



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

January 27, 2005

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: SURRY POWER STATION - NRC INTEGRATED INSPECTION REPORT NOS.
05000280/2004005, 05000281/2004005**

Dear Mr. Christian:

On December 31, 2004, the United States Nuclear Regulatory Commission (NRC) completed an inspection at your Surry Power Station, Units 1 and 2. The enclosed report documents the inspection findings which were discussed on January 12, 2005, with Mr. Jernigan and other members of your staff.

The inspection examined activities conducted under your licenses as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your licenses. The inspectors reviewed selective procedures and records, observed activities, and interviewed personnel.

Based on the results of the inspection, no findings of significance were identified by the NRC. However, three licensee-identified violations which were determined to be of very low safety significance (Green) are listed in Section 4OA7 of this report. If you contest any non-cited violation 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, D.C. 20555-0001, with copies to the Regional Administrator, Region II; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, D.C. 20555-0001; and the NRC Resident Inspector at the Surry Power Station.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of

NRC's document system (ADAMS). ADAMS is accessible from the NRC 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.: 50-280, 50-281
License Nos.: DPR-32, DPR-37

Enclosure: Integrated Inspection Reports 5000280, 281/2004005 w/Attachment:
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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos.: 50-280, 50-281

License Nos.: DPR-32, DPR-37

Report Nos.: 5000280/2004005, 5000281/2004005

Licensee: Virginia Electric and Power Company (VEPCO)

Facility: Surry Power Station, Units 1 & 2

Location: 5850 Hog Island Road
Surry, VA 23883

Dates: September 26 - December 31, 2004

Inspectors: N. Garrett, Senior Resident Inspector
D. Arnett, Resident Inspector
S. Kennedy, Resident Inspector, Millstone Power Station
L. Garner, Senior Project Engineer
J. Kreh, Emergency Preparedness Inspector (Sections 1EP2 through
1EP5, 4OA1)
S. Vias, Senior Reactor Inspector (Sections 1R08, 4OA5)
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Accompanying Personnel:

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

SUMMARY OF FINDINGS

IR 05000280/2004-005, IR 05000281/2004-005; 9/26/2004-12/31/2004; Surry Power Station Units 1 & 2, Routine Integrated Report.

The report covered a three month period of inspection by resident inspectors and a senior project engineer and announced inspections by an emergency preparedness inspector and a senior reactor inspector. Three licensee-identified violations were identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using 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

No findings of significance were identified.

B. Licensee-Identified Violations

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. These violations and corrective action tracking numbers are listed in Section 4OA7 of this report.

REPORT DETAILS

Summary of Plant Status

Unit 1 started the reporting period at full power. On October 31, 2004, the unit was shutdown for a refueling. Unit 1 was taken critical on December 2 and reached 100% power on December 6. The unit operated at or near full power the remainder of the reporting period.

Unit 2 operated at or near full power during the entire reporting period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R01 Adverse Weather Protection

a. Inspection Scope

The inspectors performed a seasonal review of the licensee cold weather preparations. The inspectors reviewed licensee procedures 0-OSP-ZZ-001, Cold Weather Preparations and OC-21, Severe Weather Checklist. The inspectors walked down portions of the emergency diesel generators (EDGs), high level intake structure, low level intake structure, refueling water storage tanks (RWSTs), and condensate storage tanks (CSTs) to assess condition of heat tracing, heaters, and insulation. The inspectors observed equipment condition and documented system deficiencies to determine system readiness for cold weather. The inspectors reviewed the Updated Final Safety Analysis Report (UFSAR) and Technical Specifications (TS) requirements to verify that these systems would remain operable during cold weather conditions.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment

.1 Partial System Walkdowns

a. Inspection Scope

The inspectors performed partial walkdowns of the following systems to verify correct system alignment. The inspectors checked for correct valve and electrical power alignments by comparing positions of valves, switches, and breakers to the procedures and drawings listed in the Attachment. Additionally, the inspectors reviewed the corrective action system to verify that equipment alignment problems were being identified and properly resolved.

- Unit 1 component cooling (CC) pumps 1-CC-P-1B, 1C, & 1D while 1-CC-P-1A was tagged out for maintenance

- Unit 1 charging (CH) pumps 1-CH-P-1A and 1C while 1-CH-P-1B was tagged out for maintenance
- Unit 2 low head safety injection (LHSI) pump 2-SI-P-1A when 2-SI-P-1B was declared inoperable

b. Findings

No findings of significance were identified.

.2 Complete System Walkdown

a. Inspection Scope

The inspectors performed a detailed walkdown on the accessible portions of the Unit 2 Auxiliary Feedwater System (AFW) to review the system alignment and condition. The inspectors reviewed applicable documents to determine the correct system alignment, reviewed outstanding maintenance work orders, plant issues associated with system deficiencies, and verified valve and breaker positions, and component labeling. In addition, the inspectors verified material condition of valves, pumps, hangers, brackets, and other system supports. The inspectors reviewed the corrective action database to determine if equipment issues were being identified and resolved. The documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R05 Fire Protection

.1 Fire Area Walkdowns

a. Inspection Scope

The inspectors conducted tours of the following eight areas to assess the adequacy of the fire protection program implementation. The inspectors checked the control of transient combustibles and the condition of the fire detection and fire suppression systems (using "SPS Appendix R Report,") in the following areas:

- Mechanical equipment room (MER) 4
- Alternate AC Diesel
- Unit 1 cable vault
- Unit 2 cable vault
- Unit 1 cable spreading room
- Unit 2 cable spreading room
- Fire pump house
- MER 2

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures

a. Inspection Scope

The inspectors reviewed the licensee's flooding mitigation plans and equipment to determine consistency with design requirements and risk analysis assumptions. Walkdowns were conducted of recent modifications to the plant in order to reduce the core damage risk associated with internal turbine building flooding. The inspectors also discussed with the system engineer other planned changes to further reduce the core damage risk associated with internal turbine building flooding.

b. Findings

No findings of significance were identified.

1R08 Inservice Inspection (ISI) Activities

a. Inspection Scope

ISI Activities

The inspectors observed in-process ISI work activities, reviewed ISI procedures, and reviewed selected ISI records, associated with risk significant structures, systems, and components. The observations and records were compared to the requirements specified in the TS and the ASME Boiler and Pressure Vessel Code, to verify compliance and to ensure that examination results were appropriately evaluated and dispositioned.

