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

January 26, 2001

Virginia Electric and Power Company
ATTN: Mr. David A. Christian
Senior 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. 50-338/00-05, 50-339/00-05 AND NORTH ANNA INDEPENDENT SPENT FUEL STORAGE INSTALLATION INSPECTION REPORT NO. 72-016/00-04

Dear Mr. Christian:

On December 30, 2000, the NRC completed an inspection at your North Anna Power Station, Units 1 and 2, and North Anna Independent Spent Fuel Storage Installation. The enclosed report documents the inspection findings which were discussed on January 8, 2001, 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.

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 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

(ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/NRC/ADAMS/index.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, 72-016
License Nos.: NPF-4, NPF-7, SNM-2507

Enclosure: NRC Integrated Inspection Report Nos. 50-338/00-05, 50-339/00-05, 72-016/00-04

Attachments: (1) Supplemental Information
(2) December 5, 2000, Emergency Exercise Time Line
(3) NRC's Revised Reactor Oversight Process

cc: w/enclosure

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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos.:	50-338, 50-339, 72-016
License Nos.:	NPF-4, NPF-7, SNM-2507
Report Nos.:	50-338/00-05, 50-339/00-05, 72-016/00-04
Licensee:	Virginia Electric and Power Company (VEPCO)
Facilities:	North Anna Power Station, Units 1 & 2 North Anna Independent Spent Fuel Storage Installation
Location:	1022 Haley Drive Mineral, Virginia 23117
Dates:	September 25 through December 30, 2000
Inspectors:	M. Morgan, Senior Resident Inspector J. Canady, Resident Inspector L. Garner, Senior Project Engineer, R II (Section 1R01) W. Sartor, Senior Emergency Preparedness Inspector, RII (Sections 1EP1, 4OA1.1, 4OA1.2 and 4OA1.3) J. Kreh, Emergency Preparedness Inspector, RII (Sections 1EP1, 4OA1.1, 4OA1.2 and 4OA1.3) F. Wright, Senior Health Physicist, RII (Sections 2OS2, 2OS3.1, 2OS3.2, 2OS3.3, 4OA1.4 and 4OA5.1)
Other Personnel:	G. Hopper, Senior Reactor Engineer, RII
Approved by:	K. Landis, Chief, Reactor Projects Branch 5 Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000338-00-05, IR 05000339-00-05, IR 07200016-00-07 on 9/25-12/30/2000, Virginia Electric and Power Co., North Anna Power Station Units 1 & 2, North Anna ISFSI. Integrated Inspection Report.

The inspection was conducted by resident inspectors and regional senior project engineer, senior emergency preparedness inspector, emergency preparedness inspector and senior health physicist. No findings of significance were identified.

Report Details

Unit 1 operated at or near full power during the entire reporting period.

Unit 2 operated at or near full power until October 14. A planned power reduction to approximately 25% was made for a containment entry to determine if pressure boundary leakage was a contributor to the slight step increase in the reactor coolant leakage. A determination was made by the licensee following the containment entry that the increased leakage was not due to pressure boundary leakage. Reactor power was returned to 100% the same day and the unit operated at or near this power for the remainder of the reporting period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R01 Adverse Weather Protection

a. Inspection Scope

The inspectors reviewed measures, which were implemented or scheduled to be implemented, to determine if they were adequate to prevent cold weather damage to safety related equipment. The measures were contained in the following general operating procedures (GOPs) and periodic test (PT) procedures:

- 0-GOP-4, "Cold Weather Operations," Revision 21;
- 0-GOP-2.9, "Heat Trace Breaker Configuration and Status," Revision 4;
- 0-GOP-2.10, "Freeze Protection Heat Tracing Circuits," Revision 1;
- 1-PT-59.8, "Verifying Operability of Freeze Protection of Unit 1 RWST Level Transmitters," Revision 4; and
- 2-PT-59.8, "Verifying Operability of Freeze Protection of Unit 2 RWST Level Transmitters," Revision 4.

