; and,
- Unit 2 Switchgear Room Areas.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Re-qualification

1. Quarterly Review

a. Inspection Scope

The inspectors reviewed associated training documentation and observed licensed operator re-qualification training involving designated Hurricane Isabel plant restart operators and supervisors. The inspectors observed simulator training for one group of supervisors and operators involving a start-up of the plant to criticality (1.0 E -8 amps).

b. Findings

No findings of significance were identified.

2. Annual Operating Test Results

a. Inspection Scope

On February 21, 2003, the licensee completed the comprehensive requalification written examinations and annual operating tests, required to be given to all licensed operators by 10 CFR 55.59(a)(2). The inspectors reviewed the overall pass/fail results of the written examinations, individual operating tests, and the crew simulator operating tests. These results were compared to the thresholds established in Manual Chapter 609 Appendix I, Operator Requalification Human Performance Significance Determination Process.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness

1. Quarterly Review

a. Inspection Scope

For the equipment issues described in the plants issues listed below, the inspectors evaluated the effectiveness of the licensee's corresponding preventive and corrective maintenance. The inspectors performed walkdowns, in-office reviews of procedures and evaluations, and held discussions with system engineers. The inspectors compared licensee's actions with the requirements of the Maintenance Rule (10 CFR 50.65) and VPAP 0815, "Maintenance Rule Program." Additionally, the inspectors attended some of the licensee's scheduled Maintenance Rule Working Group meetings.

- N-2003-2781 - work performed on a turbine building to emergency switchgear door without the proper implementation of licensee EQ requirements. Maintenance procedure for repair of the door (2-BLD-STR-S54-11-ACCESS) used an EQ watch rather than an engineering evaluation for the door being opened into a mild EQ zone.
- N-2003-3096 - painting was performed in the auxiliary building with an improper type of respirator being worn.
- N-2002-1850, Revision 2 - issue dealt with the lack of clean-out flanges ("caps") on the service water spray array assemblies.

b. Findings

No findings of significance were identified.

2. Maintenance Rule Implementation

a. Inspection Scope

The inspectors reviewed the licensee's Maintenance Rule periodic assessment, "2002 Maintenance Rule Periodic Assessment Report - North Anna Power Station," for September 1, 2000 - February 28, 2002, dated July 26, 2002, while on-site the week of September 22, 2003. The report was issued to satisfy paragraph (a)(3) of 10 CFR 50.65, and covered the period as indicated for two units. The inspection was to determine the effectiveness of the assessment and that it was issued in accordance with the time requirement of the Maintenance Rule (MR) and included evaluation of: balancing reliability and unavailability, (a)(1) activities, (a)(2) activities, and use of industry operating experience. To verify compliance with 10 CFR 50.65, the inspectors reviewed selected MR activities covered by the assessment period for the following maintenance rule systems: Pressurizer Heaters, Radiation Monitors, Containment Isolation Valves, Steam Generator Power Operated Reliefs Valves, and Main Steam Dump Valves. Specific procedures and documents reviewed are listed in the attachment to this report.

During the inspection, the inspectors reviewed selected plant work order data, the site guidance implementing procedure, discussed and reviewed relevant corrective action issues, reviewed generic operations event data, structural reports, probabilistic risk data, and discussed issues with system engineers. Operational event information was evaluated by the inspectors in its use in MR functions. The inspectors selected work orders, a MR assessment, and other corrective action documents of systems recently removed from 10 CFR 50.65 a(1) status and those in a(2) status for some period to assess the justification for their status. The documents were compared to the site's MR program criteria, and the MR a(1) evaluations and rule related data bases.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control

a. Inspection Scope

The inspectors reviewed data output from the licensee's safety monitor associated with the risk profile of Units 1 and 2. The following risk assessment areas were looked at:

- A 10-day risk (green window) existed due to the service air compressor (unit 1), AMSAC, service water spray array valve 1-SW-MOV-122B, the B service water spray array supply loop and the 2A LHSI being out of service;
- An 18-day risk (green window) existed on Unit 2 due to the service air compressor (unit 1), AMSAC, service water spray array valve SW-MOV-122B, and the associated B service water spray array supply loop being out of service;