Specifically, non-destructive examination (NDE) activities were reviewed as follows:

Direct Observation

- Visual Examination-3 (VT-3): component H003, anchor and welds on 12" safety injection pipe (loop 1, line 12"-SI-45-1502)
- RT Film review: 3" WAPD-13-601, Welds: W-4, W-2 & W-5 (Feedwater)
- RT Film review: 14" WFPD-9-601, Welds: W-6 & W-5 (Feedwater)
- Visual Examination-3 (VT-3): component 1-SI-HSS-020, snubber and welds on 12" safety injection pipe support (loop 1, line 12"-SI-45-602)

Record Review

- MT 3"-WFPD-13-601, W-8 (Feedwater)
- MT 14"-WFPD-9-601, W-1-13B, W-9 (Feedwater)
- UT 3"-WAPD-13-601, W-4, W-2 & W-5 (Feedwater)
- PT 14"WFPD-9-601, W-2, W-5 (Feedwater)

- RT 14"WFPD-9-601, W-1-18A, W-8, W-9, W-1-13B (Feedwater)

RT Film Review

- 3" WAPD-13-601, W-4, W-2 & W-5 (Feedwater)
- 14" WFPD-9-601, W-6 & W-5 (Feedwater)

Qualification and certification records for examiners, equipment and consumables, and NDE procedures for the above ISI examination activities were reviewed. In addition, a sample of ISI issues in the licensee's corrective action program were reviewed for adequacy.

The inspectors reviewed one Engineering Evaluation of UT exams for Pipe Wall Thickness Acceptance Criteria to verify dispositioning of indications and defects in accordance with ASME Code requirements or an alternative approved by the U.S. Nuclear Regulatory Commission (NRC):

- FW piping, Component ID# 1-FW-PPS-21, Line: 18-WFPD-5-901, Sketch: 11449-WFPD-018

To verify that previous indications were properly addressed, the inspectors reviewed FORM OAR-1, Owner's Activity Report, "Abstract of Repairs, Replacements, or Corrective Measures Required for Continued Service." The inspectors reviewed the listing of previous indications that were accepted by the licensee for continued service and verified that they had been evaluated and accepted 'as-is' or scheduled for repair.

Reactor Vessel Head Inspection

The inspectors reviewed reactor vessel head examination activities to determine if examinations of nozzle penetrations were being conducted in accordance with NRC Order EA-03-009, and that indications or defects would be dispositioned in accordance with the ASME Code or an NRC approved alternative. The inspectors reviewed the following procedures and program documents that the licensee would utilize to perform the inspections: SSES-6.13, Controlling Procedure for Boric Acid Corrosion Control (BACC) Program, Rev. 1 and DNAP-1004, Boric Acid Corrosion Control (BACC) Program, Rev. 2.

Boric Acid Corrosion Control (BACC) Inspection

The inspectors reviewed implementation of the licensee's BACC program to determine if commitments made in response to Generic Letter 88-05 and Bulletin 2002-01 were being effectively implemented. During containment entries, the inspectors observed the conduct of licensee BACC inspection activities in order to evaluate the thoroughness of the previous licensee inspections. The inspectors performed a walkdown of the Unit 1 containment to observe the as-found indications of borated water leakage. The inspectors held discussions and reviewed the licensee's database of component locations that had been identified as part of their BACC inspection, and compared those results with observations noted during the inspectors' containment walk-through inspections. The inspectors reviewed engineering evaluations of the BACC inspection

findings from the spring 2003 Unit 1 outage to evaluate the engineering bases for conclusions regarding cause and severity of the discovered leaks, and justification for corrective actions. The inspectors verified that all boron indications identified were entered into the corrective action system for evaluation and resolution.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program

.1 Quarterly Requalification Activity Review

a. Inspection Scope

The inspectors observed licensed operator performance during simulator training session RQ-04.7-ST-1 to determine whether the operators:

- were familiar with and could successfully implement the procedures associated with recognizing and recovering from Loss of all AC with same side emergency diesel generator inoperable;
- recognized the high-risk actions in those procedures; and,
- were familiar with related industry operating experiences.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness

a. Inspection Scope

For the three equipment issues or systems listed below, the inspectors evaluated the licensee's effectiveness of the corresponding preventive and corrective maintenance. For each selected item below, the inspectors performed a detailed review of the problem history and surrounding circumstances, evaluated the extent of condition reviews as required, and reviewed the generic implications of the equipment and/or work practice problem. Inspectors performed walkdowns 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), VPAP 0815, "Maintenance Rule Program," and the Surry Maintenance Rule Scoping and Performance Criteria Matrix.

- Unit 2 electro-hydraulic (EHC) control system
- Unit 1 containment spray (CS) ABB K-600 breaker malfunction, and
- Unit 2 low head safety injection (LHSI) system

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control

a. Inspection Scope

The inspectors reviewed five Plan of the Day (POD) documents for the weeks indicated. The inspectors evaluated the adequacy, accuracy, and completeness of plant risk assessments performed prior to changes in plant configuration for maintenance activities or in response to emergent conditions. When applicable, inspectors assessed if the licensee entered the appropriate risk category in accordance with plant procedures. Specifically, the inspectors reviewed:

- POD for Week 10/2 - 8 for schedule changes and risk impact
- POD for Week 10/9 - 15 for schedule changes and risk impact
- POD for Week 10/16 - 22 including the repair of 2-SI-P-1B
- POD for Week 11/13 - 19 including emergent outage issues
- POD for Week 11/28 - 12/3 including failure of the 1-FW-P-3B pump and the failure of the 1-CS-P-JJ beaker

b. Findings

No findings of significance were identified.