The inspectors examined the instrumentation and piping associated with the Unit 1 and 2 refueling water storage tanks (RWSTs) to verify that insulation was properly installed, heat tracing circuits were operational, and minor materiel deficiencies were identified and entered into their corrective action system.

Prior to extreme cold weather conditions, the inspectors performed plant tours, reviewed procedure implementation and held discussions with operations personnel to verify that selected risk significant systems and components were adequately protected to ensure that they would remain functional. The Unit 1 and 2 areas toured included the four emergency diesel generator (EDG) rooms; the station blackout diesel building; the auxiliary feedwater buildings; and outside piping associated with the RWST, casing cooling, and primary grade water tanks. The protective features for these areas were described in procedure 0-GOP-4.2, "Extreme Cold Weather Operations," Revision 13. Operation of the service water spray array, part of the ultimate heat sink, was inspected

to determine if abnormal procedure 0-AP-41.1, “Service Water Spray Array Nozzle Icing,” Revision 1, was being properly implemented.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment

a. Inspection Scope

The inspectors reviewed the systems or components identified below to determine if they were correctly aligned in accordance with the referenced document:

- Unit 1 and Unit 2 Service Water Pumps (0-OP-49.1A, “Valve Checkoff - Service Water,” Revision 29);
- Unit 2 A Low Head Safety Injection Pump (2-OP-7.1A, “Valve Checkoff - Low Head Safety Injection System,” Revision 15);
- Unit 1 B Main Steam System Pressure Control (1-OP-28B, “Valve Checkoff - Main Steam,” Revision 21);
- Unit 1 A Component Cooling Heat Exchanger (1-OP-51.1A, "Valve Checkoff - Component Cooling Water - Auxiliary Building, Fuel Building, Decontamination Building, and Main Steam Valve House," Revision 17); and,
- Unit 1 A Quench Spray Pump (1-OP-7.4A, "Valve Checkoff - Quench Spray System," Revision 8).

b. Findings

No findings of significance were identified.

1R05 Fire Protection

a. Inspection Scope

The inspectors assessed, using “NAPS Appendix R Report,” Revision 18 and Virginia Power Administrative Procedure (VPAP)-2401, “Fire Protection Program,” Revision 15, fire protection program implementation. The inspectors checked the control of transient combustibles and the condition of the fire detection and fire suppression systems for the following area:

- Unit 2 Auxiliary Building Cable Vault Tunnel;
- Unit 1 and Unit 2 Emergency Switchgear Rooms;
- Unit 1 and Unit 2 Auxiliary Building Cable Tray Rooms;

- Unit 1 and Unit 2 Control Room Chiller Rooms;
- Unit 1 and Unit 2 Lower Level Battery Rooms 1-2, 1-4, 2-2, and 2-4;
- Unit 1H and 1J Emergency Diesel Generator Rooms (Fire Areas 9A-1 and 9A-2);
- Unit 2H and 2J Emergency Diesel Generator Rooms (Fire Areas 9B-1 and 9B-2);
- Unit 1 Low Head Safety Injection Pump House; and
- Units 1 and 2 Service Water Pump Building.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification

a. Inspection Scope:

On November 16, the inspectors observed individual operator and crew performance during a licensee-designed team building exercise involving the use of communications and supervisory "command and control" techniques. The inspectors evaluated performance in the following areas:

- knowledge of regulatory and specific plant technical issues;
- phonic alphabet and "three-way" communications use;
- problem-solving and decision-making skills of supervisory personnel; and,
- crew involvement in the exercise (required participation by all members of the team).

Adequacy of the training evaluator's critique was also assessed.

On November 15, the inspectors observed portions of a presentation to licensed reactor operators on the recent NRC regulatory process changes to determine if the presentation provided an accurate overview of the new process.