- A 71-day risk (green window) existed on Unit 1 due to the Unit 2 control room chiller (4C), the Unit 1 B CVCS pump, licensee switchyard work (grid grounding work), and the 1J EDG being out of service;
- A 222-day risk (green window) existed on Unit 2 due to the Unit 2 control room chiller (4B), the Unit 2 B CVCS pump, "C" MFRV positioner, and the 1J EDG being out of service. Also switchyard work (breaker replacement) was being performed; and,
- A 60-day risk (green window) existed on Unit 1 due to Unit 1 CW pump, Unit 2 B service water pump check valve, and "A" train service water being out of service. Emergent work on the SBO diesel, resulting its removal from service for hose replacement, reduced the risk to a 30 day risk (green window).

b. Findings

No findings of significance were identified.

1R14 Operator Performance During Non-Routine Evolutions and Events

a. Inspection Scope

On July 15, 2003, the inspectors observed maintenance personnel and operator actions for the repair of the Unit 2 main feedwater regulating valve positioner. Repair was required because the valve would oscillate while in operation. The repair required the use of a manual override device (a turnbuckle device referred to as a "Jacatuator") and the use of plant procedure 2-MOP-31.5, "Operation of Feedwater Control Valves Using Manual Override." The inspectors reviewed operator logs, plant computer data, and plant operating procedures to determine what occurred and if the operators' response was in accordance with plant procedures.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors conducted reviews and held discussions with the appropriate plant operations and engineering personnel to determine if operability of the following conditions were properly evaluated:

- N-2003-2530 - the three Unit 1 control room chiller units (4A, 4B, and 4C) did not have the proper piping support configurations to meet design seismic conditions (this was later determined to not be the case). After insulation had been

removed (for other chiller work - condenser replacement) the licensee noted that the piping was not supported with a designed "H" bracket configuration but, instead, the only support was the piping weldments attached to the main chiller water manifold header. Engineering performed an operability evaluation and determined that the piping was in an overstressed condition and the licensee entered into TS 3.03. The inspectors evaluated the licensee's actions to address the inoperability;

- N-2003-3097 - associated with the potential for incorrect oil in the Unit 2 Outside Recirculation Spray (ORS) Pump 2B. Oil storage for the oil to be used in the pump was incorrectly marked and some of the containers used to transfer the oil was also marked incorrectly;
- N-2003-3121 - associated with power lead degradation on the Unit 1 sampling system compressor unit. In addition to the operability determination, the inspectors reviewed the licensee's wiring inspection program as well as the training received by personnel who inspect wiring. In addition, a representative sample of component procedures were reviewed to ensure that wiring inspection is a routine part of each procedure.
- N-2003-3170 - associated with inadvertently use of Rosemount-type Boric Acid Storage Tank (BAST) level transmitter calculations on the in-place (original) Barton level transmitters. The licensee, in 1995, started a modification (DCP-95-125) to replace the originally installed six (6) Barton-type transmitters with newer, Rosemount-type transmitters. In 1998, after only replacing 3 of the transmitters, the licensee closed-out the modification and erroneously started using the Rosemount channel statistical allowance (CSA) calculations for both the Rosemount and Barton BAST level transmitters. The licensee determined that since the Barton-type transmitter CSA calculations are actually bounded by the Rosemount calculation, the past Barton transmitter "read-outs" (even though they were adjusted to Rosemount specifications), remain acceptable. The licensee re-issued a DCP package to replace the remaining Barton transmitters with Rosemounts (DCP-03-120).

