



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II  
SAM NUNN ATLANTA FEDERAL CENTER  
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ATLANTA, GEORGIA 30303-8931

October 28, 2002

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 NOS. 50-338/02-03 AND 50-339/02-03

Dear Mr. Christian:

On September 28, 2002, the NRC completed an integrated inspection at your North Anna Power Station, Units 1 and 2. The enclosed report documents the inspection findings which were discussed on October 16, 2002, with Mr. D. Heacock 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. Based on the results of this inspection, no findings of significance were identified.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures 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: NRC Integrated Inspection Reports Nos. 50-338/02-03, 50-339/02-03  
w/Attachment: Supplementary Information

cc w/encls.: See page 2

VEPCO

2

cc w/encls:

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PUBLIC DOCUMENT (circle one): YES

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SIGNATURE	M. Morgan	J. Canady	P. VanDoorn	L. Garner	K ODonohue	H. Christensen	P. Vandoorn for
NAME	MMorgan	JCanady	PVanDoorn	LGarner	KO'Donohue	BBearden	RTelsen
DATE	10/28/2002	10/28/2002	10/28/2002	10/28/2002	10/28/2002	10/28/2002	10/28/2002
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

PUBLIC DOCUMENT (circle one): YES

OFFICE	Rll	Rll	Rll	Rll	Rll	Rll	Rll
SIGNATURE	P. VanDoorn for						
NAME	JBlake						
DATE	10/28/2002						
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

U.S. NUCLEAR REGULATORY COMMISSION

REGION II

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

Report Nos.: 50-338/02-03, 50-339/02-03

Licensee: Virginia Electric and Power Company (VEPCO)

Facilities: North Anna Power Station, Units 1 & 2

Location: 1022 Haley Drive  
Mineral, Virginia 23117

Dates: June 30, 2002 through September 28, 2002

Inspectors: M. Morgan, Senior Resident Inspector  
B. Bearden, Reactor Inspector, RII (Section 1R08)  
J. Blake, Senior Project Manager, RII (Sections 1R02 and 1R17)  
J. Canady, Resident Inspector  
L. Garner, Senior Project Engineer, RII (Section 1R04.2 and 4OA5)  
K. O'Donohue, Operations Engineer, RII (Section 4OA5)  
R. Telson, Resident Inspector Sequoyah RII (Sections 1R02 and 1R17)  
P. VanDoorn, Senior Reactor Engineer, RII (Sections 1R02 and 1R17)  
S. Vias, Senior Reactor Inspect, RII (Section 4OA5)

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

Attachment: Supplementary Information

Enclosure

## SUMMARY OF FINDINGS

IR 05000338-02-03, IR 05000339-02-03, on 06/30-09/28/2002, Virginia Electric and Power Co., North Anna Power Station Units 1 & 2. Resident Inspector Integrated Report.

The inspection was conducted by the resident inspectors and regional senior reactor and project engineers. 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 3, dated July 2000.

A. Inspector Identified Findings

None

B. Licensee Identified Violations

None

## Report Details

### Summary of Plant Status

Unit 1 began the inspection period at 100% power. On September 2, power was reduced to 65% for scheduled condenser waterbox maintenance. On September 5, power was raised to 100% and the unit operated at or near this level for the remainder of the inspection period.

Unit 2 began the inspection period at or near 100%. On September 8, the unit was shutdown for a scheduled refueling outage (RFO). The inspection period ended with Unit 2 outage activities in progress.

## **1. REACTOR SAFETY**

### **Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity**

#### 1R01 Adverse Weather Protection

##### a. Inspection Scope

The inspectors reviewed licensee documents and actions associated with the drought conditions which resulted in low lake levels. The documents reviewed included Technical Specifications, Emergency Action Level (EAL) basis documents, Site Emergency Plans, and the Updated Final Safety Analysis Report (UFSAR). The inspectors also assessed licensee planning for entry into a notice of unusual event (NOUE) based upon the guidelines provided in the EAL basis documents for a lake level of 246 feet. Planning included coordination with the state and the NRC's operation center regarding modifying the reporting frequency during the expected lengthy time of being in a NOUE condition. The licensee entered into an NOUE on August 9 at 12:10 p.m. due to lake levels decreasing below 246 feet.