1R14 Operator Performance During Nonroutine Evolutions and Events

a. Inspection scope

For the two non-routine events described below, the inspectors reviewed operator logs, plant computer data, and strip charts to determine what occurred and how the operators responded, and to verify if the response was in accordance with plant procedures:

- Fire in the Unit 1 'A' Amertap barrel located in the turbine building and associated Notification of Unusual Event
- 1-RC-PT-1445, pressurizer pressure transmitter for 1-RC-PCV-1456, power operated relief valve (PORV), failed high

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors evaluated the technical adequacy of the six operability evaluations listed below to ensure that operability was properly justified and the subject component or

system remained available such that no unrecognized increase in risk occurred. The operability evaluations were described in the engineering transmittal (ET) and plant issues listed below:

- Plant Issue S-2004-1867, Special test to determine if 40 weight oil would affect the operability of the emergency service water (ESW) engine.
- Plant Issue S-2004-3527 and S-2004-3608, Fuel oil contamination in the crankcase of 1-SW-P-1A, ESW engine
- Plant Issue S-2004-3599, Failure of the outer mechanical seal of 2-SI-P-1B, low head safety injection pump
- Plant Issue S-2004-3977, Start failure of #2 emergency diesel generator (EDG) during 2-OPT-EG-001
- Plant Issue S-2004-3857, Use of Engineering Transmittal S-2004-0042, to declare operable and the test acceptance criteria satisfactory for both 1-RH-P-1B and 1-RH-P-1B
- Plant Issue S-2004-4794, A 1 gpm packing leak increased to 15 gpm after the packing was damaged on auxiliary feedwater pump (AFW), 1-FW-P-3B, resulting in the pump being declared inoperable

b. Findings

No findings of significance were identified.

1R16 Operator Workarounds

a. Inspection Scope

The inspectors reviewed the licensee's list of identified operator workarounds as of October 12, 2004, to assess the cumulative effects of operator workarounds on the reliability, availability, and potential for mis-operation of a system to verify that there was no increase in overall plant risk. This assessment included increases of initiating event frequencies, effects on multiple mitigating systems, and the ability of operators to correctly respond to abnormal plant conditions.

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications

a. Inspection Scope

The inspectors evaluated two design change packages (DCP). DCP 02-075, Emergency Service Water Pump Diesel and Start Circuit Upgrade, installed a pre-start lubrication system on the 1C Emergency Service Water pump. DCP 04-002, Replace AFW Isolation Valves with Stop Check Valves, installed six stop check valves on the Unit 1 AFW system to prevent flow between isolated steam generators. The inspectors verified the following attributes:

- Materials
- Flowpaths
- Pressure Boundary
- Equipment protection
- Operations
- Licensing basis
- Post Modification Testing

b. Findings

No findings of significance were identified.

1R19 Post Maintenance Testing

a. Inspection Scope

The inspectors reviewed five post maintenance test procedures and activities associated with the repair or replacement of the following components to determine whether the procedures and test activities were adequate to verify operability and functional capability following maintenance of the following equipment:

- Work Order (WO) 513551, Replace Main Control Room Filter, 1-VS-FL-8
- WO 522361, Replacement of air start motors and solenoid on #2 EDG air start system
- WO 468517, Replace Unit 2 low head safety injection pump 1B seal package
- WO 492840, Replacement of 1-FW-P-3B, auxiliary feedwater pump
- WO 523360, Investigate cause for breaker trip, 1-CS-P-1B

b. Findings

No findings of significance were identified.

1R20 Refueling and Outage Activities (Unit 1)

a. Inspection Scope

The inspectors performed the inspection activities described below for the Unit 1 refueling outage that began on October 31, 2004, and ended December 2, 2004.

The inspectors reviewed the licensee's outage risk control plan, Unit 1 2004 Refueling Outage Safety Assessment, and the station shutdown risk procedure, VPAP-2805, Shutdown Risk Program, to verify that the licensee had appropriately considered risk, industry experience and previous site specific problems, and to confirm that the licensee had mitigation/response strategies for losses of key safety functions.

The inspectors confirmed that, when the licensee removed equipment from service, the licensee maintained defense-in-depth commensurate with the outage risk control plan for key safety functions and applicable technical specifications, and that configuration

changes due to emergent work and unexpected conditions were controlled in accordance with the outage risk control plan.

The inspectors reviewed cooldown data to verify that technical specification cooldown restrictions were followed.

During the outage, the inspectors:

- Reviewed reactor coolant system (RCS) pressure, level, and temperature instruments to verify that those instruments were installed and configured to provide accurate indication; and that instrumentation error was accounted for;
- Reviewed the status and configuration of electrical systems to verify that those systems met technical specification requirements and the licensee's outage risk control plan;
- Observed decay heat removal (DHR) parameters to verify that the system was properly functioning;
- Observed spent fuel pool operations to verify that outage work was not impacting the ability of the operations staff to operate the spent fuel pool cooling system during and after core offload;
- Reviewed system alignments to verify that the flow paths, configurations, and alternative means for inventory addition were consistent with the outage risk plan;
- Reviewed selected control room operations to verify that the licensee was controlling reactivity in accordance with the technical specifications;
- Observed licensee control of containment penetrations to verify that the licensee controlled those penetrations in accordance with the refueling operations technical specifications and could achieve containment closure for required conditions; and,
- The inspectors reviewed fuel handling operations to verify that those operations and related activities were being performed in accordance with technical specifications and approved procedures.

The inspectors reviewed the licensee's plans for changing plant configurations to verify on a sampling basis that technical specifications, license conditions, and other requirements, commitments, and administrative procedure prerequisites were met prior to changing plant configurations. The inspectors reviewed RCS boundary leakage and the setting of containment integrity. The inspectors examined the spaces inside the containment prior to reactor startup to verify that debris had not been left which could affect performance of the containment sumps.

The inspectors reviewed various problems that arose during the outage to verify that the licensee was identifying problems related to refueling outage activities at an appropriate

threshold and entering them in the corrective action program. The inspectors specifically reviewed the plant issues listed below, which were initiated during the refueling outage and were considered significant:

- Plant Issue S-2004-3829, 1-CH-MOV-1115C (Charging Pump Suction from VCT Isolation) was closed and its light indication was intermediate
- Plant Issue S-2004-3880, Containment Isolation valve 1-CC-TV-110C failed to shut when instrument air was isolated and bled off to the actuator
- Plant Issue S-2004-4050, 1-FW-FI-100B (AFW flow to steam generators) indication slowly increasing while AFW pumps were secured

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

For the eight 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:

Surveillance Tests

- 1-PT-2.33A, Emergency Bus Undervoltage and Degraded Protection Test 'H' Train
- 1-OPT-CH-002, Testing of Charging Pump Cross-Connect Manual Isolation Valve
- 2-OPT-CH-002, Testing of Charging Pump Cross-Connect Manual Isolation Valve
- 1-OPT-ZZ-001, 1H Bus Testing with #1 EDG (1-OP-EG-001)

In-Service Test

- 2-OPT-SI-005, LHSI Pump Test

Reactor Coolant Leak Test

- 2-OPT-RC-10.0, Reactor Coolant Leakage - Computer Calculated

Containment Isolation

- 1-OPT-CT-305, Containment Purge Leakage Test
- 1-OPT-CT-201, Containment Isolation Valve Local Leak Rate Testing (Type C Containment Testing)

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications

a. Inspection Scope

The inspectors reviewed the following five Temporary Modifications to determine whether system operability/availability was affected, that configuration control was maintained, and that the associated safety evaluation adequately justified implementation.

