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

December 22, 2003

Southern Nuclear Operating Company, Inc.
ATTN: Mr. J. T. Gasser, Vice President
Vogtle Electric Generating Plant
P. O. Box 1295
Birmingham, AL 35201-1295

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT - NRC SAFETY SYSTEM DESIGN AND PERFORMANCE CAPABILITY INSPECTION REPORT NOS. 05000424/2003007 AND 05000425/2003007

Dear Mr. Gasser:

On November 21, 2003, the Nuclear Regulatory Commission (NRC) completed a safety system design and performance capability inspection at your Vogtle facility. The enclosed report documents the inspection findings which were discussed on November 21, 2003, with Mr. W. F. Kitchens and other members of your staff. Following completion of additional reviews in the Region II office, a final exit interview was held by telephone with Mr. M. Shebani, Vogtle Licensing Supervisor, on December 16, 2003.

This inspection was an examination of 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 operating license. Within these areas, the inspection involved selected examination of procedures and representative records, observations of activities, and interviews with personnel.

No findings of significance were identified during this inspection.

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/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Charles R. Ogle, Chief
Engineering Branch 1
Division of Reactor Safety

Docket Nos.: 50-424, 50-425
License Nos.: NPF-68, NPF-81

Enclosure: (See page 2)

Enclosure: NRC Inspection Report Nos. 05000424/2003007 and 05000425/2003007
w/Attachment: Supplemental Information

cc w/encl:
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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos.:	50-424, 50-425
License Nos.:	NPF-68, NPF-81
Report Nos.:	05000424/2003007 and 05000425/2003007
Licensee:	Southern Nuclear Operating Company, Inc.
Facility:	Vogtle Electric Generating Plant
Location:	7821 River Road Waynesboro, GA 30830
Dates:	November 3-7, 2003 November 17-21, 2003
Inspectors:	R. Moore, Senior Reactor Inspector (Lead Inspector) R. Schin, Senior Reactor Inspector M. Maymi, Reactor Inspector S. Rudisail, Project Engineer R. Conney, Contractor
Accompanied by:	N. Staples, Reactor Inspector Intern, Region II
Approved by:	Charles R. Ogle, Chief Engineering Branch 1 Division of Reactor Safety

Enclosure

SUMMARY OF FINDINGS

IR 05000424/2003-007, 05000425/2003-007; 11/03-07/2003 and 11/17-21/2003; Vogtle Electric Generating Plant, Units 1 and 2; Safety System Design and Performance Capability Inspection.

This inspection was conducted by a team of region based inspectors and one contract inspector. 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. NRC-Identified and Self-Revealing Findings

No findings of significance were identified.

B. Licensee-Identified Findings

None.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstones: Initiating Events and Mitigating Systems

1R21 Safety System Design and Performance Capability (71111.21)

This team inspection reviewed selected components and operator actions that would be used to prevent or mitigate the consequences of a steam generator tube rupture (SGTR) event. Components in the main steam (MS), auxiliary feedwater (AFW), steam generator (SG) blowdown, chemical volume and control (CVCS), reactor coolant (RCS), and radiation monitoring systems were included. This inspection also covered supporting equipment, equipment which provides power to these components, and the associated instrumentation and controls. The SGTR event is a risk-significant event as determined by the licensee's probabilistic risk assessment.

.1 System Needs

.11 Process Medium

a. Inspection Scope

The team reviewed the water sources for components and systems required for the mitigation of the SGTR event. These included the refueling water storage tank (RWST), volume control tank (VCT), and condensate storage tank (CST). The team reviewed the availability, reliability, and adequacy of the water sources with respect to the anticipated water source requirements for the SGTR event. The team reviewed pump performance curves, tank drawings, the Updated Final Safety Analysis Report (UFSAR), tank sizing calculations, and net positive suction head (NPSH) calculations for the AFW pumps and the centrifugal charging pumps (CCPs) to verify that design and accident analysis assumptions related to water volume and NPSH were consistent with system and equipment capability. These calculations were also reviewed to verify the adequacy of design assumptions and methodology. Additionally, the team reviewed completed maintenance work orders to verify preventive maintenance was performed on the CST's bladders to ensure material condition had not deteriorated.

b. Findings

No findings of significance were identified.