##### b. Findings

No findings of significance were identified.

#### 1R02 Evaluations of Changes, Tests or Experiments

##### a. Inspection Scope

The inspectors reviewed selected samples of evaluations to confirm that the licensee had appropriately considered the conditions under which changes to the facility or procedures may be made and tests conducted without prior NRC approval. The inspectors reviewed evaluations for eight changes. The inspectors confirmed, through review of additional information such as calculations, supporting analyses, the UFSAR, and drawings that the licensee had appropriately concluded that the changes could be accomplished without obtaining a license amendment. The eight evaluations reviewed are listed in the Attachment to this report.

The inspectors also reviewed samples of design/engineering packages and procedure changes for which the licensee had determined that evaluations were not required, to

confirm that the licensee's conclusions to "screen out" these changes were correct and consistent with 10 CFR 50.59. The 14 "screened out" changes reviewed are listed in the Attachment to this report.

The inspectors also reviewed the results of the licensee's recent self-assessment and a plant issue related to the 10 CFR 50.59 process to confirm the licensee was identifying problems at an appropriate threshold, entering these into the corrective action process, and initiating appropriate corrective action.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment

.1 Quarterly Alignment

a. Inspection Scope

The inspectors performed partial walkdowns of systems, structures, and components (SSC) to determine if they were correctly aligned in accordance with appropriate procedures and drawings. The partial walkdowns were performed on a redundant train/system while the other train/system was out of service. The following SSCs were assessed for their correct alignment using the referenced documents:

- Unit 1 Train A Component Cooling Water System, (1-OP-51.1A, "Valve Checkoff - Component Cooling Water");
- Unit 2 Train A Auxiliary and Main Steam, (2-OP-51.1A, "Valve Checkoff - Auxiliary Building and Main Steam Valve House"); and,
- Unit 2 Train A Outside Recirculation Spray (ORS), (2-OP-7.5A, "Valve Checkoff - ORS System," Station Unit 2 Drawing 12050-FM-091A, sheet 4, 2-OP-7.4A, "Valve Checkoff - Quench Spray System," and Station Drawing 12050-FM-091A, sheets 1 and 2)

b. Findings

No findings of significance were identified.

.2 Complete System Walkdown

a. Inspection Scope

The inspectors performed a detailed walkdown and inspection of portions of the Unit 2 Auxiliary Feedwater System outside of containment to determine if it was properly aligned and to identify discrepancies that could impact its availability and functional capability. The inspectors assessed the physical condition of pumps, valves, pipe supports, and instrumentation. The inspection also included review of the alignment and the condition of support systems including steam, service water, instrument air,

room ventilation and emergency lighting. Equipment deficiency tags were reviewed and the condition of the system was discussed with engineering personnel. The inspectors utilized the following operating procedure (OP) and drawings:

- 2-OP-31.2A, "Valve Checkoff - Auxiliary Feedwater;"
- Drawing 12050-FM-074A, "Flow / Valve Operating Numbers Diagram Feedwater System North Anna Power Station - Unit 2," Sheet 3; and,
- Drawing 12050-FM-074B, "Flow / Valve Operating Numbers Diagram Aux Feedwater Pumps Lube Oil System 2-FW-P-2, 2-FW-P-3A & 2-FW-3B North Anna Power Station - Unit 2," Sheet 1.

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 "NAPS Appendix R Report" and 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 areas:

- Unit 1 and Unit 2 Auxiliary Building, Elevations 274' and 259'6":
- Technical Support Center (TSC) Ventilation Area (fire drill observations):
- TSC Battery Room and Instrumentation and Control Shop Assembly Areas (fire drill observations):
- Unit 1 Turbine Building Zone 1 Area;
- Unit 1 and Unit 2 Plant Electric Fire Pump (1-FP-P-1) Area;
- Unit 2 Auxiliary Building Fire Door Areas, Elevation 271'; and,
- Unit 2 Cable Tray Fire Door Areas, Elevation 294)

b. Findings

No findings of significance were identified.