- TM S1-04-060, 1-RP-PLY-27-IXA
- TM S1-03-045, Administrative controls as a compensatory measure for JCO SC-03-001
- TM S1-04-061, Unit 1 Pressure Operated Relief Valve Backup Air Bottle Camera Installation
- TM S1-04-063, 01-CLS-RLY-1A3-Relay (CLS-A) Bypass
- TM S1-04-058, Polar Crane Fuse Bypass

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP2 Alert and Notification System Testing (71114.02)

a. Inspection Scope

The inspectors reviewed the general description of the alert and notification system (ANS) in Section 7.6 of the Surry Emergency Plan, and ascertained the licensee's commitments with respect to the testing and maintenance of the ANS, which comprised 67 sirens in the ten-mile emergency planning zone. The inspectors evaluated the design of the ANS, the licensee's methodology for testing the system, and the adequacy of the testing program design. The testing program comprised biweekly silent tests and quarterly full-volume tests. ANS changes during the past two years, procedures for periodic preventive maintenance (including post-maintenance testing), and test records (with an emphasis on identification of any repetitive individual siren failures) were reviewed and discussed with cognizant management and maintenance personnel. The inspectors monitored the licensee's performance of a biweekly silent test of the ANS on October 27, 2004. Selected corrective actions were evaluated to determine their effectiveness in addressing ANS problems. The review of this program area encompassed the period September 2002 through September 2004. Licensee procedures, records, and other documents reviewed within this inspection area are listed in the Attachment to this report.

b. Findings

No findings of significance were identified.

1EP3 Emergency Response Organization (ERO) Augmentation (71114.03)

a. Inspection Scope

The inspectors identified the licensee's commitments and criteria (specified in Section 5.3 of the Emergency Plan) regarding timeliness and numbers of personnel for staffing emergency response facilities (ERFs) in the event of an emergency declaration at Alert or higher. Both the primary system ("all-call" paging of the ERO) and the backup system (Community Alert Network notification) for call-out of ERO personnel were reviewed to determine whether they were designed to support staff augmentation in accordance with ERF activation goals. The inspectors selectively reviewed the maintenance and testing of the licensee's ERO primary and backup augmentation systems, including records of the most recent off-hour ERO drill involving actual travel to the plant and activation of ERFs, conducted on August 25, 2004, as well as documentation of the quarterly Augmentation Capability Assessment drills. The inspectors also reviewed and discussed changes to the augmentation system and process during the past two years. Follow-up activities for a sample of problems identified through ERO augmentation testing were evaluated to determine whether appropriate corrective actions were implemented. The review of this program area encompassed the period September 2002 through September 2004. Licensee procedures, records, and other documents reviewed within this inspection area are listed in the Attachment to this report.

b. Findings

No findings of significance were identified.

1EP4 Emergency Action Level (EAL) and Emergency Plan Changes (71114.04)

a. Inspection Scope

The inspectors reviewed a selected sample of changes made to the Emergency Plan since the last inspection in this program area (conducted in July 2003) against the requirements of 10 CFR 50.54(q) to determine whether any of the changes decreased Plan effectiveness. The licensee had implemented Plan Revisions 47 and 48, including substantive EAL modifications in Revision 47. The inspectors conducted a detailed evaluation of all EAL changes, and reviewed documentation of the licensee's 10 CFR 50.54(q) screening reviews for the referenced revisions. Licensee documents reviewed within this inspection area are listed in the Attachment to this report.

b. Findings

No findings of significance were identified.

1EP5 Correction of Emergency Preparedness Weaknesses and Deficiencies (71114.05)

a. Inspection Scope

The inspectors evaluated the efficacy of licensee programs that addressed weaknesses and deficiencies in emergency preparedness. The procedure governing the plant corrective action process was reviewed for applicability to the emergency preparedness program. Since the last inspection of this program area (September 2002), two emergency declarations were made by the licensee, and documentation associated with these events was reviewed in detail by the inspectors. Reports on the last two annual QA audits, performed in accordance with 10CFR 50.54(t), and three self-assessments were reviewed. The inspectors evaluated selected drill scenarios and associated critiques to determine whether the licensee had properly identified failures to implement regulatory requirements and planning standards. A sample of weaknesses and deficiencies identified by means of these licensee processes was evaluated to determine whether corrective actions were effective and timely. The review of this program area encompassed the period September 2002 through September 2004. Licensee procedures, records, and other documents reviewed within this inspection area are listed in the Attachment to this report.

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation

a. Inspection Scope

The inspectors observed an emergency response training drill conducted on December 12, 2004, in the technical support center to assess the licensee's performance in emergency classification, notification, and protective action recommendation development.

b. Findings

No findings of significance were identified.

4. **OTHER ACTIVITIES**

4OA1 Performance Indicator (PI) Verification (71151)

.1 Emergency Preparedness Cornerstone PIs

a. Inspection Scope

The inspectors sampled licensee submittals relative to the PIs listed below for the period July 1, 2003, through September 30, 2004. To verify the accuracy of the PI data reported during that period, PI definitions and guidance contained in NEI 99-02,

“Regulatory Assessment Performance Indicator Guideline,” Revision 2, were used to confirm the reporting basis for each data element.

