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

January 23, 2003

EA-02-235

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

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT - NRC INTEGRATED INSPECTION REPORT 50-424/02-04 AND 50-425/02-04 AND OFFICE OF INVESTIGATION REPORT 2-2002-023

Dear Mr. Gasser:

On January 4, 2003, the Nuclear Regulatory Commission (NRC) completed an inspection at your Vogtle Electric Generating Plant Units 1 and 2. The enclosed integrated inspection report documents the inspection findings, which were discussed on January 9, 2003, with Mr. G. Frederick and other members of your staff.

The inspections 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 selected procedures and records, observed activities, and interviewed personnel.

This report documents one self-revealing finding of very low safety significance (Green) that was determined to involve a violation of NRC requirements. In addition, a Severity Level IV violation of NRC requirements was identified based upon NRC staff review of an NRC Office of Investigation (OI) Report. A synopsis of the OI Report is enclosed. However, because of the very low safety significance and because the violations were entered into your corrective action program, the NRC is treating these violations as Non-Cited Violations (NCVs) in accordance with Section VI.A.1 of the NRC's Enforcement Policy. If you contest any NCV in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region II; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Vogtle Electric Generating Plant.

Since the terrorist attacks on September 11, 2001, the NRC has issued two Orders (dated February 25, 2002, and January 7, 2003) and several threat advisories to licensees of commercial power reactors to strengthen licensee capabilities, improve security force readiness, and enhance access authorization. The NRC also issued Temporary Instruction 2515/148 on August 28, 2002, that provided guidance to inspectors to audit and inspect licensee implementation of the interim compensatory measures (ICMs) required by the February 25th Order. Phase 1 of TI 2515/148 was completed at all commercial nuclear power plants during calendar year (CY) '02, and the remaining inspections are scheduled for completion in CY '03. Additionally, table-top security drills were conducted at several licensees to evaluate the impact of expanded adversary characteristics and the ICMs on licensee protection and mitigative strategies. Information gained and discrepancies identified during the audits and drills were reviewed and dispositioned by the Office of Nuclear Security and Incident Response. For CY '03, the NRC will continue to monitor overall safeguards and security controls, conduct inspections, and resume force-on-force exercises at selected power plants. Should threat conditions change, the NRC may issue additional Orders, advisories, and temporary instructions to ensure adequate safety is being maintained at all commercial power reactors.

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 Website at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Brian R. Bonser, Chief
Reactor Projects Branch 2
Division of Reactor Projects

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

Enclosures: 1. NRC Integrated Inspection Report 50-424/02-04
and 50-425/02-04 w/Attachment
2. Office of Investigation Report 2-2002-023 Synopsis

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U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos.:	50-424 and 50-425
License Nos.:	NPF-68 and NPF-81
Report Nos.:	50-424/02-04 and 50-425/02-04
Licensee:	Southern Nuclear Operating Company, Inc. (SNC)
Facility:	Vogtle Electric Generating Plant (VEGP), Units 1 and 2
Location:	7821 River Road Waynesboro, GA 30830
Dates:	September 29, 2002 through January 4, 2003
Inspectors:	J. Zeiler, Senior Resident Inspector, Reactor Projects Branch 2 T. Morrissey, Resident Inspector, Reactor Projects Branch 2 E. Testa, Senior Health Physicist, Plant Support Branch (Sections 2OS1, 2OS2, and 2PS2) G. Kuzo, Senior Health Physicist, Plant Support Branch (Sections 2OS1, 2OS2, and 2PS2) A. Nielsen, Health Physicist, Plant Support Branch (Sections 2OS1, 2OS2, and 2PS2) M. Maymi, Reactor Inspector, Engineering Branch 1 (Sections 1R02 and 1R17) J. Blake, Sr. Project Manager, Engineering Branch 2 (Sections 1R02, 1R08, and 1R17) K. Maxey, Reactor Inspector, Engineering Branch 2 (Sections 1R02 and 1R17) J. Ennis, Physical Security Inspector (Consultant), Plant Support Branch (Section 4OA5)
Approved by:	Brian R. Bonser, Chief Reactor Projects Branch 2 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000424/2002-04, 05000425/2002-04; Southern Nuclear Operating Company, Inc.; 09/29/2002-01/04/2003; Vogtle Electric Generating Plant, Units 1 and 2; Maintenance Effectiveness, Other Activities.

The report covered a three month period of inspection by resident inspectors and an announced inspection by regional health physics inspectors, regional reactor inspectors, and a physical security inspector. Two Green non-cited violation (NCVs) were identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609 "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

A. Inspector Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

- Green. The improper reassembly of a Component Cooling Water (CCW) system isolation valve resulted in a loss of one train of CCW.

  A self-revealing non-cited violation of Technical Specification 5.4.1.a was identified for failure to follow valve reassembly procedures. This finding is greater than minor because it affected the mitigating system cornerstone objective of equipment availability and reliability, in that, the failure of valve 1HV11817 caused CCW relief valves to lift, challenged the CCW system inventory, and resulted in a loss of one train of CCW. Also failure of 1HV11817 resulted in a higher than designed CCW flow rate through an RHR heat exchanger and, over an extended period, could have resulted in heat exchanger degradation. The finding is of very low safety significance because of the short duration that the train was out of service and the CCW inventory loss was not in excess of the normal system makeup capability. (Section 1R12)

Cornerstone: Physical Protection

- Green. Failure to maintain complete and accurate results of a drug screening test and the associated entry into the licensee's Access Control System database in that the site Fitness-for-Duty Coordinator deliberately altered information indicating a specimen was negative for drugs when it was, in fact, positive for marijuana and amphetamines.

  A Severity Level IV, non-cited violation of 10 CFR 50.9 was identified. Because this issue involved willfulness on the part of a licensee employee and inaccurate information which impacts the regulatory process, it was not subject to the provisions of the Reactor Oversight Process. The finding was determined to be greater than minor because a barrier was lost in the physical security system in that the failure to properly categorize and report a positive drug test result had the potential to allow unescorted plant access to an individual who did not meet access requirements. (Section 4OA5)

B. Licensee Identified Violations

None.

REPORT DETAILS

Summary of Plant Status

Unit 1 operated at essentially 100% Rated Thermal Power (RTP) until November 24, when the unit was shutdown due to high sodium concentration in the feedwater system caused by the addition of incorrect chemicals. Following feedwater cleanup, the unit was restarted on December 1 and attained 100% RTP on December 5. The unit operated at essentially 100% RTP for the remainder of the inspection period.

Unit 2 operated at essentially 100% RTP until October 6 when the unit was shutdown for a planned refueling outage. The unit was restarted on November 12. A manual reactor trip was initiated from 21% RTP on November 13 due to high steam generator levels. The unit was restarted on November 15 and attained 100% RTP on November 19. On November 24, the unit was shutdown due to high sodium concentration in the feedwater system caused by the addition of incorrect chemicals. Following feedwater cleanup, the unit was restarted on December 10 and attained 100% RTP on December 18. The unit operated at essentially 100% RTP for the remainder of the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection

a. Inspection Scope

The inspectors performed a walkdown of the Refueling Water Storage Tank, Nuclear Service Cooling Water (NSCW), and Auxiliary Feedwater (AFW) systems to verify these systems would remain functional during high wind and cold weather conditions. The inspectors verified that the preventative maintenance activities associated with heat tracing and freeze protection systems were appropriately scheduled and completed prior to the onset of cold weather. The inspectors verified that compensatory actions were implemented for degraded or inoperable heat trace and freeze protection equipment. The inspectors also reviewed the licensee's corrective action program for adverse weather related items to ensure that discrepancies were being identified and appropriately resolved. Licensee documents reviewed during the inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R02 Evaluations of Changes, Tests or Experiments

a. Inspection Scope

The inspectors reviewed seven evaluations for changes and tests to confirm that the licensee had appropriately considered the conditions under which changes to the facility or procedures may be made and tests conducted without prior NRC approval. The

inspectors reviewed additional information such as calculations, supporting analyses, the Updated Final Safety Analysis Report (UFSAR), and drawings to determine if the licensee had appropriately concluded that the changes could be accomplished without obtaining a license amendment. The evaluations reviewed are listed in the Attachment.