.12 Energy Sources

a. Inspection Scope

The team reviewed the adequacy of energy sources for a sample of motors, valve operators, inverters, and radiation monitors used to mitigate a SGTR. This review included design basis documents, calculations, vendor information, and approved design output drawings for the Unit 1 Class 1E 4160 volt alternating current (VAC) and 480 VAC electrical distribution systems. The team also reviewed surveillance records

on breaker alignment checks and bus voltage readings to verify that these checks were being performed in accordance with the requirements specified in the Technical Specifications (TS). The team reviewed the turbine driven AFW pump steam supply orifice inspections and bypass valve preventive maintenance instructions and frequency to verify the reliability of the steam supply and the adequacy of maintenance.

b. Findings

No findings of significance were identified.

.13 Instrumentation and Controls

a. Inspection Scope

The team reviewed the level instrumentation of the CST and the RWST, to verify that they were designed, constructed, and operated in accordance with design and licensing basis documents. The team also reviewed appropriate design basis documents, TS sections, UFSAR sections, system flow diagrams, instrument uncertainty calculations, calibration and surveillance test procedures, and calibration test records to verify that the instruments had the proper range and accuracy needed to perform their safety function. This included the radiation monitors in the digital radiation monitoring system. Also reviewed was the licensee's validation of the integrated plant computer program which processes radiation monitor input to determine a primary leak rate for a SGTR.

The team reviewed electrical control schematics of the SG atmospheric relief valves (ARVs), AFW motor driven and steam driven pumps, AFW pump mini-flow valves, and pressurizer power operated relief valves (PORVs) to verify that the control systems were in accordance with their design bases and would be functional and provide desired control during accident/event conditions. The team reviewed completed calibration and surveillance tests related to the motor-driven AFW pumps' automatic motor-operated minimum flow valves to verify that the valves and their entire control circuits were being periodically tested.

The team reviewed surveillance and calibration records for process instrument channels monitoring SG level, SG pressure, RCS pressure, RCS temperature, pressurizer pressure, and pressurizer level to verify that the instruments and associated loop components were being properly calibrated and tested in accordance with calibration procedures and the TS. The calibration records were also reviewed to verify that instrument "out of tolerance" conditions were properly evaluated by the licensee for impact on system performance and, if applicable, entered into the corrective action program.

b. Findings

No findings of significance were identified.

.14 Operator Actions

a. Inspection Scope

The team reviewed emergency operating procedures (EOPs), abnormal operating procedures (AOPs), annunciator response procedures (ARPs), and operating procedures (OPs) that would be used in identification and mitigation of an SGTR event. This procedure review was done to verify that the procedures were consistent with the UFSAR description of an SGTR event and with the owners' group guideline procedures; any step deviations were justified and reasonable; and the procedures were written clearly and unambiguously. The team also reviewed relevant operator training lesson plans and job performance measures and discussed selected portions of them with operators to verify that they were consistent with the procedures. In addition, the team discussed the EOPs with procedure writers and operators and observed a simulator drill of an SGTR event to verify that the procedures and operator training were adequate to identify and mitigate an SGTR event.

b. Findings

No findings of significance were identified.

.15 Heat Removal

a. Inspection Scope

The team reviewed design calculations, drawings, test procedures, and surveillance documentation for selected equipment to assess the reliability and availability of cooling for equipment required to mitigate an SGTR event. These included the review of CCPs' lube oil coolers, related maintenance work orders, preventive maintenance instructions and frequency, condition reports, engineering evaluations, flow surveillance tests and data trending to verify adequacy of maintenance and surveillance acceptance criteria. The team also reviewed nuclear service cooling water (NSCW) fans' inspection, preventive maintenance and monthly test procedures to verify adequacy of maintenance.

b. Findings

No findings of significance were identified.

.2 System Condition and Capability

.21 Installed Configuration

a. Inspection Scope

The team performed field inspections of selected components that could be used to mitigate an SGTR. This included equipment in the following systems: CVCS, AFW, main feedwater (FW), condensate, main steam (MS), 4160 VAC, 480 VAC, and 125

volt direct current (dc). The purpose of the inspections was to assess general material condition, verify that system alignments were consistent with design and licensing basis assumptions, and to identify degraded conditions of SGTR mitigation equipment.

The team reviewed system drawings and walked down the manual valves between the CST and the AFW pumps to verify that the valves were locked open as indicated on the system drawings. Further, the team inspected the motor driven AFW pumps' automatic motor-operated minimum flow valves to verify that they were open when the pumps were not operating.

b. Findings

No findings of significance were identified.