- Emergency Response Organization (ERO) Drill/Exercise Performance
- ERO Drill Participation
- Alert and Notification System Reliability

For the specified review period, the inspectors examined data reported to the NRC and records used by the licensee to identify potential PI occurrences. The inspectors verified the accuracy of the PI for ERO drill and exercise performance through review of a sample of drill records. The inspectors reviewed selected training records to verify the accuracy of the PI for ERO drill participation for personnel assigned to key positions in the ERO. The inspectors verified the accuracy of the PI for alert and notification system reliability through review of a sample of the licensee’s records of periodic ANS tests. Licensee documents reviewed within this inspection area are listed in the Attachment to this report.

b. Findings

No findings of significance were identified.

.2 Mitigating Systems Cornerstone PIs

a. Inspection Scope

The inspectors performed a periodic review of the below listed mitigating systems PIs for Units 1 and 2. Specifically, the inspectors reviewed the PIs from the fourth quarter of 2003 through the third quarter of 2004. The review included an evaluation of whether the PIs were calculated in accordance with the guidance contained in NEI 99-02. Documents reviewed included Operating Logs, the Technical Specification Tracking System database, Performance Tracking sheets, and maintenance history to verify the accuracy of the unavailability times for the subject systems.

- High Pressure Injection System Unavailability
- Heat Removal System Unavailability

b. Findings

No findings of significance were identified.

4OA2 Problem Identification and Resolution

.1 Daily Review of Plant Issues

a. Inspection Scope

As required by Inspection Procedure 71152, Identification and Resolution of Problems, and in order to help identify repetitive equipment failures or specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into the

licensee's corrective action program. This review was accomplished by reviewing daily Plant Issues summary reports and attending daily Plant Issues review meetings.

b. Findings

No findings of significance were identified.

.2 Annual Sample Review

b. Inspection Scope

The inspectors reviewed PI S-2004-1932, AFW Pump Mini-Flow Recirculation Line Leakage, to ensure that the full extent of the issue was identified, an appropriate evaluation was performed, and appropriate corrective actions were specified, prioritized, and completed. The inspectors also evaluated the report against the requirements of the licensee's corrective action program as specified in VPAP 1601, Corrective Action, and 10 CFR 50, Appendix B, Criterion XVI, Corrective Action. Additional documents reviewed are listed in the Attachment.

b. Findings and Observations

No findings of regulatory significance were identified. The licensee performed a root cause evaluation for the failure of the Unit 2 AFW minimum recirculation line following the Unit 2 reactor trip on May 21, 2004. On May 22, the licensee found water leaking into the Unit 2 lower level safeguards building in the area of the containment spray and refueling water storage tank piping penetrations. The leak was identified after the AFW system was secured. The licensee determined that pipe, 2"-WAPD-119-151, failed due to external galvanic corrosion. The licensee's root cause evaluation determined the corrosion was exacerbated by a failed corrosion protection coating system similar to the leak on the Unit 1 AFW minimum recirculation flow line, 2"-WAPD-19-151. The Unit 1 leak occurred on April 27, 1992. The corrective action following this leak was to install a new minimum flow recirculation line in available piping in the Unit 1 lower level safeguards building. Licensee efforts to address the cause of pipe failure or to prevent recurrence of the 1992 failure did not prevent the recent failure on the Unit 2 AFW recirculation flow line. Since 1992, there have been significant changes to the licensee's corrective action program.

Failure to take adequate corrective action following the 1992 leak is a violation of 10 CFR 50 Appendix B Criterion XVI. Based on the licensee's safety evaluation, with a complete shear of the AFW minimum recirculation line back to the condensate storage tank, the AFW pumps are still capable of providing adequate water supply to feed steam generators during the required mission time without reducing the required level in the condensate storage tank below the allowable Technical Specification limits. In accordance with Manual Chapter 612, Appendix B, "Issue Screening," this violation is of minor significance and is not subject to enforcement action in accordance with Section IV of the NRC's Enforcement Policy.

.3 Semi-Annual Trend Review

a. Inspection Scope

As required by Inspection Procedure 71152, "Identification and Resolution of Problems," the inspectors performed a review of the licensee's corrective action program (CAP) and associated documents to identify trends that could indicate the existence of a more significant safety issue. The inspector's review was focused on repetitive equipment issues, but also considered the results of daily inspector CAP item screening discussed in section 4OA2.1 above, licensee trending efforts, and licensee human performance results. The inspector's review nominally considered the six month period of July 2004 through December 2004, although some examples expanded beyond those dates when the scope of the trend warranted. The review also included issues documented outside the normal CAP in major equipment problem lists, repetitive and/or rework maintenance lists, system health reports, quality assurance audit/surveillance reports, self assessment reports, and maintenance rule assessments. The specific items reviewed are listed in the Documents Reviewed section attached to this report. The inspectors compared and contrasted their results with the results contained in the licensee's latest quarterly trend reports. Corrective actions associated with a sample of the issues identified in the licensee's trend report were reviewed for adequacy.

The inspectors also evaluated the report against the requirements of the licensee's corrective action program as specified in VPAP-1601, Corrective Action and 10 CFR 50, Appendix B. Additional documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified. The inspectors evaluated the licensee's trending methodology and observed that the licensee had performed a detailed review. The licensee routinely reviewed cause codes, involved organizations, key words, and system links to identify potential trends in their CAP data. The inspectors compared the licensee process results with the results of the inspectors' daily screening. In general, the licensee's results correlated well with the inspectors' results. The inspectors noted that the licensee on occasion did not issue plant issues for certain procedure problems and scaffold issues. The inspectors also noted examples in which the licensee did not feel the need to perform apparent cause evaluations for equipment failures. Based upon previous evaluations and equipment history, they believed the apparent cause(s) were already known without consideration that a new failure mechanism may have occurred. The inspectors observed occasions in which the Plant Issues Review Team members loss focus on their review function and began to troubleshoot or find solutions for the issues under review. This is contrary to their established practices.