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing

a. Inspection Scope

The inspectors reviewed the following post-maintenance test (PMT) procedures, work orders (WO), and activities associated with the repair or replacement of the following

components to determine that the procedures and test activities were adequate to verify operability and functional capability of the equipment:

- Procedures 1-PT-82J, "1J Emergency Diesel Generator Slow Start Test" and 1-MOP-6.91, "Emergency Diesel Generator 1-EE-EG-1J," after minor maintenance on the 1J emergency diesel generator;
- Procedure 2-PT-77.11B, "Inservice Test Unit 2 4B Heating and Ventilation Chiller Unit," after the Unit 2 4B Control Room Chiller condenser was replaced;
- Procedure 2-PT-213.8A, "Valve Inservice Inspection ("A" Train of Safety Injection System)," and Work Orders WO-477893-01, "MOV stem inspection/lubrication," and WO-496025-01, "Repair PORV 201C due to steam leak," after Unit 2 Low Head Safety Injection System maintenance;
- Procedure 0-EPM-0107-02, "Quarterly Service Inspection of TSC Battery," after the TSC (AMSAC) UPS Battery preventative maintenance and battery repairs were performed when cell # 22 was observed to be reading low on voltage; and,
- Procedure 2-PT-82.2A, "2H Emergency Diesel Generator Test (Simulated Loss of Off-Site Power)," following coolant change out activities on the EDG and after readjustment of the service water sensor logic switch (43F-2ENSHO3).

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

For the surveillance tests listed below, the inspectors examined the test procedure and either witnessed the testing and/or reviewed test records and data packages to determine whether the scope of testing adequately demonstrated that the affected equipment was functional and operable, and that the surveillance requirements of the technical specifications were met:

- 2-PT-57.1B, "Emergency Core Cooling Subsystem - Low Head Safety Injection Pump 2-SI-P-1B;";
- 2-PT-71.3Q, "2-FW-P-3B, Motor-Driven AFW Pump and Valve Test;";
- 2-PT-213.8B, "Valve Inservice Inspection - "B" Train of Safety Injection System," performed in conjunction with above LHSI Pump Test (2-PT-57.1B) to completely stroke test the associated pump discharge valve;
- 1-PT-82H, "1H Emergency Diesel Generator Slow Start Test;"; and,
- 1-PT-83.12H, "1H Emergency Diesel Generator Start by ESF Actuation."

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness**1EP2 Alert Notification System Testing****a. Inspection Scope**

The inspector reviewed the alert (siren) and notification system (ANS) designed to meet the acceptance criteria of Section B of Appendix 3, NUREG-0654. The semi-weekly silent tests and the quarterly full cycle tests were reviewed against the minimum commitments in the Emergency Plan. The inspector reviewed testing results, assessed the failure rate of individual sirens and the effectiveness of repairs, and reviewed any changes related to the siren system.

b. Findings

No findings of significance were identified.

1EP3 Emergency Response Organization Augmentation Testing**a. Inspection Scope**

The inspector reviewed Table B-1 of the Emergency Plan to determine the licensee's commitment for staffing/activation of the emergency response facilities and shift staffing augmentation. The results of the two most recent unannounced call-out drills (not actual responses) were evaluated against the approximately 60 minute time commitment to fill minimum staff positions.

b. Findings

No findings of significance were identified.

1EP4 Emergency Action Level and Emergency Plan Changes**a. Inspection Scope**

The inspector reviewed the changes made in Revisions 27 and 28 of the North Anna Radiological Emergency Plan (REP) dated December 18, 2002, and July 1, 2003, respectively, against the requirements of 10 CFR 50.54(q) to determine whether any of those changes decreased REP effectiveness.

b. Findings

No findings of significance were identified.

1EP5 Correction of Emergency Preparedness Weaknesses and Deficiencies

a. Inspection Scope

The inspector evaluated the licensee programs that addressed weaknesses and deficiencies in emergency preparedness. Inspection requirements from 10 CFR 50, Appendix E, paragraph IV.F.2.g that all training provide for formal critiques in order to identify weak or deficient areas that need correction, and any weaknesses or deficiencies identified shall be corrected. The inspector reviewed the licensee's corrective action program, a sampling of drill scenarios and related critiques, the adequacy of corrective actions taken as a result of drill critiques, and the audit report performed in accordance with 10 CFR50.54(t).

b. Findings

No findings of significance were identified.