The inspectors also reviewed fifteen design/engineering packages and procedure changes for which the licensee had determined that evaluations were not required, to confirm that the licensee's conclusions to "screen out" these changes were correct and consistent with 10 CFR 50.59. The packages reviewed are listed in the Attachment.

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

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment

a. Inspection Scope

Partial System Walkdowns: The inspectors performed partial walkdowns of the following two systems to verify correct system alignment while redundant or backup equipment was inoperable.

- 2B Safety Injection (SI) and High Head Safety Injection (HHSI) systems while 2A SI and HHSI systems were out of service during the scheduled refueling outage
- 2B Residual Heat Removal (RHR) system on October 28 while 2A RHR was out of service for pump bearing replacement

The inspectors checked for correct valve and electrical power alignments by comparing positions of valves, switches, and breakers to the procedures and drawings listed below.

- Procedure 14406-2, Boron Injection Flow Path Verification
- Procedure 11011-2, Residual Heat Removal System Alignment
- Drawings 2X4DB116, 2X4DB119, 2X4DB120, 2X4DB121, and 2X4DB122

Complete System Walkdown: The inspectors conducted a detailed review of the accessible portions of the Unit 2 Train A and B RHR systems. The inspectors used licensee Procedures 11011-2, Residual Heat Removal System Alignment, and 13011-2, Residual Heat Removal System, and Drawing 2X4DB122 to verify system alignment, electrical power availability, labeling, hangers and support installation, and support systems status. The inspectors also reviewed system health reports, Condition Reports (CRs), and outstanding maintenance work orders (MWOs) to verify that alignment and equipment discrepancies were being identified and appropriately resolved.

b. Findings

No findings of significance were identified.

1R05 Fire Protection

a. Inspection Scope

Fire Area Walkdowns: The inspectors toured the following five plant areas to verify the licensee was controlling combustible materials and ignition sources as required by licensee Procedure 92015-C, Use, Control, and Storage of Flammable/Combustible Materials, and Procedure 92020-C, Control of Ignition Sources. The inspectors also assessed the condition of fire detection, suppression, and protection systems and reviewed the licensee's fire protection Limiting Condition for Operation log and CR database to verify that the corrective actions for degraded equipment were identified and appropriately prioritized. The inspectors reviewed the licensee's fire protection program to verify the requirements of UFSAR Section 9.5.1, Fire Protection Program, and Appendix 9A, Fire Hazards Analysis were met. Other licensee documents reviewed to support these inspection activities are listed in the Attachment. Plant areas toured included the following:

- Unit 1 CCW pump #2, #4 and #6 room
- 2B HHSI pump room
- 2B RHR pump room
- 1A and 1B Emergency Diesel Generator (EDG) rooms
- 1A and 1B NSCW system building and electrical tunnels

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance

a. Inspection Scope

The inspectors observed the licensee perform eddy current testing (ET) and inspections of the 2B CCW heat exchanger. The inspectors reviewed the as-found condition of the heat exchanger to determine if deficiencies existed that could mask degraded heat exchanger problems. The inspectors discussed the as-found condition, monitoring schedule, and historical performance of the CCW heat exchangers with engineering personnel. Additionally, the inspectors reviewed the licensee's corrective action program for heat exchanger performance issues to ensure that discrepancies were being identified and appropriately resolved. Licensee procedures and documents reviewed are included in the Attachment.

b. Findings

No findings of significance were identified.

1R08 Inservice Inspection (ISI)

a. Inspection Scope

Unit 2 ISIs: The inspectors reviewed selected ISI records and compared them to the requirements of the Technical Specifications (TS) and the applicable Code (ASME Boiler and Pressure Vessel Code, Sections V and XI, 1989 Edition, with no Addenda) to verify compliance. The inspectors reviewed the results of ISI activities including:

- Eight ultrasonic (UT) examinations
- Three magnetic particle (MT) examinations
- One liquid penetrant (PT) examination
- One set of UT examinations and the resulting engineering evaluation in the Flow Accelerated Corrosion (FAC) Program
- Program for examination and testing of snubbers

Licensee documents reviewed are listed in the Attachment.

Unit 2 Steam Generator (SG) Inspection: The inspectors reviewed the SG ET inspection program with the licensee's Level III, ET examiner, to determine if lessons learned from recent ET findings at other plants with thermally treated Alloy 600 SG tubes had been included in the Unit 2 ET examination guidelines. The inspectors also reviewed the results of the ET examination, and the indications which required two tubes in SG 4 to be plugged due to anti-vibration bar (AVB) wear.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification

a. Inspection Scope

On November 26, the inspectors observed operator performance during a licensed operator requalification Segment #6 evaluation. The scenarios involved: multiple faulted steam generators which led to a pressurized thermal shock condition; a dropped rod that failed to fully insert complicated by a loss of feedwater to a steam generator, loss of a 1E 480 VAC bus, and a steam generator tube rupture; and a failure of the reactor to trip complicated by a loss of a 1E 4160 VAC bus and all charging pumps. The inspectors specifically assessed the following areas:

- Correct use of abnormal and emergency operating procedures including: Procedure 18031-C, Loss of Class 1E Electrical Systems; Procedure 19000-C, E-0 Reactor Trip or Safety Injection; Procedure 19020-C, E-2 Faulted Steam Generator Isolation; Procedure 19200-C, F-0 Critical Safety Function Status Trees; Procedure 19211-C, FR-S.1 Response to Nuclear Power Generation/ATWT; Procedure 19030, E-3 Steam Generator Tube Rupture; and Procedure 19241-C, FR-P.1 Response to Imminent Pressurized Thermal Shock Condition.

- Ability to identify and implement appropriate TS actions.
- Ability to identify and implement appropriate reporting and emergency plan actions in accordance with licensee Procedure 91001-C, Emergency Classification and Implementing Instructions
- Clarity and formality of communications in accordance with licensee Procedure 10000-C, Conduct of Operations
- Proper control board manipulations including critical operator actions
- Quality of supervisory command and control
- Effectiveness of the post evaluation critique

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness

a. Inspection Scope

The inspectors reviewed the following two equipment problems and associated CRs to verify the licensee's maintenance efforts met the requirements of 10 CFR 50.65 (the Maintenance Rule) and licensee Procedure 50028-C, Engineering Maintenance Rule Implementation. This included review of failure characterization, establishment of performance criteria or 50.65 (a) (1) performance goals, and corrective actions. The inspectors reviewed control room logs; the system health report, CR, and maintenance rule databases; MWOs; and interviewed the system engineer and maintenance rule coordinator, to determine system condition and whether maintenance problems existed. The inspectors also reviewed the CR database to verify that equipment problems were being identified at the appropriate level, entered into the corrective action program, and appropriately resolved. Other documents reviewed are listed in the Attachment.