1R08 Inservice Inspection Activities

a. Inspection Scope

The inspectors observed portions of the remotely monitored vessel head penetration (VHP) visual examinations and reviewed licensee and vendor procedures. The resulting video tapes were reviewed to confirm that the licensee had properly identified either potentially leaking VHPs or VHPs which required additional NDE to determine their condition. The visual examination identified six potential leaking VIPs. Qualifications of personnel performing the visual examinations were verified and discussions were held with contractor representatives and other licensee personnel. The inspectors assessed



the scope of NDE inspections, i.e., eddy current, dye penetrant and ultrasonic testing, to confirm that they were consistent with the guidelines of NRC Bulletin 2002-02, "Reactor Pressure Vessel Head and Vessel Head Penetration Nozzle Inspection Programs."

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification

a. Inspection Scope

During the week of August 19, the inspectors observed in-plant licensed operator activities. They reviewed relevant return-to-work documents for union represented control board operators who had returned to shift duties following strike. The inspectors focused their observations on licensed operator shift order/guidance preparations, on-shift procedure usage, routine communications, and unit control board manipulations. The inspectors also evaluated if shift turn-overs were properly performed and if up-to-date licensed operator requalification certification requirements were met by the licensed operators prior to these operators returning duty.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness

a. Inspection Scope

For the equipment issues described in the plant issues listed below, the inspectors evaluated the licensee's effectiveness of the corresponding preventive and corrective maintenance. Inspectors performed walkdown of the accessible portions of the system, performed in-office reviews of procedures and evaluations, and held discussions with system engineers. Inspectors compared the licensee's actions with the requirements of the Maintenance Rule (10 CFR 50.65) using VPAP 0815, "Maintenance Rule Program," and Engineering Transmittal (ET) CEP-97-0018, "North Anna Maintenance Rule Scoping and Performance Criteria Matrix."

- N-2001-1279-R3 - Reliability of the Unit 1 and Unit 2 Steam Generator PORV Backup Air Supply Tank Relief Valves - Due to numerous failures of the valves, the reliefs were placed in a(1) status for continued observation;
- N-2002-1834 - Control Room Bottled Air Modification (Hilti-Bolt Placement) - Personnel failed to use established standards for bolt installation. Bolts were not installed to prescribed depth. Subsequent engineering analysis determined that the installation, although not in accordance with standards, was still acceptable;
- N-2002-1850, Service Water Spray Array Reliability - Due to numerous piping weldment and side-wall pin-hole leaks, the spray arrays were placed in a(1) status for continued evaluation.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control

a. Inspection Scope

The inspectors reviewed the licensee's scheduled or emergent work activities to assess the management of plant risk. The inspectors evaluated if the assessments of risk were performed in accordance with requirements of 10CFR50.65 (a)(4) and plant procedures. Additionally, the inspectors reviewed the licensee's actions to minimize the probability of initiating events, maintain the functional capability of mitigating systems, and maintain barrier integrity. The risk impact of performing the following work activities was assessed:

- Work Order 00438178-01 - Unit 1 1H Emergency Diesel Generator (EDG) Storage Tank Cleaning and Inspection Activities;
- Work Order 00461438-01 - Unit 1 1B Component Cooling Water Heat Exchanger Cleaning Activities;
- Work Order 00462991-01- Unit 2 A Main Steam Header Pressure Transmitter (2-MS-P-201A) Calibration Activities;
- Work Order 00460938-02 - Unit 1 Loop 1 Channel 1 Hot/Cold Leg Temperature Recorder Adjustment/Calibration Activities;
- Work Order 00460940-14 - Unit 2 Wide Range Channel III Loop 3 Hot/Cold leg Temperature Recorder Adjustment/Calibration Activities;
- Periodic Test 2-PT-36.17A, "Channel Calibration for Station Blackout - Unit 2 Train A Bus 1E and 1F"- Station Blackout (SBO) Diesel Testing; and,
- Periodic Test 2-PT-36.17B, "Channel Calibration for Station Blackout - Unit 2 Train B Bus 1E and Bus 1F" - SBO Diesel Testing.

b. Findings

No findings of significance were identified.

1R14 Nonroutine Plant Evolutions

a. Inspection Scope

The inspectors monitored portions of the Unit 1 power ascension from 68% to 100% reactor thermal power. Reactor power had been earlier reduced to perform an inspection and tube repair of condenser tubes. The inspectors also held discussions with operations and nuclear engineering personnel regarding the power ascension and the status of any transient initiators (xenon).

b. Findings

No findings of significance were identified.