4. **OTHER ACTIVITIES**

4OA1 Performance Indicator (PI) Verification

a. Inspection Scope

The inspectors performed a periodic review of the Unit 1 and 2 PI data reported to the NRC for the following performance indicators:

- Unplanned Scrams per 7000 Critical Hours (Initiating Event Cornerstone);
- Scrams with Loss of Normal Heat Removal (Initiating Event Cornerstone); and
- Reactor Coolant System Activity (Barrier Integrity Cornerstone).

The inspectors reviewed data for the fourth quarter 2002 to second quarter 2003 from the licensee event reports, maintenance rule records, operating logs, technical specifications and chemistry sample records. Discussions with the PI and maintenance rule coordinators were held by the inspectors regarding the data reviewed. The data was compared with that displayed on the NRC's public web site. The PI method of assessment was compared with the guidelines contained in Nuclear Energy Institute (NEI) 99-02, "Regulatory Assessment Performance Indicator Guideline."

During plant tours the inspectors also periodically assessed the Occupational Exposure Control Effectiveness and the RETS/ODCM Radiological Effluent Occurrence PIs by determining if high radiation areas (>1R/hr) were properly secured and looking for unmonitored radiation release pathways.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems

a. Inspection Scope

The inspectors performed a semi-annual review of the licensee's corrective action program (CAP) to assess trends that might indicate the existence of more significant safety issues. This semi-annual review included a review of the licensee's system health report, self assessment reports, and plant issues. Plant issues and applicable root cause evaluations associated with tagging problems reviewed by the inspectors included the following:

- N-2003-0039 - Welders inadvertently cut piping on wrong side of isolation valve for high pressure heater drain valve due to not noticing red danger tag;
- N-2003-0070 - Mechanical maintenance personnel contacted operations to request clarification of tagging boundary;
- N-2003-0464 - Licensee's performance annunciator panel indicates a negative trend in tagging. Trend went from white to red;
- N-2003-1020 - Danger tag discovered to be hung in error during a walkdown by craft foreman after sign off of work order prior to start of work;
- N-2003-3285 - Electrician removed RED tagged breakers in control room without the proper involvement of the Operations Department (See Section 4OA7 for licensee identified deficiency); and,
- N-2003-2403 - 1-EE-EG-1H exceeding 14-day Limiting Condition of Operation (LCO).

b. Findings and Observations

There were no findings of significance identified. The inspectors identified that there was an increase in the number of tagging/work control problems due mainly to human performance problems. The inspectors observed that the licensee was pro-actively taking measures to resolve the tagging problems.

4OA3 Event Followup

a. Inspection Scope

The inspectors reviewed information available concerning the spurious discharge of carbon dioxide (CO₂) into the Unit 2 cable spreading room on June 27, 2003, to determine if an emergency action level (EAL) had been met but not declared as required by the REP.

b. Findings

Introduction. A Green non-cited violation (NCV) of 10 CFR 50.54(q), 50.47(b)(4), and Section IV.B of Appendix E of 10 CFR 50 was identified for failure to declare an Notification of Unusual Event.

Description. At 1000 hours on June 27, 2003, a Fix-It-Now (FIN) team electrical maintenance evolution resulted in a spurious discharge of CO₂ into the Unit 2 Cable Spreading Room. Response to the event consisted of the electrician warning anyone inside the cable spreading room to evacuate prior to discharge (prompted by the trouble light and CO₂ pre-discharge alarm); the fire brigade team responding to the scene in self-contained breathing apparatus (SCBA) and searching the area for anyone who might have been inside, and the scene leader directing that the Emergency Switchgear Room and stairwell areas be checked for oxygen (O₂). This resulted in the identification that O₂ levels within the lower level of the Service Building Stairwell dropped below that necessary for habitability.

No emergency classification was made. A review of Tab K to the Emergency Action Level Table of EPIP-1.01 lists the Notification of Unusual Event classification condition as an onsite or nearsite release of toxic or flammable liquids or gases. The indication listed for the event is notification of unplanned release of toxic or flammable agents which may affect safety of station personnel or equipment. The unplanned release of CO₂ resulting in the lower level of the Service Building Stairwell not being habitable met this condition.