- CCW valve 1HV11817 (Spent Fuel Pool Heat Exchanger Train A Outlet Isolation) failed closed resulting in a transient on the Train A CCW system and lifting of system relief valves (CR 2002002643)
- 2A Essential Chiller failure to start during testing (CR 2002003241)

b. Findings

Introduction: A Green self-revealing NCV was identified for failure to properly reassemble a valve following maintenance.

Description: On October 2, Unit 1 control room operators received CCW Train A low header pressure and low flow annunciators, and an annunciator for high CCW flow to the RHR Train A heat exchanger. In conjunction with the annunciators, the standby CCW Train A pump started. The operators entered Abnormal Operating Procedure 18020-C, Loss of Component Cooling Water, and stopped all three pumps and placed them in Pull-To-Lock.

The licensee found that locked-open manual valve 1HV11817 (Spent Fuel Pool Heat Exchanger Train A Outlet Isolation) had failed closed. Closing of this valve caused a pressure transient that lifted the CCW relief valves associated with the RHR Train A heat exchanger and the Spent Fuel Pool Train A heat exchanger. The lifting of the relief valves caused a low pressure condition that started the standby pump. The licensee determined that the stem-to-gearbox key, which connects the manual operator to the valve stem, had fallen out of the valve operator due to improper reassembly of the valve in March 2002. With the key removed, system flow caused the valve to close. The train was removed from service and the valve repaired. Through review of control room indicators and discussions with the system engineer, the inspectors determined that the loss of inventory from the Train A CCW system was within the capacity of the automatic makeup water system.

Analysis: This finding is greater than minor because it affected the mitigating system cornerstone objective of equipment availability and reliability, in that, the lifting of system relief valves challenged the CCW system inventory and resulted in a loss of one train of CCW. Failure of valve 1HV11817 resulted in a higher than designed CCW flow rate through the RHR heat exchanger and, over an extended period, could have resulted in heat exchanger degradation. This would have impacted the high and low pressure recirculation function of one train of RHR. The finding is of very low safety significance because of the short duration that the train was out of service and the CCW inventory loss was not in excess of the normal system makeup capability. The direct cause of this finding involved the cross-cutting area of Human Performance.

Enforcement: TS 5.4.1.a requires that written procedures be implemented covering the activities listed in Regulatory Guide 1.33, Appendix A, February 1978. Regulatory Guide 1.33, Appendix A includes procedures for performing valve maintenance. Contrary to the above, Procedure 26849-C, Fisher Valve Actuators Type 1073 and 1074 Lubrication and Maintenance, was not implemented correctly in that valve 1HV11817 was reassembled incorrectly. Because the violation is of very low significance and has been entered into the licencee's corrective action program (CR 2002002645), this violation is being treated as an NCV, consistent with Section VI.A.1 of the Enforcement Policy, and is identified as NCV 50-424/02-04-01, Failure to Properly Assemble CCW Valve 1HV11817 Results in CCW Transient.

1R13 Maintenance Risk Assessments and Emergent Work Control

a. Inspection Scope

The inspectors reviewed the following six risk significant and emergent work activities to verify plant risk was properly assessed by the licensee prior to conducting the activities. The inspectors reviewed risk assessments and risk management controls implemented for these activities to verify they were completed in accordance with licensee Procedure 00354-C, Maintenance Scheduling, and 10 CFR 50.65(a)(4). The inspectors also reviewed the CR database to verify that maintenance risk assessment problems were being identified at the appropriate level, entered into the corrective action program, and appropriately resolved.

- Repair CCW Valve 1HV11817 (MWO 10202965)
- Replace 2A RHR pump bearing assembly (MWO 20202560)
- Unit 1 power reduction to 95% to replace condensate demineralizer control switch (MWO 10201639)
- Repack CCW Valve 1HV11817 (MWO 10202972)
- Unit 1 and Unit 2 forced outages to facilitate feedwater system cleanup activities
- Investigate electrical ground on 120 volt AC Panel 1NYC2 (MWO 10203720)

b. Findings

No findings of significance were identified.

1R14 Personnel Performance During Non-Routine Evolutions

a. Inspection Scope

For the non-routine plant evolutions and events described below, the inspectors reviewed operator logs, plant computer data, completed procedures, and interviewed plant personnel to determine what occurred and how the operators responded. Additionally, the inspectors verified that the operator response was in accordance with plant procedures.

- On October 2, a transient involving the unexpected loss of inventory from the Unit 1, Train A CCW system occurred. The loss of inventory resulted from the lifting of several CCW relief valves when the spent fuel pool heat exchanger CCW outlet isolation valve failed close. This event is discussed in Section 1R12.

- On November 13, during Unit 2 startup from a refueling outage, a manual reactor trip was initiated from 21% RTP due to high steam generator water levels.

- On November 24, a dual unit shutdown to Mode 5, Cold Shutdown, was initiated from 100% RTP due to high sodium concentrations detected in both unit's feedwater systems.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the following six evaluations to verify that they met the requirements of licensee Procedure 00150-C, Condition Reporting and Tracking System. This review included the technical adequacy of the evaluations, the adequacy of compensatory measures, and the impact on continued plant operation.

- 2B RHR pump high radial bearing guard temperatures (CR 2002003185)
- 2A RHR pump high radial bearing guard temperatures (CR 2002003186)
- Excessive packing leakage from CCW isolation valve to spent fuel pool heat exchanger (CR 2002003381)
- 2A Essential Chiller start relay mis-operation due to electrical interference (CR 2002003241)
- 1B RHR pump mechanical seal leakage (CR 2002003429)
- Low cooling flow to Unit 1 NSCW pump motor #4 (CR 2002003539)

b. Findings

No findings of significance were identified.

1R16 Operator Workarounds

a. Inspection Scope

The inspectors assessed the cumulative effects of operator workarounds requiring operator compensation, on the operators' ability to respond to plant transients and events. The inspectors periodically reviewed control room logs, caution tag log, component out-of-position log, MWOs, and the clearance and tagging database, to identify any abnormal configurations. For any abnormal configuration identified, the inspectors evaluated whether they would be considered operator workarounds and could increase the likelihood of an initiating event or could affect multiple mitigating systems.

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications

a. Inspection Scope

The inspectors reviewed Minor Design Change (MDC) No. 02-VAM019, Change Backup Protection Devices for Containment Penetration Circuits in Auxiliary Relay Panels, and Design Change Package (DCP) No. 99-VA0040, Replace 2B RHR Pump Outlet Flow Transmitter 2FIS0611, and observed portions of the MDC implementation to verify the licensee met the requirements of licensee procedure 50016-C, Minor Design Change. The inspectors evaluated if the modified systems' design had been degraded and if the modifications left the plant in an unsafe condition.

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

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing

a. Inspection Scope

The inspectors either observed the testing or reviewed the test results for the following five maintenance activities to verify that the post-maintenance tests met the requirements of licensee Procedure 29401-C, Work Order Functional Tests, for ensuring equipment operability and functional capability were restored. The inspectors also reviewed the test procedures to verify the acceptance criteria was sufficient to meet the operability requirements in TS. Other licensee documents reviewed are listed in the Attachment.