## 1R15 Operability Evaluations

### a. Inspection Scope

The inspectors evaluated the technical adequacy of operability evaluations to ensure that operability was properly justified and the subject component or system remained available such that no unrecognized increase in risk occurred. The reviewed operability evaluations were described in the following plant issues:

- N-2002-2121 - Station Blackout (SBO) Diesel Generator Low Battery Cell Voltage Issue - Licensee noted low battery cell (#8) voltage during the performance of SBP diesel testing;
- N-2002-2251 - Coolant Leakage From 2H Emergency Diesel Generator (EDG) #1 Cylinder of the Unit 2H EDG - Operations personnel note excessive leakage at cylinder area - request engineering assistance in determining operability;
- N-2002-1234 - Follow-Up on NSSS Vendor Vessel Head Penetration Flaw Aspect Ratio Calculations - Licensee OE coordinator questions about calculations;
- N-2002-1964 - Low Water Level at the Circulating Water Discharge Structure - Licensee engineering determined discharge fully operable with no restrictions/contingencies;
- N-2002-2040 - 1J EDG Lube Oil Heater Breaker Failure - Continuing failures of breaker vendor NZM-type breakers; and,
- N-2002-2390 - Improved Technical Specification Interpretation for Alternative AC Power Sources - Licensee corporate interpretations for SBO diesel inoperability.

### b. Findings

No findings of significance were identified.

## 1R16 Operator Work-Arounds (OWAs)

### a. Inspection Scope

The inspectors reviewed operator workaround (OWA) 98-OWA-B25, "Secondary Side Feed Water Heater Reliefs and held discussions with the responsible engineer. The inspectors determined from this review and discussions that design change DC-02-117 has been developed to install improved relief valves on Unit 2 during the fall 2002 outage. The inspectors also reviewed 50.59 and the design change safety reviews.

### b. Findings

No findings of significance were identified.

## 1R17 Permanent Plant Modifications

### a. Inspection Scope

The inspectors evaluated design change packages for five modifications, in all three cornerstone areas, to evaluate the modifications for adverse affects on system availability, reliability, and functional capability. The modifications and the associated attributes reviewed are as follows:

#### DCP01-119, Unit 2 RHR Heat Exchanger Component Cooling Flow Transmitter Replacement (Mitigating Systems)

- Functional requirements in accordance with design bases
- Environmental qualification
- Testing including acceptance criteria
- Implementation actions including normal and emergency operating procedure changes, plant computer changes, simulator changes, and training

#### DCP00-169, Control Room Bottled Air System Modification (Mitigating Systems)

- Energy needs (i.e., additional electrical loads added to vital and semi-vital buses)
- Added Piping Materials met functional and seismic qualification requirements
- Flowpaths for the modified air system eliminated single failure vulnerability of original design
- Piping support systems and additional bottle racks met structural and seismic design requirements
- Licensee identified problems during installation and testing of modified system

#### DCP95-190, RWST/CCT Manway Strongbacks (Barrier Integrity, Mitigating Systems)

- Materials/Replacement Components material compatibility, functional property and seismic qualification requirements
- Replacement Pressure Boundary materials original design specification requirements
- Structural integrity of the modified tanks for accident/event conditions
- Modification activities scheduled and completed during appropriate plant modes
- Plant drawings updated to show modifications.

#### DCP01-113, Unit 1 Control Rod Position Indication (RPI) Voltage Regulator Transformer Replacement (Mitigating Systems)

- Energy needs (voltages and currents)
- Compatibility with physical interfaces
- Functional properties (response to power interruption)
- Heat removal
- Operation procedures and training
- Process medium (voltages and currents)
- Failure modes
- Post-modification testing

DCP01-161, Unit 2 Vital Bus 2-I, 2-II Inverter Modification / Replacement (Initiating Events, Mitigating Systems)

- Energy needs (voltages and currents)
- Compatibility with physical interfaces
- Functional properties (static switch and regulated backup power supply)
- Control signals (deletion of remote manual inverter bypass switch)
- Heat removal
- Operation procedures and training
- Process medium (voltages and currents)
- Failure modes

The inspectors observed the as-built configuration for selected modification packages. Documents reviewed included procedures, engineering calculations, modifications, work orders, site drawings, corrective action documents, applicable sections of the living UFSAR, supporting analyses, Technical Specifications, and design basis information.