.22 Operation

a. Inspection Scope

The team performed walk throughs of selected tasks to verify that human factors in the procedures and in the plant (e.g., clarity, lighting, noise, accessibility, labeling) were appropriate to support effective use of the procedures. The team walked through SGTR procedures, with radiological control technicians and chemistry personnel, that would be used to help operators identify the SG involved in the SGTR event, and walked through, with an operator, the EOP actions to manually operate an SG ARV and to switch the AFW pumps' suction to the alternate CST. Additionally, the team reviewed procedural guidelines and performance records for the loose parts monitoring systems to verify that the systems were operational and were being used to monitor for loose parts in the reactor coolant system and steam generators.

b. Findings

No findings of significance were identified.

.23 Design

a. Inspection Scope

Mechanical Design

The team reviewed mechanical design calculations, specifications, and the UFSAR accident analysis to identify the design criteria which defined the required capacity and capability of SGTR mitigation mechanical equipment. Surveillance test procedures and equipment monitoring activities were also reviewed to verify that the design criteria were appropriately translated into acceptance criteria. This included a review of an MS safety valve modification which removed the manual lift arm. The AFW pump performance curves were also reviewed to verify adequate brake horsepower was provided by the motor for pump runout conditions.

Electrical Design

The team reviewed documentation of completed design changes, corrective maintenance, and preventive maintenance; and walked down selected components of the AFW, safety injection (SI), 4160 VAC, 125 VDC and 120 VAC systems to verify that these activities were maintaining the assumptions of the licensing and design bases. During these reviews, the team focused on potential common mode failure vulnerabilities that could be introduced by design or maintenance activities. The team reviewed the uncertainty calculations for the RWST level, CST level and pressurizer pressure instrument loops to verify adequate incorporation of design setpoint values into the instrument calibration procedures. Design changes were reviewed to verify that system and equipment design functions were appropriately evaluated and maintained. Design changes reviewed included the installation of a new noble gas detector (RE0810) on the steam jet air ejector and replacement of installed Barton AFW flow transmitters with Rosemount transmitters.

b. Findings

No findings of significance were identified.

.24 Testing and Inspection

a. Inspection Scope

The team reviewed documentation of completed surveillance tests, data trending, and inspections to verify that the tests and inspections were appropriately verifying that the assumptions of the licensing and design bases were being maintained. This review included surveillance testing of the CCPs and AFW pump discharge pressures and flowrates, AFW and MS valve stroke times, AFW stop check valve operation, and AFW pump vibration and oil testing. Additionally, electrical equipment testing in the 4160 VAC, 125 VDC and 120 VAC systems was reviewed. The team reviewed the surveillance testing and test records for the 125/250 VDC station batteries to verify that the battery capacity was adequate to supply and maintain in operable status, the required emergency loads for the design basis duty cycle.

b. Findings

No findings of significance were identified.

.3 Selected Components

.31 Component Degradation

a. Inspection Scope

The team reviewed inservice test program trending data, system health reports, maintenance and testing documentation, calibration records, work orders, preventive maintenance schedules, pump oil analysis reports, and condition reports to assess the

licensee's actions to verify and maintain the safety function, reliability and availability of selected components. The Maintenance Rule functional failures of selected components for the past five years were also reviewed. Additionally, the team reviewed potential common cause failure mechanisms due to flooding, maintenance, parts replacement and modifications. A list of equipment reviewed is included in the Attachment.

b. Findings

No findings of significance were identified.

.32 Equipment/Environmental Qualification

a. Inspection Scope

The team conducted in-plant inspections to verify that the observable portion of selected mechanical components and electrical connections to those components were suitable for the environment expected under all conditions, including high energy line breaks. The team reviewed electrical switchgear room heat up calculations for switchgear rooms which provide motive power to motor operated valves (MOVs) used during an SGTR event to verify the adequacy of the equipment environmental qualification for the period assumed in the station probabilistic risk assessment analysis (24hrs).

b. Findings

No findings of significance were identified.

.33 Equipment Protection

a. Inspection Scope

The team conducted in-plant inspections to verify that there was no observable damage to installations designed to protect selected components from potential effects of high winds, flooding, and high or low outdoor temperatures. The team used the internal plant flooding report to assess potential water depths and potential impact on instrumentation located in those areas.

b. Findings

No findings of significance were identified.