- 2A Motor Driven AFW motor preventative maintenance and Trico oiler replacement testing (MWOs 20200745 and 20102857)
- 2A RHR pump impeller/bearing assembly replacement testing (MWO 20202563)
- Unit 2 Auxiliary Component Cooling Water Pump #1 replacement (MWO 20200270)
- 2B RHR pump impeller/bearing assembly replacement testing (MWO 20202645)
- Modification of start circuitry in Unit 1 and Unit 2 Essential Chillers testing (MDC 02-VAM061)

b. Findings

No findings of significance were identified.

1R20 Refueling and Other Outage Activities

.1 Unit 2 Refueling Outage

a. Inspection Scope

The inspectors reviewed the licensee's 2R9 Pre-Outage Schedule Risk Assessment Report, dated September 4, 2002, and the 2R9 Refueling Outage Schedule, Revision A, to confirm that the licensee had appropriately considered risk, industry experience, and previous site-specific problems in developing and implementing the outage plan. During the refueling outage, the inspectors observed portions of the shutdown and cooldown processes and monitored licensee controls over the outage activities listed below. Licensee documents reviewed during the inspection are listed in the Attachment.

- Outage related risk assessment monitoring
- Controls associated with shutdown cooling, reactivity management, reduced inventory activities, electrical power alignments, containment integrity and closure, and spent fuel pool cooling
- Implementation of equipment clearance activities
- Core refueling operations
- Reactor mode changes

- Reactor heatup and repressurization
- Reactor initial startup activities
- Power ascension and full power testing

b. Findings

No findings of significance were identified.

.2 Unit 1 and Unit 2 Forced Outages Due to Feedwater Chemistry Control Error

a. Inspection Scope

On November 24, the licensee initiated a dual unit shutdown as a result of high sodium concentrations detected in both unit's feedwater systems. The inspectors reviewed the forced outage plans to confirm that the licensee had appropriately considered risk in developing and implementing the plans. During the outages, the inspectors observed or reviewed portions of the unit cooldowns, outage activities, and the subsequent heatup and unit restart activities. The inspectors verified that these activities were conducted in accordance with licensee procedures. Licensee documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors reviewed the following six surveillance test procedures and either observed the testing or reviewed test results to verify that testing was conducted in accordance with the procedures and that the acceptance criteria adequately demonstrated that the equipment was operable. Additionally, the inspectors reviewed the CR database to verify that the licensee had adequately identified and implemented appropriate corrective actions for surveillance test problems.

- 14721-2, ECCS Subsystem Flow Balance and Check Valve Refueling Inservice Test
- 14666-2, Train A Diesel Generator and ESFAS Test
- 14667-2, Train B Diesel Generator and ESFAS Test
- 14000-2, Operations Shift and Daily Surveillance Logs
- 14005-1, Shutdown Margin and Keff Calculation
- 14980B-1, Diesel Generator Operability Test (1B EDG)

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications

a. Inspection Scope

The inspectors evaluated the following two Temporary Modifications (TMs) and the associated 10 CFR 50.59 screenings against the system design basis documentation and UFSAR to verify that the modifications did not adversely affect the safety functions of important safety systems. Additionally, the inspectors assessed if the modification was developed and implemented in accordance with licensee Procedure 00307-C, Temporary Modifications.

- TM 02-V2T009, Install Protective Cap Over Train B NSCW Motor Cooler Throttle Valve 2-1202-U4-A26
- TM 02-V2T048, Modify Operation of 30 Kilo-Volt Amp (KVA) Inverter 2ND3I1 to Operate at 20 KVA

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluation

a. Inspection Scope

The inspectors observed and reviewed the following two emergency response activities to verify the licensee was properly classifying emergency events, making the required notifications, and making appropriate protective action recommendations. The inspectors verified that classifications, notifications, and protective action recommendations were performed in accordance with licensee Procedure 91001-C, Emergency Classification and Implementing Instructions; Procedure 91002-C, Emergency Notifications; and Procedure 91305-C, Protective Action Guidelines. Additionally, the inspectors verified that adequate critiques were conducted in order to identify performance weaknesses and improvements.

- On August 27, licensed operator requalification Segment #5 annual simulator graded examination was conducted involving a faulted steam generator scenario.

- On November 20, the licensee conducted an emergency response facility activation drill involving an uncontrolled radioactive gas release from a shutdown decay tank.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety

2OS1 Access Control To Radiologically Significant Areas

a. Inspection Scope

Access Controls: During the weeks of October 15 and October 28, licensee activities for controlling worker access to radiologically significant areas and tasks associated with the Unit 2 End of Cycle 9 Refueling Outage (2R9) were evaluated. The inspectors directly observed implementation of administrative and physical access controls, appraised both radiation worker and health physics technician (HPT) knowledge and proficiency in implementing radiation protection activities, and assessed procedural guidance for the control of access to radiologically significant areas.

During the review, the inspectors discussed and assessed procedure and administrative guidance documents for posting areas and labeling containers, airborne radioactivity control, special radiological controls, diving operations, development and use of Radiation Work Permits (RWP), issuance of dosimetry, and contamination control.

The inspectors directly observed the posting and locking status of five Locked High Radiation Areas and one Very High Radiation Area in the Auxiliary Building, Control Building, and Spent Fuel Pool Room. Posting of areas and labeling of containers in the Unit 1 (U1) and Unit 2 (U2) Auxiliary Building, Radwaste Processing Facility (RPF), Auxiliary Radwaste Building (ARB) building, and the U2 containment were evaluated for consistency with procedural guidance. Independent dose rate measurements were conducted in U2 Containment Radiation Areas (RAs) and High Radiation Areas (HRAs) and the results compared to current licensee surveys. The inspectors reviewed three Personnel Contamination Events (PCEs) and a Personnel Contamination Report (PCR) for technical adequacy, completeness, and consistency with licensee protocols. Licensee records for multi-badging and extremity dose assessments for selected individuals were reviewed and compared to procedural requirements.

The inspectors evaluated work performed in selected RAs and HRAs. Observed tasks included setup for U2 SG ET, fuel movement, and removal of a valve from the post-accident sampling system. Several shift turnover meetings and pre-job briefings were observed and evaluated throughout the inspection. For the valve removal, the inspectors attended the pre-job briefing, observed the work, evaluated the use of radiological (airborne and direct radiation) controls, observed HPT and radiation worker (radworker) performance, evaluated RWP requirements and electronic dosimeter (ED) alarm setpoints, and queried selected workers regarding RWP details and work practices.

Radiation protection program guidance and implementation were evaluated against 10 CFR 19.12; 10 CFR 20, Subparts B, C, F, G, H, and J; TS Section 5.7, High Radiation Area; and approved licensee procedures. Licensee guidance documents, records, and data reviewed within this inspection area are listed in the Attachment.

Problem Identification and Resolution: Licensee corrective action program CRs associated with access controls were reviewed. The inspectors assessed the licensee's ability to identify, characterize, prioritize, and resolve the identified issues in accordance with licensee Procedure 00150-C, Condition Reporting and Tracking System. Licensee documents reviewed and evaluated in detail during inspection of this program area are identified in the Attachment.

b. Findings

No findings of significance were identified.