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementation

a. Inspection Scope

The inspectors reviewed implementation of the Maintenance Rule (10 CFR 50.65) using VPAP 0815, "Maintenance Rule Program," Revision 11, and Engineering Transmittal (ET) CEP-97-0018, "North Anna Maintenance Rule Scoping and Performance Criteria Matrix," Revision 12. The reviews focused on the characterization of failures, the appropriateness of the associated a(1) or a(2) classification, and the appropriateness of either the associated a(2) performance criteria or the associated a(1) goals and corrective actions. The plant issues and associated equipment issues reviewed were:

- N-2000-1822, Unit 2 A Charging Pump Seal Leakage;
- N-2000-2443, Station Blackout Diesel Inoperable Due To Fuel Oil Tank Maintenance;
- N-2000-2600, Control Room Bottled Air Pressurization Test Failure;
- N-2000-1807, Unit 2 A Charging Pump (2-CH-P-1A) Seal Leakage; and,
- N-1999-1241, Unit 2 Pressurizer PORV (2-RC-PCV-2455C) Leakage.

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 the requirements of 10 CFR 50.65 (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 Request (WR) 113650, Identify and Repair Source of Unit 2 B Hot Leg Sample Line Leakage;
- Design Change Package (DCP) 99-010 and Work Order (WO) 00427050, Fire Protection and Primary Grade Water Temporary Piping Installation During Replacement of Service Water System Piping with AL6XN Piping;
- WO 00433507, Maintenance of the Unit 2 3A Auxiliary Feedwater (AFW) Pump;

- WO 00432994, Unit 2 A Low Head Safety Injection Pump (2-SI-P-1A) Circuit Breaker Repair; and,

- WO 00438753, Unit 1 1H EDG - Replace Air Blower Bolting.

b. Findings

No findings of significance were identified.

1R14 Nonroutine Plant Evolutions

a. Inspection Scope

The inspectors reviewed plant issue N-2000-1377, “Inadvertent Addition of Muriatic Acid to the Sodium Hypochlorite Day Tank,” to determine whether operator response to the event was in accordance with procedures and training.

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 plant issues:

- N-2000-2366, “Unit 2 J Bus Pressurizer Backup Heater Power Less Than Required by Plant Technical Specifications;”

- N-2000-2235, “Operability Determination - Unit 2 Service Water Pump Failed To Meet Acceptance Criteria For Pump Performance (ET CME 00-0040);”

- N-2000-2302, “Unit Operability - Unit 2 B Hot Leg Sample Valve Area Leak;”

- N-2000-0045, “Operability Re-evaluation - 1H EDG Strainer “O” Ring Split;”

- N-2000-2634, “Unit 2 C Charging Pump (2-CH-P-1C) Gear Box Cooler Micro-biologically Influenced Corrosion (MIC) Repairs;” and,

- N-2000-2188, “Unit 2 Trip Throttle Valve Number 4 Stroke Test Failure.”

b. Findings

No findings of significance were identified.

1R16 Operator Work-Arounds (OWAs)

a. Inspection Scope

On October 6, the inspectors reviewed operator work-around (OWA) 99-OWA-B01B, "Manual Operation of Bearing Cooling Water MOVs." The OWA was evaluated to determine whether the work-around affected either the functional capability of the related system or human reliability in responding to events. The inspectors specifically considered whether the OWA affected the operators' ability to implement abnormal or emergency operating procedures.

On December 7, the inspectors reviewed OWA 00-OWA-CO1, "Determination of Watchstander Qualifications," to determine whether it affected the shift supervisor's functional capability or human reliability in responding to events.

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications

a. Inspection Scope

The inspectors reviewed design change package (DCP) 99-010, which involved the replacement and modification of small bore (four-inches or less) service water piping susceptible to microbiological influenced corrosion (MIC). The review focused on whether the DCP met 10 CFR 50.59 requirements and if the DCP was developed in accordance with plant procedures.

The inspectors observed work activities to determine if work was being performed in accordance with work instructions. The inspectors talked with fire watch personnel to evaluate if they were knowledgeable of and were implementing their responsibilities as described in plant fire procedures.

b. Findings

No findings of significance were identified.