The inspectors also reviewed nine PIs to confirm the licensee was identifying problems at an appropriate threshold, entering these into the corrective action process, and initiating appropriate corrective actions.

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 and activities associated with repair or replacement of the following components to determine if the procedures and test activities were adequate to verify operability and functional capability of the equipment:

- Unit 1 Service Water Spray Array Piping Test (0-PT-171.4, "Alternate Pressure Tests for Hydrostatic/Pneumatic Testing");
- Unit 1 Charging Pump 1C Normal Discharge Valve 1286 Test (1-PT-213.2C, "Valve Inservice Inspection Charging Pump 1-CH-P-1C MOV");
- Unit 1 Charging Pump 1C Alternate Discharge Valve 1287 Test (1-PT-213.35C, "Valve Inservice Inspection 1-CH-P-1C Charging Pump Discharge Check Valve Backseat Test");
- Unit 1 Emergency Diesel Generator (EDG) 1J Test (1-PT-82J, "1J Emergency Diesel Generator Slow Start Test");
- Unit 2 EDG 2H Test (2-PT-82H, "2H EDG Slow Start Test").
- Unit 2 EDG 2H Test Following Preventative Maintenance (2-PT-82.3A, "2H Diesel Generator Test - Simulated Loss of Off-Site Power (LOSP) in Conjunction with an ESF Actuation Signal,"); and,

- Unit 2 EDG 2J Test Following Preventative Maintenance(2-PT-82.3B, “2J Diesel Generator Test - Simulated LOSP in Conjunction w/ an ESF Actuation Signal,”).

b. Findings

No findings of significance were identified.

1R20 Refueling and Outage Activities

a. Inspection Scope

The inspectors reviewed the licensee’s Unit 2, Fall 2002 outage risk control plan. The focus of this review was on risk considerations, industry experience, and the licensee’s response strategies for losses of key safety functions. On September 7 the inspectors observed unit coastdown activities in preparation for unit shutdown on September 8.

Unit 2 was shutdown on September 8 for the refueling outage and vessel head inspections. The vessel head inspection was performed in accordance with the guidelines described in NRC Bulletin 2002-02. The inspectors monitored portions of the shutdown and observed that cooldown restrictions were followed. The licensee’s outage plan was reviewed prior to the outage and it was confirmed by the inspectors that shutdown risk and industry operating experience had been properly considered. The inspectors also assessed the licensee’s control of outage activities. These included, clearance activities, electrical power availability, decay heat removal controls and plant inventory control. The unit remained in a shutdown condition at the end of the report period due to ongoing outage activities and reactor vessel head repair, inspection, and potential vessel head replacement activities.

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 to determine whether the scope of testing adequately demonstrated that the affected equipment was functional and operable:

- 1-PT-57.1A, “Emergency Core Cooling Subsystem - Low Head Safety Injection Pump (1-SI-P-1A)”;
- 1-PT-14.1, “Charging Pump 2-CH-P-1A Testing”;
- 1-PT-14.2, “Charging Pump 2-CH-P-1B Testing”;
- ICP-RC-2-T-2433, “Wide Range Temperature (Hot Leg) Protection Channel III”;
- 1-PT-36.1A, “Train A Reactor Protection and ESF Logic Channel Functional (ITS Actuation Logic) Test”; and
- 1-PT-71.1Q “1-FW-P-2 Turbine Driven Auxiliary Feedwater Pump & Valve Test”.

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications

a. Inspection Scope

The inspectors reviewed the details of the following temporary modification (TM) to determine whether system operability/availability was affected; configuration control was maintained; and associated safety evaluations adequately justified implementation:

0-GOP-5.5, "EDG Hot Weather Operations" - Procedurally controlled temporary modification to lift lead to prevent the alarm of local annunciator "Jacket Water or Lube Oil Low Temperature". The lead was lifted following removal of the Jacket Coolant Keepwarm System from service because of hot weather (ambient) conditions. This temporary modification was performed to maintain a lower ambient temperature.