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

a. Inspection Scope

ALARA: During the weeks of October 15 and October 28, ALARA program guidance and its implementation for ongoing 2R9 activities were evaluated. Development of dose expenditure goals for selected outage tasks estimated to exceed one person-rem were reviewed and discussed with site management. The inspectors reviewed applicable ALARA Committee meeting details, ALARA Plans, Health Physics Self Assessment, Post Job Reports, and ALARA Planning Work Sheets associated with the following 2R9 activities:

- RWP 02-0128, Perform the Unit 2 Transfer Canal Fuel Transfer System Upgrade
- RWP 02-2004, Install and Remove Nozzle Scaffold Containment
- RWP 02-2006, Install and Remove Insulation Containment
- RWP 02-2300, Install and Remove Steam Generator 1&4 Manway Covers
- RWP 02-2307, Upper Bundle Hydraulic Cleaning

The inspectors reviewed and discussed dose rate and cumulative dose expenditure data trends associated with selected systems, equipment, and tasks. For selected outage tasks, the inspectors compared current dose rate and dose expenditure results with data used in planning estimates and with data from the previous 1R10 refueling outage. The inspectors evaluated selected data associated with dose reduction initiatives including shutdown chemistry and cleanup, planning and sequencing of work activities, dose estimation techniques and concurrent reduced ED alarm set points, system equipment flush controls, temporary shielding, and cobalt reduction initiatives for valve replacement.

Knowledge of ALARA program guidance and staff proficiency in program implementation were appraised through observation of selected work activities, comparison of estimated and current dose expenditure data for selected tasks, and discussions of selected outage tasks with responsible supervisors and managers.

Program implementation and results were reviewed against the facility's ALARA work plans, UFSAR, 10 CFR Part 20 requirements, and licensee procedures documented in the Attachment.

Problem Identification and Resolution: Licensee CR documents associated with dose reduction initiatives and ALARA activities were reviewed and assessed. The inspectors evaluated the licensee's ability to identify, characterize, prioritize, and resolve the identified issues in accordance with Procedure 00150-C, Condition Reporting and Tracking System. Specific CR documents reviewed and evaluated are listed in the Attachment.

b. Findings

No findings of significance were identified.

Cornerstone: Public Radiation Safety (PS)

2PS2 Radioactive Material Processing and Transportation

a. Inspection Scope

Waste Processing and Characterization: During the week of October 14, 2002, the operability and installed configuration of selected liquid and solid radioactive waste (radwaste) processing systems and equipment were evaluated. Inspection activities included document review, interviews with plant personnel, and direct inspection of processing equipment and piping in the RPF and the ARB.

The inspectors directly observed material condition and installed configurations for selected RPF equipment and piping. The system engineer was interviewed regarding Process Control Program (PCP) equipment function and operability. Radwaste operators were queried to assess knowledge of resin sluicing and dewatering operations. The material condition and licensee identification of ARB radwaste processing equipment abandoned in place were observed and discussed during tours.

For selected radwaste material sent to licensed processing or burial facilities between January 1, 2001 and October 1, 2002, the inspectors reviewed and discussed waste stream sampling activities; licensee gamma spectroscopy data; and offsite vendor sample sizes and associated detection capabilities for 10 CFR Part 61.55 analyses. The licensee's sampling method for waste stream analyses and the use of scaling factors for hard-to-detect nuclides were assessed. Waste characterizations for dry active waste (DAW) and selected drums containing spent filters and trash were reviewed in detail. The most recent audit of the offsite Part 61.55 vendor's quality program was reviewed and evaluated. DAW waste stream radionuclide data were reviewed for consistency in radionuclide composition between January 1, 2001, through September 30, 2002.

For DAW, primary resin, secondary resin, and spent filter processing and disposal activities, the inspectors evaluated procedural guidance against the UFSAR, Section 11.4, Solid Waste Management System; 10 CFR 61.55 requirements; and the Final Branch Technical Position (BTP) on Concentration and Encapsulation, Revision In Part To Waste Classification Technical Position, dated January 17, 1995. Program implementation was evaluated against 10 CFR 61.55 requirements, UFSAR Section 11.4 details, and the approved licensee procedures listed in the Attachment.

Transportation: The inspectors evaluated the licensee's activities related to transportation of radioactive material. The evaluation included review of shipping records and procedures, assessment of worker training and proficiency, and direct observation of shipping activities.

The inspectors assessed selected shipping-related procedures and practices for compliance with applicable regulatory requirements. Records and surveys for selected shipments made during calender year 2002 were reviewed for consistency with licensee procedures and for completeness and accuracy. On October 16, the inspectors observed the loading and preparation of contaminated clothing for shipment to an offsite laundry. The inspectors interviewed the responsible technician regarding packaging and vehicle radiation and contamination control limits. In addition, the inspectors directly observed selected radiation surveys associated with the prepared shipment.

Transportation program guidance and implementation were reviewed against regulations detailed in 10 CFR 71, and 49 CFR 170-189 and applicable licensee procedures listed in the Attachment.

Problem Identification and Resolution: Licensee CRs and self-assessments associated with PCP and transportation activities were reviewed and evaluated. The inspectors evaluated the licensee's ability to identify, characterize, prioritize, and resolve the identified issues in accordance with Procedure 00150-C, Condition Reporting and Tracking System. Specific CR documents reviewed and evaluated are listed in the Attachment.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator (PI) Verification

a. Inspection Scope

The inspectors reviewed the licensee submittal for the PIs listed below. To verify the accuracy of the PI data reported during the periods reviewed, PI definitions and guidance contained in licensee Procedure 00163-C, NRC Performance Indicator Preparation and Submittal, and NEI 99-02, "Regulatory Assessment Indicator Guideline," Rev. 1, were used to verify the basis in reporting for each data element.

Mitigating Systems Cornerstone

- Auxiliary Feedwater system
- High Pressure Injection system
- Residual Heat Removal system

For the period October 1, 2001, through September 30, 2002, the inspectors reviewed operator logs, licensee maintenance rule database, licensee event reports, and licensee monthly PI Summary reports to verify the licensee had properly identified system unavailability hours.

Occupational Radiation Safety

- Occupational Exposure Control Effectiveness

For the period November 1, 2001, through September 30, 2002, the inspectors reviewed applicable CRs, dosimeter alarm logs, and door access records.

Public Radiation Safety

- Radiological Control Effluent Release Occurrences

For the period November 1, 2001, through September 30, 2002, the inspectors reviewed selected radiological liquid and gaseous effluent release data, out-of-service process radiation monitor and compensatory sampling data, abnormal release results, and CRs.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems

Annual Sample Review

a. Inspection Scope

The inspectors reviewed one issue (documented in CRs 1999000855 and 2001003040) to evaluate the effectiveness of the licensee's corrective actions for important safety issues. The CRs were associated with repeat occurrences of low cooling flow to NSCW pump motors. Specifically, the inspectors assessed whether the issue was identified in a timely manner; documented accurately and completely; properly classified and prioritized; adequately considered extent of condition, generic implications, common cause, and previous occurrences; adequately identified root causes; and, identified appropriate corrective actions to prevent recurrence. Also, the inspectors assessed whether the issues were processed in accordance with licensee Procedure 00150-C, Condition Reporting and Tracking System, and Procedure 00058-C, Root Cause Determination. Other licensee documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

4OA5 Other Activities

.1 Office of Investigations (OI) Report No. 2-2002-023

a. Inspection scope

The inspectors reviewed the results of OI Investigation Report No. 2-2002-023, completed on July 31, 2002, regarding the alleged falsification of drug screening results by the site Fitness-for-Duty (FFD) Coordinator in March 2002. The inspectors reviewed information gathered by OI and the licensee's investigation into the issue. The licensee's activities were reviewed against drug screening recordkeeping requirements of 10 CFR 26.71(d) and 10 CFR 50.9.

b. Findings

Introduction: A Severity Level IV, NCV was identified in that the site FFD Coordinator deliberately altered drug screening test records to indicate that a specimen which tested positive for marijuana and amphetamines was negative for indications of drugs.