1R19 Post Maintenance Testing

a. Inspection Scope

The inspectors reviewed the following post-maintenance test procedures 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:

- Unit 2 3B Motor-Driven Auxiliary Feedwater Pump Maintenance Test, (2-PT-71.3Q, "2-FW-P-3B Motor-Driven AFW Pump, and Valve Test," Revision 22);

- 1H Emergency Diesel Generator Testing Following Preventative Maintenance (1-PT-82.3A, “1H Diesel Generator Test - Simulated Loss of Off-Site Power in Conjunction with an ESF Actuation Signal,” Revision 24);

- Unit 2 A High Head Safety Injection/Charging Pump Testing Following Pump Leak Repairs (2-PT-14.1, “Charging Pump 2-CH-P-1A,” Revision 35);

- Control Room (CR) Bottled Air Pressurization System Testing Following CR Envelope Sealing Repairs (0-PT-76.4, “CR Air Pressurization Test,” Revision 13); and,

- Unit 1 3B Motor-Driven Auxiliary Feedwater Pump Maintenance Test, (1-PT-71.3Q, “1-FW-P-3B Motor-Driven AFW Pump, and Valve Test,” Revision 28).

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:

- 0-PT-76.4.2, “Control Room Pressure Envelope Flow Balance Verification,” Revision 4;

- 1-PT-36Q, “AMSAC System Logic Test,” Revision 3;

- 1-PT-44.7, “PORV Block Valves and Inadequate Core Cooling Monitor System Channel Checks,” Revision 15;

- 1-PT-57.1A, “Emergency Core Cooling Subsystem - Low Head Safety Injection System Pump (1-SI-P-1A),” Revision 40;

- 1-PT-63.1B, “Quench Spray System - B SubsystemTest,” Revision 30;

- 1-PT-213.5J, “Valve Inservice Inspection (1-QS-MOV-101B),” Revision 7;

- 2-PT-57.1A, “Emergency Core Cooling Subsystem - Low Head Safety Injection System Pump (2-SI-P-1A),” Revision 38; and,

- 2-PT-36.9, “Undervoltage Testing - 2H Bus,” Revision 5.

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications

a. Inspection Scope

The inspectors reviewed the temporary piping installation which provided backup cooling water to the charging pump gear boxes and oil coolers during DCP 99-010 (See Section 1R17) implementation. The review involved examination of the temporary piping and changes to abnormal procedure 0-AP-12, "Loss of Service Water," to ensure they were consistent with the safety evaluation and the DCP 99-010 field change.

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP1 Exercise Evaluation

a. Inspection Scope

The inspectors reviewed the objectives and scenario for the North Anna Power Station biennial, full-participation emergency preparedness December 5, 2000, exercise to determine whether they were designed to suitably test major elements of the licensee's emergency plan.

During the period December 4 - 8, 2000, the inspectors observed and evaluated the licensee's performance in the exercise, as well as selected activities related to the licensee's conduct and self-assessment of the exercise. The exercise was conducted on December 5, 2000, from 8:30 a.m. to 1:20 p.m. Licensee activities inspected during the exercise included those occurring in the Control Room Simulator (CRS), Technical Support Center (TSC), Operational Support Center (OSC), and Local Emergency Operations Facility (LEOF). The NRC's evaluation focused on the risk-significant activities of event classification, notification of governmental authorities, onsite protective actions, offsite protective action recommendations (PARs), and accident mitigation. The inspectors also evaluated command and control, the transfer of emergency responsibilities between facilities, communications, adherence to procedures, and the overall implementation of the emergency plan. The inspectors attended the post-exercise critique to evaluate the licensee's self-assessment process, as well as the presentation of critique results to plant management.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety

2OS2 As Low As Is Reasonably Achievable (ALARA) Planning and Controls (71121.02)

a. Inspection Scope

A review of the licensee's post-outage critique items identified in the most recent refueling outage was made and compared with previous ALARA program performance. The inspectors reviewed the licensee's proposed corrective actions for ALARA program improvements. The ALARA goals and preparations for the next refueling outage were also reviewed.

b. Findings

No findings of significance were identified.