.34 Operating Experience

a. Inspection Scope

The team reviewed the licensee's dispositions of operating experience reports related to the SGTR events at Palo Verde and Indian Point Nuclear Stations to verify that applicable insights from those reports had been applied to the station equipment and

procedures. The team reviewed the licensee's actions to address an industry issue related to monitoring the life of installed Rosemount transmitters. (NRC Bulletin 90-01, Supplement 1)

b. Findings

No findings of significance were identified.

.35 Steam Generator Inservice Inspection

a. Inspection Scope

The team performed a limited scope review of the inservice inspection program for the SGs to verify that SG tubes were being inspected as required by TS and procedures, tube conditions were assessed, and the progress of identified wear mechanisms was monitored.

b. Findings

No findings of significance were identified.

.36 Foreign Material Exclusion Control (FME) Program

a. Inspection Scope

The team reviewed the procedural guidelines for cleanliness requirements during maintenance with systems open to verify that controls existed to prevent the introduction of foreign material. These guidelines included a method for controlling and accounting for material, tools and parts. Additionally, the team reviewed Foreign Material Exclusion (FME) related CRs initiated in the past three years to determine if there was a history of FME issues.

b. Findings

No findings of significance were identified.

.4 Identification and Resolution of Problems

a. Inspection Scope

The team reviewed selected SGTR mitigation equipment problems identified in the licensee's corrective action program to assess the adequacy of the corrective actions to prevent recurrence and the scope of broadness reviews to other plant equipment. This included CRs related to the MSIVs, CCPs' lube oil coolers, AFW pump discharge MOVs and stop check valves.

In addition, the team reviewed work orders on risk significant equipment to evaluate failure trends. The team also reviewed the licensee's performance in the identification of procedural deficiencies.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA6 Meetings, Including Exit

The lead inspector presented the inspection results to Mr. W. F. Kitchens, and other members of the licensee staff, at an exit meeting on November 21, 2003. Following completion of additional reviews in the Region II office, a final exit was held by telephone with Mr. M. Shebani, Vogtle Licensing Supervisor, on December 16, 2003. The licensee acknowledged the findings presented. Proprietary information is not included in this inspection report.

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

B. Burmeister, Engineering Support Manager
S. Douglas, Operations Manager
B. Gover, System Engineer
W. Kitchens, General Plant Manager
K. Lowery, Senior Engineer, Souther Nuclear Company (SNC) Licensing
R. Moye, Electrical and I&C Supervisor, Plant Support
J. Robinson, Operations Unit Supervisor
R. Rowland, Operations Supervisor

NRC (attended exit meeting)