Analysis. The inspector determined that this event did not have any potential for impacting NRC's regulatory function. However, the licensee's failure to make an emergency classification was considered more than minor since it affected an Emergency Preparedness Cornerstone objective. The affected objective is the emergency response organization's performance in an event to ensure that North Anna is capable of implementing adequate measures to protect public health and safety during an emergency.

Consequently, this issue represents a finding that is more than minor and which was evaluated using the Emergency Preparedness Significance Determination Process contained in Appendix B to Manual Chapter 0609. Since the finding involved a failure to comply with regulatory requirements during an actual event, Sheet 2 of Appendix B is applicable. This sheet classifies a failure to declare a Notification of Unusual Event as very low safety significance (Green).

Enforcement. In part, 10 CFR 50.54(q), 50.47(b)(4), and Section IV.B of Appendix E of 10 CFR require that an emergency action declaration be made promptly after an emergency action level is met. Contrary to the above, the licensee failed to classify and declare an Unusual Event on June 27, 2003, when all required conditions necessitating classification and declaration of an Unusual Event were met. This violation is being treated as an NCV in accordance with Section VI.A.1 of the Enforcement Policy issued May 1, 2000 (65 FR 25388). This violation is identified as NCV 05000338, 339/2003004-01, Failure to classify and declare an Notification of Unusual Event as required by 10 CFR 50.54(q), 50.47(b)(4), and Section IV.B of Appendix E of 10 CFR 50.

4OA6 Meetings, Including Exit

Exit Meeting Summary

On October 15, 2003, the resident inspectors presented the inspection results to Mr. Jack Davis and other members of his staff who acknowledged the findings. The inspectors confirmed that proprietary information was not provided or examined during the inspection.

4OA7 Licensee-Identified Violations

The following violations of very low safety significance (Green) were identified by the licensee and are violations of NRC requirements which meet the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600, for disposition as NCVs:

- Technical Specification 5.4.1 requires that written procedures be established and implemented for the activities covered in Regulatory Guide 1.33. Procedure OPAP-0010, "Tag-Outs, Section 6.1.2, requires that equipment status be identified by tags as specified in the procedure. Contrary to this, on August 29, 2003, the change in equipment status was not reflected in the operation tagging log when an electrician removed RED tagged three poled breakers to replace them with new single poled breakers. This event is documented in the licensee's corrective action program as Plant Issue N-2003-3285. This event is of very low safety significance because the circuitry was not energized and no operating plant equipment was impacted.
- Technical Specification 5.4.1 requires that written procedures be established and implemented for the activities covered in Regulatory Guide 1.33. Procedure VPAP 2401, "Fire Protection Program," Section 6.1.1(g)2 requires that prior to performing any evolution which may result in the release of CO₂, the area shall be inspected and precautions shall be taken to prevent a life hazard. Procedure VPAP 2401 Section 6.1.1 (h) further requires that prior to performing any evolution which may result in the actuation of an alarm, the Shift Manager and personnel in the area shall be made aware of the situation. Contrary to this, on June 27, 2003, a craftsman opened an energized Cardox panel door to perform unplanned work. This work resulted in the unexpected, inadvertent actuation of CO₂ in the Unit 2 Cable Spreading Room. This event is documented in the licensee's corrective action program as plant issue N-2003-2539. This event is of very low safety significance because shutdown equipment contained in the cable spreading room was backed up by redundant equipment and impact on operating plant equipment was minimal.