2OS3 Radiation Monitoring Instrumentation (71121.03)

.1 Plant Radiation Monitoring Systems and Portable Radiation Survey Instrumentation

a. Inspection Scope

The operability of the plant area radiation monitors (ARMs), utilized to alert the site staff of changing radiation exposures, was examined to verify that the equipment was functioning as required and properly maintained. Additional ARMs temporally installed throughout the plant were also reviewed. Operability of the ARMs was checked by comparing measured radiation levels at the monitors placement with measured radiation levels displayed on local and control room instrumentation. Instrument operation checks, source checks, and calibration records for selected plant instruments were reviewed to verify licensee surveillances met procedure and Technical Specification requirements. Licensee procedures addressed instrument setpoints and their basis for plant radiation measuring equipment. The operability and performance of plant radiation monitors were reviewed with the Radiation Monitoring System Engineer to identify any adverse trends in monitor performance.

Work practices of Health Physics technicians were observed to determine if they made source checks of instruments prior to use.

b. Findings

No findings of significance were identified.

.2 Respiratory Protection - Self Contained Breathing Apparatus (SCBA) Equipment

a. Inspection Scope

The inspectors evaluated issues concerning SCBA qualifications of control operators, SCBA training, and the effect of SCBAs on control room operators during an emergency.

The inspectors verified that the licensee had received and reviewed the problems identified in NRC Information Notice 98-20, “Respiratory Protection Programs,” and NRC Information Notice 99-05, “Inadvertent Discharge of Fire Protection System and Gas Migration,” and considered the applicability for the North Anna site.

Potentially hazardous atmosphere adjacent to the control rooms were evaluated. The inspectors reviewed the operating readiness to properly use respiratory protection equipment during emergency conditions, and the availability and readiness of SCBA equipment in the control room. The inspectors also verified that the corrective lenses for use with SCBA equipment were available for use in the licensee’s control room. The availability of additional SCBA equipment for control room operators was observed.

b. Findings

No findings of significance were identified.

.3 Problem Identification and Resolution

a. Inspection Scope

The inspectors reviewed licensee self-assessments, audits, and licensee condition reports of radiation protection issues. The inspectors evaluated whether the licensee was performing sufficient and quality self-assessments and whether the corrective actions were completed in a timely manner.

b. Findings

No findings of significance were identified.

Cornerstone: Public Radiation Safety

2PS2 Radioactive Material Processing and Transportation

a. Inspection Scope

The inspectors reviewed the liquid radioactive waste system description and walked the system down to verify that the current system configuration and operation agreed with the descriptions contained in the Updated Final Safety Analysis Report.

Current processes for transferring radioactive waste resin into shipping and disposal containers were reviewed with the licensee's staff. The inspectors verified the licensee's methodology for waste classification requirements met requirements specified in 10 CFR 61.55 for waste disposal and the licensee was periodically evaluating those waste streams.

The inspectors reviewed the licensee's procedures applicable to processing and shipping radioactive material and radioactive waste. Licensee records for recent shipments of radioactive materials and radioactive waste were reviewed to verify NRC and Department of Transportation requirements had been met.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator (PI) Verification

.1 Emergency Response Organization (ERO) Drill/Exercise Performance PI

a. Inspection Scope

Licensee records were reviewed to determine whether the submitted PI statistics were calculated in accordance with the guidance contained in Section 2.4, "Emergency Preparedness Cornerstone," of NEI 99-02, Revision 0, "Regulatory Assessment Performance Indicator Guideline." The inspectors assessed the accuracy of the PI data for ERO drill and exercise performance over the past eight quarters through review of a sample of drill documentation. Detailed records of drills (specifically, CRS operator requalification evaluations) conducted in January and February 2000 were reviewed to verify the reported data was accurate regarding successes in emergency classifications, notifications, and PARs.

b. Findings

No findings of significance were identified.