4OA5 Other

.1 (Closed - Unit 1) Temporary Instruction (TI) 2515/152, Reactor Pressure Vessel Lower Head Penetration Nozzles (NRC Bulletin 2003-02), Revision 0

a. Inspection Scope

In response to NRC Bulletin 2003-02, the licensee performed a direct visual VT-2 examination of the Unit 1 bottom reactor pressure vessel head. During the week of November 4, 2004, the inspectors performed TI 2515/152 inspection of these activities. The inspection included: (1) review of engineering surveillance procedure 0-NSP-RC-003, "Visual Examination of Reactor Pressure Vessel Bottom Mounted Instrumentation (BMI)," (2) discussions with the licensee's engineer, VT-2 qualified, concerning his knowledge of industry results associated with top and bottom head inspections and experience associated with performing top and bottom head examinations, (3) independent inspections of the BMI and bottom head material conditions, (4) discussion of the examination results with cognizant personnel, and (5) review of VT-2 and medical certifications of the licensee's VT-2 examiner. In addition, the inspectors compared the examination performed to that described in the licensee's 30-day response to NRC Bulletin 2003-002.

b. Findings

There were no findings of significance. From their VT-2 examination the licensee identified no indication of RCS leakage from the BMI nor evidence of general wastage of the bottom reactor pressure vessel head. In addition, during the 10 year ISI inspection, the licensee performed Eddy Current testing on 39 of 50 nozzles and Ultra Sonic testing on 48 of 50 nozzles. Two nozzles were not tested due to equipment limitations. The inspectors concurred with the licensee's conclusions. No areas were identified that required samples to be taken for chemical analysis. The licensee did not perform cleaning of the bottom reactor pressure vessel head.

1. For each of the examination methods used during the outage, the examination was:
 - a. performed by qualified and knowledgeable personnel? Yes, the licensee's engineer was VT-2 qualified. He was familiar with the inspection results, including pictures, of the South Texas Project reactor vessel bottom head. In addition he was knowledgeable of bottom and top head penetrations issues since he had performed similar type visual inspections on the Surry Unit 2 reactor vessel bottom, Surry reactor vessel top heads and was familiar with the North Anna top head penetration issues.
 - b. performed in accordance with demonstrated procedures? Yes, was performed in accordance with 0-NSP-RC-003, and the normal licensee VT-2 procedures.
 - c. able to identify, disposition, and resolve deficiencies? Yes; however, no deficiencies were identified that required resolution.
 - d. capable of identifying pressure boundary leakage as described in the bulletin and/or RPV lower head corrosion? Yes, see answers to questions 2 and 3 below.
2. What was the physical condition of the RPV lower head (e.g. debris, insulation, dirt, boron acid deposits from other sources, physical layout, viewing obstructions)? The

licensee removed insulation to allow 360 degree inspection of all the BMI and bottom vessel head interfaces and an inspection of the bottom vessel head around the BMIs. A few BMIs required the use of an inspection mirror to see around the full 360 degrees. The inspectors were able to walk around each BMI tube and touch most areas of the bottom vessel head. Rust stains were observed in and around the BMI / vessel bottom interface. However, the staining was not sufficiently severe to mask boron crystalline deposits. There was no indication of generalized corrosion on the bottom vessel head based upon the good condition of its coating and uniform contour. Boric acid on insulation was from either leakage from the refueling cavity seal or from the reactor vessel top head area (the reactor vessel head was replaced in 2003).

3. Could small boric acid deposits, as described in the Bulletin 2003-02, be identified and characterized? Yes, the engineer could get within 12 to 20 inches of the penetrations with a portable light source with sufficient intensity to detect small boric acid deposits.
4. What material deficiencies (i.e., cracks, corrosion, etc.) were identified that required repair? None.
5. What, if any, impediments to effective examinations, for each of the applied non-destructive examinations methods, were identified (e.g. insulation, instrumentation, nozzle distortion)? None, see answer 2 above.

This temporary instruction had been closed for Unit 2 in an earlier NRC inspection report, 05000280, 281/2003005. Thus, this temporary instruction is considered complete on Unit 1 and Unit 2.

.2 (Closed Unit 1 and Unit 2) Temporary Instruction 2515/153 Reactor Containment Sump Blockage (NRC Bulletin 2003-01)

During the Unit 1 refueling outage, the inspectors performed a detailed walkdown of the containment sump during the licensee sump inspection and following the licensee's sump closeout but prior to the final containment closeout. The closeout inspection was performed before and after installation of trash racks. This temporary instruction had been discussed in NRC inspection report 05000280, 281/2003005 and remained open pending final review of the response and the completion of any resulting follow-up inspections. The inspectors reviewed the licensee's August 7, 2003, response to NRC Bulletin 2003-1 and verified that the interim compensatory actions have been completed on both units. Thus, this temporary instruction is considered complete on Unit 1 and Unit 2.

.3 (Closed Unit 1 and Unit 2) Temporary Instruction 2515/160, Pressurizer Penetration Nozzles and Steam Space Piping Connections in U.S. Pressurized Water Reactors (NRC Bulletin 2004-01)

The inspectors reviewed the licensee's response to NRC Bulletin 2004-01, dated July 27, 2004, and a supplemental response dated October 4, 2004. From this review, the inspectors determined that Surry Units 1 & 2 pressurizer penetrations/nozzles and steam space piping connections contain all stainless steel (for the integral full

penetration nozzles). Also, there was no use of alloy 82/182/600 materials in the fabrication of Surry Units 1 & 2 pressurizer penetrations/nozzles or connected steam space piping. The review scope for each unit included the pressurizer relief valve nozzle, spray valve nozzle, safety valve nozzle, instrument taps, and the heater penetrations. This temporary instruction is considered complete on Unit 1 and Unit 2.

40A6 Meetings, Including Exit

Exit Meeting Summary

On January 12, 2005, the resident inspectors presented the inspection results to Mr. Jernigan and other members of his staff who acknowledge the findings.

The inspectors confirmed that proprietary information was not provided or examined during the inspection.