T. Morrissey, Resident Inspector

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

None

ATTACHMENT

LIST OF DOCUMENTS REVIEWED

Procedures

11610-1, Auxiliary Feedwater System Alignment, Rev. 20
14495-1, Auxiliary Feedwater System Flow Path Verification, Rev. 7
14545-1, Motor Driven Auxiliary Feedwater Pump Operability Test, Rev. 12
14807-1, Motor Driven Auxiliary Feedwater Pump & Check Valve Inservice & Response Time Test, Rev. 26
14808-1, Centrifugal Charging Pump & Check Valve IST & Response Time Test, Rev. 30.1
27445-C, Marley (NSCW) Cooling Tower Fan & Gear Reducer Maintenance, Rev. 11
28210-C, Main Steamline Code Safety Valve Setpoint Verification, Rev. 17
83308-C, Testing of Safety Related NSCW System Coolers, Rev. 28
AOP 18009-C, Steam Generator Tube Leak, Rev. 20
AOP 18038-1, Operation From Remote Shutdown Panels, Rev. 27.1
AOP 49009-C, HP/Chemistry Steam Generator Tube Leak Actions, Rev. 12
ARP 17100-1, Annunciator Response Procedure for the Effluent Radiation Monitoring System (RMS), Rev. 19
Administrative Procedure 00150-C, Condition Reporting and Tracking System, Rev. 34
EOP 19000-C, E-0, Reactor Trip or Safety Injection, Rev. 28.3
EOP 19030-C, E-3 Steam Generator Tube Rupture, Rev. 29
EOP 19231-C, FR-H.1 Response to Loss of Secondary Heat Sink, Rev. 26.4
OP 13610-1, Auxiliary Feedwater System, Rev. 33
ST 24390-1, Auxiliary Feedwater Pump Mini Flow Control IF-5154 Channel Calibration, Rev. 8
ST 24390-1, Auxiliary Feedwater Pump Mini Flow Control IF-5155 Channel Calibration, Rev. 8
17100-1 Annunciator Response Procedures for the Process & Effluent Radiation Monitoring System Rev. 19
17102-1 Annunciator Response Procedures for the Safety Related Display Console QRMZ Rev. 13.1
18009-C Abnormal Operating Procedure Steam Generator Tube Leak Rev.20
19031-C Emergency Operating Procedure ES-3.1 Steam Generator Tube Rupture Rev.29
20202-c Rosemount Transmitter Calibration Trending Rev.0.2
24256-1 Volume Control Tank Pressure Control P-115 Rev. 10
24806-1 RWST 1L990 Channel Calibration Test Rev. 19.1
24987-C 18 month Channel Calibration Gaseous Effluent Monitor 1RE12839-C (SJAE) Rev. 1
34306-C Operation of Steam Generator Blowdown Liquid Process Monitor RE0021 Rev.8
34326-C Operation of the Primary/Secondary Leakrate Monitor RE0724 Rev. 5
34327-C Operation of Radiation Monitor RE0810 Rev. 8
34303-C Surveillance of the Digital Radiation Monitoring System (DRMS) Rev.29.1
34331-C Management of DRMS Status and Parameters Rev.20
14545-1, MDAFW Pump Operability Test, Rev. 12
14606-1, SSPS Slave Relay K618 Train A Test Safety Injection, Rev. 8
14640-1, SSPS Slave Relay K640 Train A Test Safety Injection, Rev. 13
14748-1, AFW Pump and Check Valve Cold S/D IST and TDAFWP Auto Start Test, Rev. 21
14495-1, AFW System Flow Path Verification, Rev. 7
26871-C, Static Testing of Motor Operated Gate/Globe Valves Using VOTES analysis and Test System, Rev. 10

55025-C, Calculation of Breaker Trip Settings for AC Molded Case Circuit Breakers and Selection of Thermal Overload Protection for AC Motor Loads, Rev. 16

Calculations

X4C1204T03, Refueling Water Storage Tank (RWST) Volume Distribution and Sizing, Rev. 4
X4C1204V01, Emergency Core Cooling Pumps Suction Line Losses and NPSH, Rev. 2
X4C1302V06, Condensate Storage Tank Verification, Rev. 1
X5CP00100 Evaluation of Rosemount 1153 & 1154 Pressure Transmitters for various protection channel applications Rev.2
X5CP00103 Evaluation of Rosemount Differential Pressure Transmitters for Static Pressure Span Effect Rev.0
X4CI204T03 RWST Volume, Setpoints and Operator time requirements for ECCS Pump Suction Rev.4
1X6AA10-00149 Set point Methodology Uncertainty Calculations and Set points for Reactor Protection Systems Rev.5
VEGP 55032-C Scaling Calculations only for RWST, Condensate Storage Tanks, Steam Generator Level, Pressurizer Pressure and Level, Main Steam Pressure Loop1, Rev. 5

Updated Final Safety Analysis Report

UFSAR 5.4.13, Safety and Relief Valves
UFSAR Section 6.3, Emergency Core Cooling System
UFSAR Section 9.2.1, Nuclear Service Cooling Water System
UFSAR Section 9.2.6, Condensate Storage Facility
UFSAR Section 10.0, Steam and Power Conversion System
UFSAR Section 10.4.9, Auxiliary Feedwater System
UFSAR Section 15.6.3, Steam Generator Tube Failure

Improved Technical Specifications

Section 3.4.11, Pressurizer Power Operated Relief Valves (PORVs)
Section 3.5.2 and Bases, ECCS - Operating
Section 3.5.4, Refueling Water Storage Tank (RWST)
Section 3.7.2, Main Steam Isolation Valves (MSIVs)
Section 3.7.3, Main Feedwater Isolation Valves (MFIVs) and Main Feedwater Regulation Valves (MFRVs) and Associated Bypass Valves
Section 3.7.5 and Bases, Auxiliary Feedwater System
Section 3.7.6 and Bases, Condensate Storage Tank (CST)
Section 3.7.9 and Bases, Ultimate Heat Sink (UHS)

Requests for Engineering Assistance (REAs)

REA 95-VAA093, Room Heat Load Calculation for Class 1E 4.16 KV / 480 V Switchgear Rooms, dated June 4, 1996