ATTACHMENT: SUPPLEMENTAL INFORMATION

Enclosure

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

D. Christian, Senior Vice President and Chief Nuclear Officer
K. Barnette, Supervisor, Site Industrial Safety/Fire Protection
J. Crossman, Supervisor, Nuclear Engineering
L. Lane, Director, Nuclear Safety and Licensing
E. Dryier, Supervisor Dosimetry
M. Dunston, Manager, Site Services
J. Davis, Director, Nuclear Operations and Maintenance
D. Heacock, Site Vice President
P. Kemp, Manager, Operations
M. Lane, ALARA Supervisor
J. Leberstien, Supervisor Licensing
T. Maddy, Manager, Nuclear Protection Services
B. McBride, Supervisor, Emergency Preparedness
F. Mladen, Manager, Maintenance
N. Nichols, Staff Health Physicist
Q. Parker, Maintenance Rule Coordinator
W. Renz, Director, Nuclear Security and Emergency Preparedness
H. Royal, Manager, Nuclear Training
M. Sartain, Manager, Station Engineering
A. Stafford, Manager, Radiological Protection
M. Whalen, Supervisor Licensing

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000338, 339/2003004-01	NCV	Failure to classify and declare an Notification of Unusual Event as required by 10 CFR 50.54(q), 50.47(b)(4), and Section IV.B of Appendix E of 10 CFR 50 (Section 40A3)
--------------------------	-----	--

Discussed

NONE

LIST OF DOCUMENTS REVIEWED

Section 1R05: Fire Protection

Plant Issue Reports

N-2003-2899, Fuel Oil Pump House Fire Protection Panel failed during lightening strike storm
 N-2003-3010, Lack of proper labeling of communications equipment in new technical support building and some newly installed FP detection equipment also lacked ID numbers
 N-2003-3377, The FP equipment was in need of repair/replacement (obsolete heat/smoke detectors) and fire suppression item for two 100 gallon fuel oil storage tanks appeared to be insufficient
 N-2003-3548, FP dampers in Unit 1 and Unit 2 Cable Spreading Rooms failed to actuate properly during functional testing

Section 1R12: Maintenance Effectiveness (paragraph 2)

Plant Issue Reports

N-2001-3447, Containment Isolation Valve
 N-2000-0362, B containment Vacuum Discharge Check Valve
 N-2001-1279, Relief valve on 1-IA-TK-4A, B, and C
 N-2003-0821, Relief valve on 1-IA-TK-4A, B, and C
 N-2099-2838, Main Steam PORVs
 N-2000-1057, A&B Main Condenser Steam Dump Valves
 N-2000-1341, A Main Steam Dump
 N-2001-3604-E1, 2-MS-TCV-2408A Failed Open
 N-2002-0089, Main Steam Dump Valve
 N-2000-1861, Discharge Tunnel Hi Radiation Monitor
 N-2000-2146, Process Vent High Range Effluent Radiation Monitor
 N-2003-1243, Process Vent High Range Effluent Radiation Monitor
 N-2000-0266, Pressurizer Heater Unreliability

Administrative Procedures

VPAP-0815, Maintenance Rule Program, Revision 12
 STD-GN-0044, Maintenance Rule Program Administration, Revision 3

Miscellaneous

Audit Report 01-13, Maintenance Rule a(4) Program, 11/20/2001
 Audit Report 02-06, Design Control and Engineering Programs, 8/06/02
 NRC Inspection Report 50-338, 339/2003-008-002 NCV, Failure of Corrective Action Program to Determine the Cause of Charging Pump Seal Leaks to Preclude Repetition
 PM Task Evaluation N-PMTE-2003-0130, HVD-P-1A-1B- PUMP Oil and Filter Change
 Engineering Transmittal No. N02-073, Rev. 0, Monitoring of Structures Report of 5-Year Periodic Inspections North Anna Power Station, Unit 1 & 2, 10-30-02

Section 40A1: Performance Indicator Verification

Procedures

HPAP-2802, NRC Performance Indicator Program, Rev. 1

0-PT-452.01, Radioactive Liquid Effluents, Dose Calculations, Revision 5 (reviewed results of monthly procedural performance for June 2003 to September 2003)

0-PT-454.01, Radioactive Gaseous Effluents, Dose Calculations, Revision 5 (reviewed results of monthly procedural performance for June 2003 to September 2003)

Section 40A3: Event Followup

Radiological Emergency Plan, Revisions 27 and 28

Nuclear Oversight Audit Report 03-02: Emergency Preparedness

Job Demonstration Guide 3, State & Local Emergency Communicator

Trend Evaluation Response-N-2002-1815-E1