40A7 Licensee-Identified Violations

The following findings of very low significance (Green) were identified by the licensee and are violations of NRC requirements which meet the criteria of Section VI.A of the NRC's Enforcement Policy, NUREG-1600, for being dispositioned as an NCV:

- 10 CFR 50, Appendix B, Criterion V requires that activities affecting quality shall be prescribed by documented instructions, procedures, or drawings of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings. Contrary to the above, the pre-lubrication modification for the 1C Emergency Service Water (ESW) pump diesel engine did not contain adequate procedural direction to properly install the modification. Consequently, the licensee improperly installed a modification to the ESW pump diesel engine. This error was not identified during the post-modification testing. Subsequently, the ESW pump failed during a scheduled monthly surveillance. In accordance with Inspection Manual Chapter (IMC) 612 Appendix B, "Issue Screening, the issue is more than minor, in that, the equipment failure affected the equipment availability attribute of the equipment performance objective of the Mitigating Systems Cornerstone. In accordance with the IMC Chapter 609 Appendix A SDP Phase 1 screening worksheet, the finding was determined to be of very low safety significance because no safety function was lost, in that, the two redundant pumps were available. This was identified in Plant Issue S-2004-4621.
- 10 CFR 50, Appendix E, Section IV.D.3, requires that a licensee shall have the capability to notify responsible State and local government agencies within 15 minutes after declaring an emergency. Contrary to this, on November 11, 2004, the licensee did not complete notifications to State and local governments during a declared Notice of Unusual Event. In accordance with IMC 612 Appendix B, the issue is more than minor, in that, the failure to make timely offsite notifications affected the actual event response attribute of the response organization objective of the Emergency Preparedness Cornerstone. In accordance with the IMC Chapter 609 Appendix B Sheet 2 worksheet, the finding was determined to

be of very low safety significance because a notification failure during an actual Notification of Unusual Event, the lowest of the emergency classifications, has very low safety significance. This was identified in Plant Issue S-2004-3706.

- Technical Specification 4.0.5 (a) requires, in part, that in-service testing of ASME Code Class 1, 2, and 3 pump and valves shall be performed in accordance with Section XI of the ASME Boiler and Pressure Code and applicable Addenda as required by 10 CFR 50, Section 50.55a(f), except where specific written relief has been granted by the Commission pursuant to 10 CFR 50, Section 50.55a(f)(6)(I). The ASME Omb Code-2000 requires, in part, that on failure of a check valve during in-service testing, other check valves in the sample group that may be affected by this failure mechanism shall be examined or tested during the same refueling outage. Contrary to the above, following the failure of 1-SW-262 during in-service testing during the November 2004 refueling outage, 1-SW-268 was not inspected or tested as required. Subsequently, the in-service testing of valve 1-SW-268 was satisfactory. In accordance with Inspection Manual Chapter 612 Appendix B, the issue is more than minor, in that, if left uncorrected the finding would become a more significant safety concern in the Mitigating Systems Cornerstone. Specifically, the licensee did not have procedural controls in place to ensure additional valves are tested or inspected as required by ASME Omb Code-2000. In accordance with the IMC Chapter 609 Appendix A SDP Phase 1 screening worksheet, the finding was determined to be of very low safety significance because no safety function was lost, in that, the valve were determined to be operable by subsequent testing. This was identified in Plant Issue S-2004-4693.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Partial List of Persons Contacted

Licensee

R. Allen, Manager, Outage and Planning
R. Blount, Site Vice President (9/26-12/12/04)
M.Gaffney, Director, Nuclear Station Safety and Licensing
B.Garber, Supervisor, Licensing
T. Huber, Manager, Engineering
D. Jernigan, Site Vice President (12/13-12/31/04)
L. Jones, Manager, Radiation Protection and Chemistry
D. Llewellyn, Manager, Training
R. MacManus, Manager, Nuclear Oversight
K. Sloane, Director, Nuclear Station Operations and Maintenance
B. Stanley, Manager, Maintenance
J. Swientoniewski, Manager, Operations
D. Jensen, NDE Engineer
E. Shore, Engineering Supervisor Test & Inspection
P. McFadden, NDE Engineer

NRC

K. Landis, Chief, Branch 5, Division of Reactor Projects, Region II

LIST OF ITEMS OPENED AND CLOSED

Opened

None

Closed

TI 2515/152 (Unit 1)	TI	Reactor Pressure Vessel Lower Head Penetration Nozzles (Section 4OA5.1)
TI 2515/153 (Unit 1 and Unit 2)	TI	Reactor Containment Sump Blockage (Section 4OA5.2)

TI 2515/160 (Unit 1 and Unit 2)

TI

Pressurizer Penetration Nozzles and
Steam Space Piping Connections in
U.S. Pressurized Water Reactors
(Section 40A5.3)

LIST OF DOCUMENTS REVIEWED

Section 1R04: Equipment Alignment

Plant Drawings

11448-FMC-072C
11448-FMC-088B
11548-FM-064A
11548-FM-068A
11548-FMC-068A
11548-FMC-089A
11548-FP-2A
11548-FP-2J
11548-FP-2K

Procedure

2-OP-FW-001A, Auxiliary Feedwater System Valve Alignment

Section 1R05: Fire Protection

Procedures

0-FS-FP-224
0-FS-FP-225
0-FS-FP-198
0-FS-FP-199
1-FS-FP-101 - 103
1-FS-FP-127
2-FS-FP-101 - 103
2-FS-FP-126 - 127

Section 1R08: Inservice Inspection Activities

NDE-RT-101 Radiographic Examination, Rev 10
SSES-6.13 Controlling Procedure for Boric Acid Corrosion Control (BACC) Program, Rev. 1
DNAP-1004 Boric Acid Corrosion Control (BACC) Program, Rev. 2
NDE-MT-701 Magnetic Particle Examination, Rev. 4
NDE-UT-804 Ultrasonic Examination of Bolting Greater than 2 inches, Rev. 2
NDE-7.5 General Requirements for ISI Nondestructive, Rev. 4
NDE-UT-803 Single or Two Side Access Ultrasonic Examination of Austenitic Welds, Rev. 2
NDE-PT-701 Liquid Penetrant Examination, Rev. 5

Other Documents

PIs: All initiated for boric acid leaks:

S-2004-3813 S-2004-3807 S-2004-3803 S-2004-3783 S-2004-3782
S-2004-3781 S-2004-3780 S-2004-3779 S-2004-3809 S-2004-3808
S-2004-3806 S-2004-3805 S-2004-3804 S-2004-3802 S-2004-3801
S-2004-3777 S-2004-3778 S-2004-3749 S-2004-3748 S-2004-3746
S-2004-3784 S-2004-3785 S-2004-3798

FORM OAR-1, Owner's Activity Report, S1R18

FORM OAR-1, Owner's Activity Report, S1R17

FORM OAR-1, Owner's Activity Report, S2R17

Drawing 11448-MKS-118A2 (Revisions 1 through 6), Auxiliary Feedwater System (Unit 1)

Drawing 11448-WMKS-0122L1, Inservice Inspection Isometric-SI System: Safety Injection Loop 1 (Unit 1)