REA 99-V1A036, No NSCW Flow to SIP Inboard Motor Cooler, dated March 19, 1999
REA 01-V2A134, SIP 2B Lube Oil Cooler, dated November 13, 2001

Modifications

MDC 01-VAM015, Main Steam Safety Relief Valve Manual Lever Removal, Rev.
DCP 00-VAN0012 Feed flow Transmitters, Rev. 0
DCR 99-VIN0025 AFW Miniflow valves Rev.0
DCO 00-VAN0005-003 SJAE Radiation Monitor RE0810

Completed Work Orders (WOs) and Work Requests (WRs)

MWO 10000148-00, 1PSV-3024 Testing per Procedure 28210-C, September 17, 2000
MWO 10300899-00, CSTs 1-1301-V4-001 & 1-1301-V4-002 Bladder Inspection, August 26, 2003
MWO 20201414-00, CSTs 2-1302-V4-001 & 2-1302-V4-002 Bladder Inspection, September 30, 2002

Completed Surveillance Procedures, Preventive Maintenance (PM), and Test Records

14748-1, AFW Pump and Check Valve Cold S/D IST & TDAFWP Auto Start Test, completed April 7, 2002 and September 21, 2003
14825-1, Quarterly Inservice Valve Test, completed on SG ARVs on June 16, 2003 and September 8, 2003
14825-1, Quarterly Inservice Valve Test, completed on AFW Train A on August 11, 2003 and November 3, 2003
14825-1, Quarterly Inservice Valve Test, completed on AFW Train B on August 1, 2003 and October 29, 2003
14830-1, Quarterly Check Valve Inservice Test, completed July 22, 2003 and November 8, 2003
ST 14748-1, AFW Pump and Check Valve Cold S/D IST and TDAFWP Auto Start Test, Rev. 21, completed on September 21, 2003
ST 14545-1, Motor Driven Auxiliary Feedwater Pump Operability Test, Rev. 12, completed on September 12, 2003 and on October 20, 2003
ST 14546-1, Turbine Driven Auxiliary Feedwater Pump Operability Test, Rev. 25, completed on October 31, 2003
ST 54084-C, DMIMS Data Analysis and Comparison, Rev. 14, completed on October 29, 2003
ST 24901-101, Degraded Grid Voltage Relay Tests, dated April 4, 2002 and November 14, 2003
ST 28810-103, 18 Month, Class 1E Service Check for 1BD1B, dated March 25, 2002
ST 28810-101, 18 Month Class 1E Battery Service Check for 1AD1B, dated March 8, 2002

Condition Reports (CRs))

2001000468, Auxiliary Feedwater stop check valve multiple leaks and repairs, March 7, 2001
2001000905, MSIVs hemisphere charging safety concerns, April 19, 2001

2001002057, MSIVs and ARVs Grayboot connectors issues, April 19, 2001
2001002835, CCP motor coolers' leakage due to bowed tube sheet, November 27, 2001
2002001613, CCP lube oil cooler reduced flows, May 14, 2002
2002002100, MFIV accumulator precharge check issues, July 22, 2002
2003002464, MFIV low oil level alarms and precharge check issues, September 7, 2003
2003002511, MSIV hemisphere charging safety concern, September 10, 2003
2003003157, MDAFW discharge MOV flow issues, October 22, 2003
2003002176, Unit 2 MDAFW pump A miniflow valve failed open, dated August 11, 2003
2003002197, Unit 2 MDAFW pump A miniflow valve failed to open, dated August 13, 2003
2003002389, Unit 2 MDAFW pump A miniflow valve failed to open, dated August 30, 2003
2003002422, LCO entry not made when operating AFW pump min-flow valves from the remote shutdown panel for a surveillance test, dated August 29, 2003
2003001010, Load Test Surveillance Failure for Charger 2BD1CB, dated April 21, 2003
2003002489, 1CD1CB-A, battery charger ammeter will not calibrate, dated, September 10, 2003
2003002246, Procedures differ from operations procedures for starting chargers, dated August 16, 2003
2003003214, Load profile change for batteries changed but site test procedures not changed, dated October 28, 20003
2001001937, Battery 2CD1CA gaps between rails of rack and cells, seismic operability, dated August 13, 2001
2002001710, Part 21 notification related to Vogtle 125 VDC switchgear circuit beakers, dated May 30, 2002