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 PI data reported to the NRC for the following performance indicators:

- Safety system functional failures (Mitigating System) - PI data reviewed for the second quarter of 2001 through the second quarter of 2002.
- Unplanned transients per 7000 critical hours (Initiating System) - PI data reviewed for the fourth quarter of 2001 through the second quarter of 2002.
- RCS leak rate (Barrier Integrity System) - PI data reviewed for the fourth quarter of 2001 to the second quarter of 2002.

The data reviewed for the PIs above was compared to that displayed on the NRC's web site. The documents reviewed included monthly operating reports, licensee event reports, inspection reports and the licensee's corrective action database. It was noted from this review that Unit 1 had an unplanned power reduction of greater than 20% on April 17, 2002 (2<sup>nd</sup> Quarter) due to a loss of generator bus duct cooling. The inspectors also discussed the PIs with licensee personnel responsible for the PI data input and reporting to the NRC. During plant tours, the inspectors periodically assessed high radiation areas (>1 R/hr) to determine if they were properly secured.

b. Findings

No findings of significance were identified.

4OA5 Other

.1 Licensee Strike Contingency Plans (IP 92709)

a. Inspection Scope

The inspectors reviewed the content of licensee's strike contingency plans to determine if reactor operation, facility security, and fire protection were to be maintained consistent with site technical specifications and regulatory requirements in the event of a strike. Interviews were conducted with operations, maintenance, security, emergency preparedness and fire brigade personnel to determine if the minimum number of qualified personnel would be available as required for the proper operation and safety of the facility. In addition, during the initiation of the strike, a team of inspectors observed activities within the control room and plant on a 24 hour basis to assure that reactor operation, facility security and fire protection were maintained consistent with site technical specifications and regulatory requirements.

b. Findings

No findings of significance were identified.

.2 Continued Implementation of Strike Plans (IP 92711)

a. Inspection Scope

On August 2, 2002, approximately 275 union members at the North Anna Power Station (NAPS) went on strike. The resident inspectors immediately began an observation of the transition of plant operations from the unionized control room operators to the non-unionized operators. The resident inspector staff and a regional based inspector performed 24 hour monitoring of plant activities during the initial days of the strike. The 24 hour coverage was discontinued on August 5, 2002, and an extended day (12 hours) monitoring of plant activities was implemented. The inspectors reviewed the licensee's compliance with technical specifications and regulations and decision making process as they related to reactor operation, facility security and fire protection. In addition, operations, maintenance, security, emergency preparedness and fire brigade personnel were observed to determine if the minimum number of qualified personnel were being maintained on a day to day basis as required for the proper operation and safety of the facility.

b. Findings

No findings of significance were identified.



.3 Resumption of Normal Operations After a Strike (IP 92713)

a. Inspection Scope

The strike ended on August 17 and the return of the striking workers was completed by August 19. The inspectors monitored the transition of the striking operations and maintenance personnel back into their routine work functions to ensure that they were qualified to resume their job functions. The inspectors also verified that returning personnel who had been out of contact with plant operation had knowledge of current plant conditions. In addition the inspectors verified that the staffing of the shift crew were consistent with the technical specifications.

b. Findings

No findings of significance were identified.

4OA6 Meetings

Exit Meeting Summary

An interim exit meeting was conducted on August 30, 2002, to discuss the findings of a region based 50.59 inspection.

The inspectors presented the inspection results to Mr. D. Heacock, Site Vice President, and other members of the licensee's staff on October 16, 2002. One proprietary document was reviewed but not retained by the inspectors.

## ATTACHMENT

### SUPPLEMENTARY 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  
J. Davis, Director, Station Nuclear Safety and Licensing  
M. Dunston, Manager, Site Services  
T. Fredette, Electrical Engineering (Emergency Diesel Generator) Systems Engineer  
C. Funderburk, Director, Station Operations and Maintenance  
D. Heacock, Site Vice President  
E. Hendrixson, Manager, Station Engineering  
P. Kemp, Manager, Nuclear Oversight  
L. Lane, Manager, Operations  
J. Leberstien, Supervisor Licensing  
T. Maddy, Manager, Station Security  
F. Mladen, Manager, Maintenance  
Q. Parker, Maintenance Rule Coordinator  
W. Renz, Director, Security and Emergency Preparedness  
H. Royal, Manager, Nuclear Training  
A. Stafford, Manager, Radiological Protection  
M. Whalen, Supervisor Licensing