Description: As documented in the attached OI Report synopsis, OI concluded that the FFD Coordinator at Plant Vogtle deliberately falsified drug screening results. Specifically, on March 11, 2002, the FFD Coordinator performed drug screen tests on a number of urine specimens, one of which (V21106) tested positive for marijuana and amphetamines. The FFD Coordinator incorrectly entered a negative test result for this specimen into the licensee's Access Control System database, which is part of the licensee's system for determining eligibility for unescorted access to Southern Nuclear Operating Company's facilities. On March 12, 2002, the FFD Coordinator realized her error and, believing that the specimen had been disposed of as a negative sample elected to enter the drug screening computer's database and manually change the result from positive to negative. Subsequently, the FFD Coordinator selected specimen V21104, which indicated a negative screening result, as a quality control (QC) sample to be sent to the HHS-certified laboratory for testing. However, as the result of an additional error (e.g., inadvertent switching of samples during initial testing) specimen V21106 (positive) was sent as the QC sample in place of specimen V21104 (negative), contrary to the intent of FFD Coordinator. The HHS-certified testing laboratory reported that the specimen reported by the licensee's screening test as negative had been found to be positive for marijuana and amphetamines. As a result of this information, the licensee initiated an investigation which ultimately established that the drug screening results had been falsified and that the FFD Coordinator had entered inaccurate information into the Access Control System.

Analysis: Because this finding involved deliberateness on the part of a licensee employee and inaccurate information which impacts the regulatory process, it is not subject to the provisions of the Reactor Oversight Process and is being dispositioned in accordance with traditional enforcement. The finding was determined to be greater than minor because a barrier was lost in the physical security system in that the failure to properly categorize and report a positive drug test result had the potential to allow unescorted plant access to an individual who did not meet access requirements.

Enforcement: 10 CFR 26.71(d) requires, in part, that each licensee subject to this Part shall collect and compile FFD program performance data and submit this data to the NRC. The data compiled must include the numbers of tests and test results, including identification of substances identified. The data must be retained for three years.

10 CFR 50.9(a) requires, in part, that information required by NRC regulations to be maintained by the licensee shall be complete and accurate in all material respects.

Contrary to these requirements, from approximately March 11, 2002 until May 28, 2002, the results of an initial drug screening on a urine specimen tested at Plant Vogtle entered into the licensee's Access Control System were not complete and accurate in that they reflected that the specimen was negative for drugs when it, in fact, the specimen was positive for marijuana and amphetamines. The inaccuracies resulted from the site FFD Coordinator manually changing the testing instrument's database to falsely indicate that the sample was negative for drugs. Similar inaccurate information was entered into the licensee's Access Control System by the FFD Coordinator. The inaccurate information entered into these record systems was material to the NRC in that the records would be relied upon to determine compliance with the requirements of 10 CFR Part 26 to assure that personnel granted plant access are not under the influence of illegal substances. Although this violation was deliberate, it was brought to the NRC's attention by the licensee, involved the isolated acts of a low-level individual, and was addressed by appropriate remedial action. Therefore, this Severity Level IV violation is being treated as a non-cited violation, NCV 50-424 and 50-425/02-04-02, Falsification of Security Access Control System Records, consistent with Section VI.A.1 of the NRC Enforcement Policy. This violation is in the licensee's program as Investigation File No. 01-53-2002.

.2 Temporary Instruction (TI) 2515/148, Appendix A: Pre-inspection Audit for Interim Compensatory Measures (ICMs) at Nuclear Power Plants

a. Inspection Scope

The inspectors conducted an audit of the licensee's actions in response to a February 25, 2002 Order, which required the licensee to implement certain interim security compensatory measures. The audit consisted of a broad-scope review of the licensee's actions in response to the Order in the areas of operations, security, emergency preparedness, and information technology as well as additional elements prescribed by the TI. The inspectors selectively reviewed relevant documentation and procedures; directly observed equipment, personnel, and activities in progress; and discussed licensee actions with personnel responsible for development and implementation of the ICM actions.

The licensee's activities were reviewed against the requirements of the February 25, 2002 Order; the provisions of TI 2515/148, Appendix A; the licensee's response to the Order; and the provisions of the NRC-endorsed NEI Implementation Guidance, dated July 24, 2002.

b. Findings

No findings of significance were identified. A more in-depth review of the licensee's implementation of the February 25, 2002 Order, utilizing Appendix B and C of TI 2515/148 will be conducted in the near future.

.3 TI 2515/145: Circumferential Cracking of Reactor Pressure Vessel Head Penetration Nozzles

a. Inspection Scope

The inspectors reviewed the licensee's inspection activities related to the Unit 2 reactor vessel head penetrations in response to NRC Bulletin 2001-01, Circumferential Cracking of Reactor Pressure Vessel Head Penetration Nozzles, in accordance with NRC TI 2515/145, Circumferential Cracking of Reactor Pressure Vessel Head Penetration Nozzles (NRC Bulletin 2001-01), dated September 9, 2001.

b. Findings and Observations

The licensee's examination involved a remote visual inspection and video taping of the top of the reactor vessel head surface in the area of the 78 control rod drive mechanisms and head vent penetrations under the head insulation. The majority of the inspection was conducted using a crawler mounted video camera. The remaining penetrations were inspected utilizing a video boroscope. The inspectors verified the adequacy of Westinghouse Field Service procedure MRS-SSP-1369, Reactor Vessel Head Penetration Remote Visual Inspections for A. W. Vogtle Electric Generating Plant, Unit 2, used to conduct the examination and verified the ASME visual test (VT)-2 Level III qualifications of the individuals conducting the examinations. The inspectors observed a representative sample of these video examinations and made the following observations regarding the examination process and results:

- The visual clarity and color of the video inspection process allowed for effective visual examination of the vessel head surface and 100% circumferential coverage of each head penetration and its associated annulus region. The visual inspection was capable of identifying primary water stress-corrosion cracking through evidence of leakage from a penetration. No leakage was identified from any of the vessel head penetrations.

- There were no significant examples of insulation, leakage sources, debris, dirt, or other physical impediments that prevented a complete visual examination.

- The vessel head was generally free of debris, dirt, or large boron deposits.

- The head had evidence of previous conoseal leakage; however, this did not interfere with the inspection activity.

There were no indications of reactor vessel head or penetration degradation identified by the licensee during the observed inspections.

.4 Institute of Nuclear Power Operations (INPO) Assessment Report Review

a. Inspection Scope

The inspectors reviewed the final report of the INPO annual assessment of site activities conducted in January 2002. The inspectors reviewed the report to ensure that issues identified were consistent with the NRC perspectives of licensee performance and if any significant safety issues were identified that needed further NRC followup.

b. Findings

No findings of significance were identified.

4OA6 Management Meetings

Exit Meeting Summary: On January 9, 2003, the resident inspectors presented the inspection results to Mr. G. Frederick and other members of his staff, who acknowledged the findings. The inspectors confirmed that proprietary information was not provided or examined during the inspection.