Condition Reports Written Due to this Inspection

2003003336, Insulation missing from piping downstream of two Unit 1 steam generator atmospheric relief valves, dated November 11, 2003
2003003436, Incorrect data was recorded for AFW pump miniflow during a surveillance test on September 21, 2003; dated November 20, 2003
2003003428, Incomplete documentation of surveillance task 28905-114, 18 month MOV thermal overload bypass test, performed October 10,200
2003003414, Incomplete documentation of surveillance task 28905-114, performed October 8, 2003

Vendor and Technical Manuals

AX5AC05-00034-1, Installation, Operation & Maintenance for Self-Actuated Safety Valves, Rev.1

Drawings

AX5AC05-00135-4, Nozzle Type Safety Valve, Rev. F
1X4DB112, P&ID Reactor Coolant System / System No. 1201, Rev. 40
1X4DB116-2, P&ID Chemical and Volume Control System / System No. 1208, Rev. 27
1X4DB159-2, P&ID Main Steam System / System No. 1301, Rev. 28

1X4DB161-1, P&ID Auxiliary Feedwater System, Condensate Storage & Degasifier System/ System No. 1302, Rev. 41
1X4DB161-2, P&ID Auxiliary Feedwater System / System No. 1302, Rev. 26
1X4DB161-3, P&ID Auxiliary Feedwater Pump System (Aux Feedwater Pump Turbine Driver)/ System 1302, Rev.37
1X4DB168-3, P&ID Condensate & Feedwater System/System No. 1305, Rev. 27
1X5DT0032, Level Setting Diagram Condensate Storage Tank - 1, Rev. 5
1X5DT0066, Level Setting Diagram Refueling Water Storage Tank T4001, Rev. 1
P&ID 1X4DB161-1, Auxiliary Feedwater System Condensate Storage & Degasifier System, Rev. 41
P&ID 1X4DB161-2, Auxiliary Feedwater System, Rev. 26
P&ID 1X4DB168-3, Condensate & Feedwater System, Rev. 27
½X6AH02-68-0, Centrifugal Charging Pump Data Booklet
IST Data, Unit 1 & 2 Centrifugal Charging Pumps, 1998-2003
1X4AF03-20032, Motor Driven Auxiliary Feedwater Pumps' Vendor Curves, Rev. 5
IST Data, Unit 1 & 2 Motor Driven Auxiliary Feedwater Pumps, 1998-2003
Pump Oil Analysis Reports, Motor Driven Auxiliary Feedwater Pumps, 1998-2003
IST Data, Pressurizer PORVs Stroke Time Test, 1990-2003
IST Data, Main Steam Atmospheric Relief Valves Stroke Time Test, 1991-2003
1X5DV011 Instrument Loop Diagram Aux FW to Steam Generator Rev.6
1X5DV041 Instrument loop Diagram Main Steam ATM Relief loop1 Rev.7
1X5DV093 Instrument Loop Diagram Condensate Storage Tank level Rev.7
1X4DB161-2, P&ID Diagram AFW System NO. 1302, Rev. 26
1X3D-BC-F04B, Elementary Diagram AFW System 1FV-5155, Rev. 5

Miscellaneous Documents

Westinghouse Owners Group Emergency Response Guidelines, Rev. 1C
System Health Report, Auxiliary Feedwater System, 2nd Quarter 2003
System Health Report, Main Steam System, 2nd Quarter 2003
System Health Report 125 VDC system, 2nd Quarter 2003
System Health Report 480 VAC System 2nd Quarter 2003
Job Performance Measure, JPM RQ-JP-18038-016, Locally Operate Steam Generator ARV, Rev. 17

Section 1R21.31.a Partial list of Components Reviewed

AFW Pump and Motors
SI Pump Motors
Vital Inverters
125 VDC Batteries
Battery Chargers
4kV Switchgear
Nuclear Service Water Cooling Tower Fan Motors
SG ARVs
MSIVs,

MSSVs,
MFIVs
Pressurizer PORVs,
AFW MOVs suction valves
AFW mini-flow valves
check valves
TDAFW Pump, Discharge Valves (1-HV-5120,1-HV-5122,1-HV-5125,1-HV-5127)
MDAFW Pump, Discharge Valves (1-HV-5134, 1-HV-5132, 1-HV-5137, 1-HV-5139)
MDAFW PMP-B Mini-flow Valves(1-FV-5154, 1-FV-5155)