.2 ERO Drill Participation PI

a. Inspection Scope

Licensee records were reviewed to determine whether the submitted PI statistics were calculated in accordance with the guidance contained in Section 2.4 of NEI 99-02, Revision 0. The inspectors assessed the accuracy of the PI data for ERO drill participation during the previous eight quarters by selective review of the training records for the 128 personnel (as of September 30, 2000) assigned to key positions in

the ERO. PI statistics for drill participation were verified by reviewing training attendance records for approximately 10% of key ERO personnel.

b. Findings

No findings of significance were identified.

.3 Alert and Notification System Reliability PI

a. Inspection Scope

Licensee records were reviewed to determine whether the submitted PI statistics were calculated in accordance with the guidance contained in Section 2.4 of NEI 99-02, Revision 0. The inspectors assessed the accuracy of the PI for the alert and notification system reliability through review of the licensee's records of the siren tests for the previous 12 months. A sample of records, for the bi-monthly silent tests and the quarterly full activation tests, was reviewed.

b. Findings

No findings of significance were identified.

.4 Occupational and Public Radiation Safety Performance Indicators

a. Inspection Scope

The inspectors verified the licensee had established programs for gathering and submitting Occupational and Public Radiation Safety Performance Indicators.

b. Findings

No findings of significance were identified.

4OA3 Event Follow-up

.1 Event Review

a. Inspection Scope

For the event discussed in plant issue N-2000-2302, "Increased Unidentified Leakage Unit 2 B Hot Leg," the inspectors reviewed the associated facility operating logs, abnormal event reports, and reactivity management log information to evaluate operations department performance and operator response.

b. Findings

No findings of significance were identified.

4OA5 Other

.1 Operation of an Independent Spent Fuel Storage Facility (ISFSI) (60855)

a. Inspection Scope

The inspectors evaluated the licensees radiation protection controls during the transportation of a Spent Fuel Storage Cask from the North Anna Nuclear Power Station to the North Anna ISFSI.

b. Findings

No findings of significance were identified.

4OA6 Management Meetings

Exit Meeting Summary

The inspectors presented the inspection results to Mr. D. Heacock, Site Vice President, and other members of the licensee's staff on January 8, 2001. The licensee acknowledged the findings presented.

The inspectors asked the licensee whether any of the material examined during the inspection should be considered proprietary. No proprietary information was identified.

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

D. Christian, Senior Vice President and Chief Nuclear Officer
J. Breeden, Supervisor, Radiation Analysis and Material Control
J. Davis, Manager, Station Nuclear Safety and Licensing
C. Funderburk, Manager, Station Operations and Maintenance
D. Heacock, Site Vice President
E. Hendrixson, Superintendent, Station Engineering
P. Hensley, Supervisor, Water Treatment
P. Kemp, Director, Nuclear Oversight
L. Lane, Superintendent, Operations
T. Maddy, Superintendent, Station Security
W. Matthews, Vice President, Nuclear Operations
R. Page, Plant Radiation Monitoring Engineer
W. Renz, Director, Security and Emergency Preparedness
H. Royal, Superintendent, Nuclear Training
D. Schappell, Superintendent, Site Services
J. Schleser, ALARA Coordinator
R. Shears, Superintendent, Maintenance
A. Stafford, Superintendent, Radiological Protection

ITEMS OPENED, CLOSED OR DISCUSSED

None

LIST OF DOCUMENTS REVIEWED

The following list includes documents and records critically reviewed during the inspection that are not identified in the body of the report for Sections 2OS2, 2OS3.1, 2OS3.2, 2OS3.3, 4OA1.4 and 4OA5.1:

“2000 Unit One Refueling and 10-Year In-Service Inspection (ISI) Outage ALARA Report;”
“50 - Rem Outage Action Plan;”
“1999 Annual Trend of Radiological Problems,” April 4, 2000;
“Radiation Protection Department, Self-Assessment Report, First Quarter 2000," May 9, 2000;
Health Physics Administrative Procedure (HPAP) - 1091, “Monitoring and Improving Radiological Performance,” Revision 7;
Health Physics (HP) - 1031.030, “Dosimetry Processing and Dose Determination,” Revision 3;
HP - 1071.041, ”Receiving Radioactive Material,” Revision 6
HP - 1071.030, “Packaging and Shipping New Fuel for Return to Vendor,” Revision 3;
HP - 1072.010, “Packaging Radioactive Waste,” Revision 4;