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel:

W. Bargeron, Plant Support Assistant General Manager
W. Burmeister, Manager Engineering Support
G. Frederick, Nuclear Plant General Manager
K. Holmes, Manager Training and Emergency Preparedness
P. Rushton, Plant Operations Assistant General Manager
T. Tynan, Manager Operations
I. Kochery, Health Physics & Chemistry Manager
J. Dixon, Superintendent Health Physics
D. Carter, Superintendent Chemistry

NRC personnel:

B. Bonser, Chief, Region II Reactor Projects Branch 2

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

50-424/02-04-01	NCV	Failure to Properly Assemble CCW Valve 1HV11817 Results in CCW Transient (Section 1R12)
50-424, 425/02-04-02	NCV	Falsification of Security Access Control System Records (Section 4OA5)

Closed

2515/145 (Docket 50-425)	TI	Circumferential Cracking of Reactor Pressure Vessel Head Penetration Nozzles (NRC Bulletin 2001-01) (Section 4OA5)

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

Procedures:
111877-1/2, Cold Weather Checklist
11889-C, Severe Weather Checklist
11901-1/2, Heat Tracing System Alignment
13150-1/2, Nuclear Service Cooling Water System
13901-1/2, Heat Tracing System
17104-1, Annunciator Response Procedures for Heat Tracing Panel 1(2)NCQARHT
20054-C, Maintenance Support of the Severe Weather Checklist
50050-C, Heat Tracing Program

Section 1R02: Evaluation of Changes, Tests, or Experiments

Design Changes:

DCPT 97-VAN0043, Central Fire Alarm Console Replacement, Rev. 2
DCPT 99-V2N0059-002, Diesel Generator Fuel Oil Transfer Pump Power Source, Rev. 1
EVAL 02-001, HZP MSLB with Reduced MDC and ECCS Injection from 3 of 4 Accumulators, Rev. 0
TM 2002-VIT025, Reduced Condenser Vacuum Setpoint for C-9 Permissive, Rev. 0
TENG-99-21, Test procedure to verify the water flow capacity of Seismic Category I Standpipe System, Rev. 1
TM 2001-V2T015, Defeat the automatic isolation function for the SGBD HELB isolation valves during switchgear outages. Rev. 0
TM 00-VAT033, Install a temporary battery in the Switchyard to allow for cell replacements in battery A1806B3HA(ANDHBA) and A1806B3BHB (ANDHBB) and for discharge testing of these batteries, Rev. 0

Screened Out Items:

01-V1T048, Temporary Communications for 1R10
LDCR 2002001, Change to Post-LOCA Containment Hydrogen Filter Carbon Beds Allowable Bypass Leakage to 1%
DCPT 99-V2N0042-001, Digital Rod Position Indication Power Supply Replacement, Rev. 0
DCPT 00-V2N0033-001, Westinghouse Inverter Replacement, Rev. 0
VEGP 01-302, Replace Unit 1 and Unit 2 EGS GB-1 Grayboot Connector Cover Clamp, Rev. 0
VEGP 01-303, 480 V Motor Control Center Cutler-Hammer Citation Series Service Component Replacement, Rev. 0
ID 01-VIT054, Provide Temporary Power to One Train A and One Train C Battery Charger, Rev. 0
ID T-ENG-02-14, Functional Test for Fuel Oil Transfer Pump 1-2403-P4-003 and 004, Rev. 0
TM 2002-VAT056, Diesel A-2502-Q3-DG5 Jacket Heater De-rate, Rev. 0
RER 2002-0044, Modification of Hanger A-1215-147-H632, Rev. 0
MDC 02-V2M017, AFW Pump Oiler Mounting Modification and Level Gauge Addition, Rev. 0
LDCR FS 00-009, Revision of FSAR Section 17.2.1.4, Rev 1
ED 01-VAD043, Containment Personnel Airlock Handwheel Shaft Material Change, Rev. 0
ED 02-VAD041, Equivalency Determination for capscrews for RHR Pump 2A, Rev. 0
ED 00-VAD051, Allow SA-516 Gr.70 material for 1/2HV11816, 1/2HV11817, 1/2HV11820, 1/2HV11821 retaining ring, Rev. 0

Self Assessment Documents (1R02 & 1R17):

Engineering Support 2001 Self-Assessment Report, November 26-30, 2001

Section 1R05: Fire Protestion

Procedures:

92737-1, Auxiliary Building Level A Fire Fighting Preplan
92719-2, Zone 19 - Auxiliary Building - CVCS Centrifugal Charging Pump Rooms Fire Fighting Preplan
92709-2, Zone 9 - Auxiliary Building Level D Fire Fighting Preplan
92861-1, Zone 161 - Diesel Generator Building Fire Fighting Preplan
92862-1, Zone 162 - Diesel Generator Building Fire Fighting Preplan
92863-1, Zone 163 - Diesel Generator Building Fire Fighting Preplan
92860A-1, Zone 160A - NSCW Pumphouse Train A Fire Fighting Preplan

92860B-1, Zone 160B - NSCW Pumphouse Train B Fire Fighting Preplan

Section 1R07: Heat Sink Performance

Procedures:

83305-C, Heat Exchanger Testing/Maintenance Program
83309-C, Safety-Related Heat Exchanger Inspection

Other Documents:

MWO 20103530, Perform Eddy Current Testing of 2A Heat Exchanger
Preliminary Inspection Report #06-33 of CCW 2A Heat Exchanger Results

Section 1R08: Inservice Inspection Activities

Procedures:

PT-V-605, Liquid Penetrant Examination Procedure,
MT-V-505, Magnetic Particle Examination VT-3,
VT-V-715, Visual Examination (VT-1),
VT-V-716, Visual Examination (VT-1) for IWE Components,
UT-V-480, Manual Ultrasonic Examination of Full-Penetration Ferritic Piping Welds (Appendix VIII)
UT-V-481, Manual Ultrasonic Examination of Full-Penetration Austenitic Piping Welds, (Appendix VIII)
UT-V-482, Manual Ultrasonic Examination of Vogtle Bolts and Studs (Appendix VIII)

Other Documents:

Ultrasonic Flow Accelerated Corrosion Report for Component 21305117-6-PXX2, MFW-REG VLV FV-530 Bypass
UT Report for Weld No. 21305-058-1, Forging to 16" pipe
UT Report for Weld No. 21305-058-2, 16" pipe to 6" branch connection
UT Report for Weld No. 21305-058-5, 16" valve to pipe
UT Report for Weld No. 21305-058-6, 16" pipe to valve
UT and PT Reports for Weld No. 21201-V6-002-W21, 4" Spray nozzle to Safe-end Weld
MT Report for Weld No. 21305-058-3
UT and MT Reports for Weld No. 21201-V6-002-W12, Upper head to 6" safety nozzle weld
UT Report for Weld No. 21201-V6-002-W12, Upper head to 6" safety nozzle
MT Report for Weld No. 21201-V6-002-w14, Upper head to 4" safety nozzle
UT Report for Weld No. 21201-V6-002-1R-02, 6" Safety Nozzle inner radius

Section 1R12: Maintenance Effectiveness

Procedures:

Procedure GEN-92, Maintenance Rule Scoping Manual

Other Documents:

MWO 10202965, Repair key found out of valve 1HV11817
MWO 10202972, Repair packing leak on valve 1HV11817
MWO 10002199, Inspect/Repair sector gears, replace shaft on valve 1HV11817
Fisher Controls Instruction Manual, Type 1073 and 1074 Manual Handwheel Actuators, 1976
CR 2002000995, Broken shaft on valve 1HV11817
CR 2002003398, Indicator plate found on floor of valve 1HV11817
CR 2000000823, Valve 1HV11817 found not full open