Drawing 11448-WMKS-RC-E-2, ISI Detail Drawing Pressurizer: 1-RC-E-2 (Unit 1)

Audit 03-10, Inservice Inspection, February 25, 2004

Section 1R12: Maintenance Effectiveness

Plant Procedures

2-OP-EH-001A, System Alignment Electro-Hydraulic Fluid System (EHC)

2-OP-EH-001, Electro-Hydraulic Fluid System (EHC)

2-OSP-TM-001, Turbine Inlet Valve Freedom Test

2-OSP-TM-003, Functional Check of Turbine Valves Stroke and Limit Switch Operation

Plant Issues

S-1999-0285, S-1999-2539, S-2001-0299, S-2001-0411, S-2001-0138, S-2001-1387,
S-2001-1390, S-2001-2704, S-2002-0563, S-2002-1426, S-2002-1752, S-2002-3096,
S-2002-3410, S-2002-3678, S-2002-3743, S-2003-5768, S-2004-3495, S-2004-3497,
S-2004-3498, S-2003-3504, S-2004-3599, S-2004-3601, S-2004-3628

Plant Drawings

11548-FMC-089A

11548-FM-091B

Work Orders

451415-01, 451416-01, 451417-01, 451418-01, 451419-01, 451553-01, 451554-01/02,
451555-01, 451556-01, 458958-01, 465253-01, 468517-01, 469118-01, 476735-01,
481120-01, 485191-01, 489061-01, 490150-01, 490278-01, 490279-01, 490280-01,
490285-01, 490693-01, 490694-01, 490695-01, 490696-01, 490697-01, 491022-01,
495372-01, 500889-01, 503862-01, 505992-01, 512325-01, 515004-01, 515497-01,
516821-01, 518295-01, 518296-01, 521466-01

Section 1R20: Refueling and Other Outage Activities

Tagouts

1-04-CS-0002, CS/RS Flange Reversal Window

1-04-SI-0018, 1-GOP-2.4, Accumulator MOV's
1-04-SI-0005, Remove and Install Level Switch
2-04-EE-0001, #2 Emergency Diesel Generator
1-04-SW-0006A, Repairs to 1-SW-MOV-104B
1-04-FW-0012, Perform Maintenance on 1-FW-P-3B, Motor Driven Auxiliary Feedwater Pump.
1-04-SW-0015A, Replacement of 1-SW-S-2B, Charging Pump Service Water Pump Suction Strainer
1-04-VS-0033, Replacement of Self Cleaning Strainer

Sections 1EP2 - 1EP5: Reactor Safety—Emergency Preparedness

Plans and Procedures

Radiological Emergency Plan, Rev. 47 (effective 01/07/2004) and Rev. 48 (effective 07/15/2004)
VPAP-1501, Deviations, Rev. 17
VPAP-1601, Corrective Action, Rev. 19
VPAP-2601, Maintaining Emergency Preparedness, Rev. 11
0-LSP-EW-001, Early Warning System Polling Functional Test, Rev. 6
0-LSP-EW-002, Early Warning System Siren Activation Monitoring, Rev. 5
0-ECM-0502-01, Early Warning System Inspection, Rev. 6
EPCP-0004, Emergency Preparedness Management System, Rev. 2
EPIP-3.05, Augmentation of Emergency Response Organization, 01/07/2004
[Unnumbered Procedure] Telecommunications Operability Testing - Emergency Warning System - North Anna and Surry, Rev. F

Records and Data

10 CFR 50.54(q) Reviews for Revs. 47 and 48 of Emergency Plan
Siren system availability test records for September 2002 - September 2004
Records of siren system quarterly preventive maintenance for 2nd quarter 2003, 4th quarter 2003, 2nd quarter 2004, and 3rd quarter 2004
Records of Augmentation Capability Assessment drills conducted in accordance with VPAP-1601 on 11/17/2003 and 08/11/2004
Documentation packages (scenario/time line/event notification forms/critique report) for ERO drills on 03/19/2003 and 08/25/2004
Documentation packages (Control Room log/event time line/event notification forms/critique report) for Notification of Unusual Event (NOUE) declarations on 09/18/2003 and 05/21/2004

Audits and Self-Assessments

Audit Report 03-02, Emergency Preparedness, 03/31/2003
Audit Report 04-02, Emergency Preparedness, 03/29/2004
Self-Assessment EP-02-02, Emergency Response Training Data Base Assessment, 09/26/2002
Self-Assessment ITC-SA-03-26, Analysis of the Design Report Documentation for the Alert Notification System, 01/30/2004
Self-Assessment ITC-SA-04-03, EP INPO Checklist Program Review, 05/19/2004

Plant Issues (PIs)

PI S-2003-3370, Failure during a drill to demonstrate the ability to notify State and Local governments with correct and timely information, 07/15/2003

PI S-2003-4151, Event classification issues associated with National Weather Service warnings for Hurricane Isabel, 09/18/2003

PI S-2003-4153, NOUE declared at 0900, based on EPIP Tab —4 as a precautionary measure based on severe weather expected from Hurricane Isabel, 09/18/2003

PI S-2003-4166, 45 of 67 sirens are inoperable due to power outages resulting from Hurricane Isabel, 09/19/2003

PI S-2004-1965, Administrative errors noted in State and local notification forms for the NOUE declaration on 05/21/2004

PI S-2004-3046, Technical Support Center activation goal not met during 08/25/2004 exercise, 08/25/2004

PI S-2004-3054, Three anomalies of the MIDAS dose assessment computer system were observed during the 08/25/2004 exercise, 08/25/2004

PI S-2004-3694, Two failures indicated during 10/27/2004 biweekly silent test of ANS, 10/27/2004

Section 4OA1: Performance Indicator Verification

Records, and Data

Siren System Availability Test Records for September 2002 - September 2004

Documentation package (scenario/time line/event notification forms/critique report) for ERO exercise on 08/24/2004

Documentation of DEP Opportunities from State and Local Communicator evaluations on 03/24/2004, 03/29-31/2004

Section 4OA2: Identification and Resolution of Problem

Procedures

DNAP-0114, Dominion Nuclear Self-Evaluation Program

Dominion Self-Evaluation Rollup Presentations for August 17, and December 15, 2004