HP - 1072,020, “Sampling, Analyzing, and Classification of Solid radioactive Waste,” Revision 4;
HP - 1072.030, “Computer Programs for Radwaste (Radioactive Waste) and Radioactive Material,” Revision 3;
HP - 1072.40, “Radioactive Waste Disposal Using the Barnwell Disposal Facility,” Revision 10;
HP - 1072.051, “Radioactive Waste Transfer to Chem-Nuclear Consolidation Facility, Barnwell South Carolina,” Revision dated July 22, 1999;
0 - MPM - 1902-03, Mechanical Maintenance, “Handling Chem Nuclear Rad Waste Transport Cask CNSI 8-120 (USA/6601/A),” Revision 2;
0 - MPM - 1902-04, Mechanical Maintenance, “Handling Chem nuclear Radioactive Waste Transport Cask CSI 8-120B (USA/9168/b, Revision 8;
1 - Operations Procedure (OP) - 20.1, Operations, “Operation of the spent resin holdup tanks,” Revision 15;
1 - OP - 1A, Operations, “Pre-Start-Up Check Off List,” Revision 17; and
0 - OP - 22.3A, Operations, “Valve Checkoff - Waste Disposal Evaporator,” Revision 3.

NRCs REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) recently revamped its inspection, assessment, and enforcement programs for commercial nuclear power plants. The new process takes into account improvements in the performance of the nuclear industry over the past 25 years and improved approaches of inspecting and assessing safety performance at NRC licensed plants.

The new process monitors licensee performance in three broad areas (called strategic performance areas): reactor safety (avoiding accidents and reducing the consequences of accidents if they occur), radiation safety (protecting plant employees and the public during routine operations), and safeguards (protecting the plant against sabotage or other security threats). The process focuses on licensee performance within each of seven cornerstones of safety in the three areas:

Reactor Safety	Radiation Safety	Safeguards
● Initiating Events	● Occupational	● Physical Protection
● Mitigating Systems	● Public	
● Barrier Integrity		
● Emergency Preparedness		

To monitor these seven cornerstones of safety, the NRC uses two processes that generate information about the safety significance of plant operations: inspections and performance indicators. Inspection findings will be evaluated according to their potential significance for safety, using the Significance Determination Process, and assigned colors of GREEN, WHITE, YELLOW or RED. GREEN findings are indicative of issues that, while they may not be desirable, represent very low safety significance. WHITE findings indicate issues that are of low to moderate safety significance. YELLOW findings are issues that are of substantial safety significance. RED findings represent issues that are of high safety significance with a significant reduction in safety margin.

Performance indicator data will be compared to established criteria for measuring licensee performance in terms of potential safety. Based on prescribed thresholds, the indicators will be classified by color representing varying levels of performance and incremental degradation in safety: GREEN, WHITE, YELLOW, and RED. GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections. WHITE corresponds to performance that may result in increased NRC oversight. YELLOW represents performance that minimally reduces safety margin and requires even more NRC oversight. And RED indicates performance that represents a significant reduction in safety margin but still provides adequate protection to public health and safety.

The assessment process integrates performance indicators and inspection so the agency can reach objective conclusions regarding overall plant performance. The agency will use an Action Matrix to determine in a systematic, predictable manner which regulatory actions should be taken based on a licensee's performance. The NRC's actions in response to the significance (as represented by the color) of issues will be the same for performance indicators as for inspection findings. As a licensee's safety performance degrades, the NRC will take more and

increasingly significant action, which can include shutting down a plant, as described in the Action Matrix.

More information can be found at: http://www.nrc.gov/NRR/OVERSIGHT/index.html.