#### ITEMS OPENED, CLOSED AND DISCUSSED

None

#### LIST OF DOCUMENTS REVIEWED

##### **Section 1R02:**

##### Safety Evaluations

- 00-SE-MOD-12, UFSAR Change Request FN-2000-036 for replacement of service water piping dated 09/18/2000
- 01-SE-ST-01, Auxiliary Building Filter Bank Acceptance Tests dated 03/09/2001
- 01-SE-OT-11, UFSAR Change Request FN 2001-002 for change of biocide, Rev. 1
- 02-SE-OT-01, Replacement of methodology described in the UFSAR for hydrogen analysis dated 06/13/2002
- 01-SE-TM-05, Temporary modification to replace the first of two orifices in the TDAFW pump full flow recirculation lines dated 04/12/2001
- 01-SE-OT-15, UFSAR Change Request No. FN 2001-007, to incorporate the criteria and methodology of Generic Implementation Procedure (GIP) developed by the Seismic Qualification Utility Group (SQUG) dated 05/22/2001

- 01-SE-PROC-2, Procedurally controlled temporary modification (PCTM) to jumper in regulated temporary power to the RPI system in the event the normal power supply fails
- 0-SE-PROC-3, O-OP-3.2, Unit Shutdown From Mode 3 to Mode 4, Rev. 41

#### Screened Out Items

- Engineering Transmittal (ET) N 01-071, Effect of Painting Activities on Charcoal Filters, Rev. 0
- ET NAF 2002-0002, Responses to Selected SDBD-NAPS-AFW Open Items, Rev. 0
- UFSAR Change Request FN 2001-016 for Recirculation Spray Net Positive Suction Head dated 09/18/2001
- Procedure 1-ES-0.1, Reactor Trip Response, Rev. 21
- Procedure 1-PT-36.9, P-4 Interlock TADOT Reactor Trip and Bypass Breakers, Rev. 0
- UFSAR Change Request FN-2000-040, Chapter 2 Site Characteristics, Section 2.4 Hydrology, specifically 2.4.11.4 Future Control dated 10/16/2001
- ET N 01-110, Emergency Diesel Generator Pre-lubrication Practices, Rev. 0
- DCP00-169, Control Room Bottled Air System Modification
- ET N 01-096, Required and Recommended Action Based on the IGSCC Found on the Unit 2 SI Accumulators, Rev. 0
- ET N 02-021, Minimum Differential Pressure for AFW Pumps and Maximum Allowable Leakage for Main Feed Check Valves, Rev 1.
- DCP01-119, Unit 2 RHR Heat Exchanger Component Cooling Flow Transmitter Replacement
- 1-AP-22.1, Loss of 1-FW-P-2, Turbine-Driven AFW Pump, Rev. 12
- 1-E-0, Reactor Trip or Safety Injection, Rev. 28
- DCP01-113, Unit 1 Control Rod Position Indication (RPI) Voltage Regulator Transformer Replacement

#### **SectionS 1R02 and 1R17:**

#### Self Assessment Documents

- Site Self-Assessment SLA-02-01 and SLA-02-10, Implementation of the Amended 10CFR50.59 Rule dated 08/13/2002
- Plant Issue N-2001-1990, Modification Affected Document not Updated
- Plant Issue N-2001-3240, Modification Affected Procedures not Updated
- Plant Issue N-2002-0103, Non-Conservative Assumption in Hydrogen Analysis
- Plant Issue N-2002-0362, Untimely UFSAR Changes Associated with Boron Concentration Increase
- Plant Issue N-2002-1024, Service Water System not Fully Restored in Accordance with Drawing for Corrosion Coupons Which Were No Longer Used
- Plant Issue N-2002-1187, Untimely Updating of Equipment Data Base
- Plant Issue N-2002-1352, Untimely Updating of Non-Priority Documents
- Plant Issue N-2002-1855, Untimely Updating of Equipment Data Base
- Plant Issue N-2002-2007, Corrective Actions for Self-Assessment SLA-02-10
- Plant Issue N-2002-0030, Loss of RPI Transformer