CR 2000000207, Gear box cover found loose on valve 1HV11817
MWO 2022746, Troubleshoot and repair 2A Chiller start failure
MDC 02-VAM061, Provide Time Delay for Action Pak Relays in Essential Chillers

Section 1R17: Permanent Plant Modifications
DCP 97-V2N0038, MSIV Closure Time Reliability and Maintainability
DCP 98-V2N0026, AFW Flow Control Valves
DCP 00-V2N0017, RHR Valve Bonnet Venting
DCP 00-VAN0006, CCW/ACCW Pump Upgrade
DCP 02-V2N0023, RVLIS Instrument Isolation Valve Addition
DCR 99-V2N0042, Digital Rod Position Indication Power Supply Replacement
DCR 99-V2N0059, Diesel Generator Fuel Oil Transfer Pump Power Source
DCR 00-V2N0033, Inverter Replacement

Section 1R19: Post-Maintenance Testing
Procedures:
14802-2, NSCW Pumps and Check Valve IST and Response Test
14805-2, Residual Heat Removal Pump and Check Valve IST and Response Time Tests
14807-2, Motor Driven Auxiliary Feedwater Pump and Check Valve Inservice and Response Time Test
14808-1, Centrifugal Charging Pump and Check Valve IST and Response Time Test (1B CCP)
27082-C, Ingersoll Rand WDF Pump Maintenance
T-OPER-2002-14, Residual Heat Removal Pump Functional Test after Impeller Replacement

Other Documents:
Drawing 2X4DB122, Residual Heat Removal System No. 1205
2X6AF02-025, RHR Vendor Manual

Section 1R20: Refueling and Other Outage Activities
Procedures:
00254-C, Foreign Material Exclusion and Plant Housekeeping Programs
00309-C, Control of Unattended Temporary Material in Containment in Modes 1-4
11899-2, RCS Draindown Configuration Checklist
12000-C, Post Refueling Operations (Mode 6 to Mode 5)
12001-C, Unit Heatup to Hot Shutdown (Mode 5 to Mode 4)
12002-C, Unit Heatup to Normal Operating Temperature and Pressure
12003-C, Reactor Startup (Mode 3 to Mode 2)
12004-C, Power Operations (Mode 1)
12005-C, Reactor Shutdown to Hot Standby (Mode 2 to Mode 3)
12006-C, Unit Cooldown to Cold Shutdown
12007-C, Refueling Operations (Entry into Mode 6)
13005-2, Reactor Coolant System and Refueling Cavity Draining
14210-2, Containment Building Penetrations Verification - Refueling
14406-2, Boron Injection Flow Path Verification - Shutdown
14900-C, Containment Exit Inspection
18004-C, Reactor Coolant System Leakage
18019-C, Loss of Residual Heat Removal
18030-C, Loss of Spent Fuel Pool Level or Cooling
27504-C, Equipment Hatch Emergency Closure

23985-2, RCS Temporary Water Level System
29540-C, Risk Assessment Monitoring
29542-C, Shutdown Risk Management
93300-C, Conduct of Refueling Operations
93360-C, Limitations and Precautions for Handling New and Partially Spent Fuel Assemblies
93641-C, Development and Implementation of the Fuel Shuffle Sequence Plan
93663-C, Verification of Core Loading Pattern

Other Documents:
LPPT-GAE/GBE-01, Low Power Physics Test Program with Dynamic Rod Worth Measurement

Section 2OS1: Access Controls To Radiologically Significant Areas
Procedures, Instructions, and Guidance Documents:
43005-C, Establishing and Posting Radiation Controlled Areas and High Radiation Area Access Control
43007-C, Issuance, Use, and Control Of Radiation Work Permits
43014-C, Special Radiological Controls
00930-C, Radiation and Contamination Control
00960-C, Control of Radioactive Materials
00303-C, Containment Entry
45013-C, Issuance, Use and Collection of Personnel Dosimetry
00150-C, Condition Reporting and Tracking System

Radiation Work Permit (RWP) Documents:
RWP-02-0110, Changeout Reactor Coolant Filters, Spent Fuel Pool Filters, and Spent Fuel Skimmer Filters, and All Associated Work Including Transfer to the ARB or 1-AB-D-43 for Filter Disposal
RWP-02-2614, Delete PASS and Associated Work
RWP-02-0136, Remove Tri-Nuke Filters from Drum Shield and Place in the Unit 1 SFP, Survey and Dispose of Filters, and all Associated Work

Records, Worksheets, and Data:
Radiological Information Survey (RIS) Number (No.) 47235, Unit 1 D43 area, High Rad Trash Storage, 10/04/02
Multi-Badge Assignment History, 01/01/02 to 10/20/02
TLD Exposure Record Results (extremity), 01/01/02 to 10/23/02
Personnel Contamination Event (PCE) logs, January, 2002, through October, 2002

Corrective Action Program Documents:
Condition Report (CR) 2002002846, Workers Altered Locked High Radiation Area Posting and Didn't Contact HP, 10/15/02
CR 2002002573, Concern Raised by Resident NRC Inspector Regarding Adequacy of Tech Spec 5.7.2, 9/20/02
CR 2002002259, Include "Survey Prior to Entry" Philosophy in General Employee Training, 8/14/02
Health Physics (HP) Self-Assessment, July 15 - 19, 2002

Section 2OS2: As Low As Reasonably Achievable (ALARA)

Procedures, Instructions, and Guidance Documents:

2R9 Shutdown Chemistry, RCS Degassing, and PRT Purging
Southern Nuclear Operating Company, Plant Vogtle, Strategic Primary Water Chemistry Plan, dated 7/26/02
Chemistry Department Outage Activities
Chemical Degassing of the Reactor Coolant System
00920-C, Radiation Exposure Limits and Administrative Guidelines
00930-C, Radiation and Contamination Control
00910-C, VEGP ALARA Program
41001-C, ALARA Job Review
41006-C, Temporary Shielding
Vogtle Electric Generating Plant 2001 ALARA Report 2/07/02

Records, Worksheets, and Surveys:

License Design Change Request, 2002008, Alternate Media for Primary System Demineralizers, Rev 0, dated 2/13/02
Radiological Information Survey (RIS) Data for the Unit 1 Steam Generator 1, 2, 3, and 4 Channel Head Hot and Cold Leg Surveys including RIS Numbers (Nos.) 16401, 16402, 16404, 16406 conducted 9/29/2000; and RIS Nos 40659, 40670, 40671, 40672, conducted 03/18/2002
Plant Vogtle, 2R 9 Total Gamma and Hard Gamma RCS Concentration Results, 10/05/2002, through 10/11/02
Interoffice Memo Re: Cobalt Reduction in Valves 03/26/93
Memorandum Re: ALARA in-progress review with Westinghouse 10/25/02
Post Job Report RWP 02-0128 Unit 2 Transfer Canal Fuel Transfer System Upgrade 09/13/02
Post Job Report RWP 02-1301 Install and Remove Nozzle Covers for Unit 1 SG Nos. 1 and 4, 09/13/02
Post Job Report RWP 02-1404 RX Head “O” Ring Replacement 09/13/02
Post Job Report RWP 02-1409 Upender Pit Drain and Transfer Tube Flange Work, 09/13/02

Corrective Action Program Documents:

CR 2002000985, Carpenter Entering the Steam Generator No. 1 Primary Platform, 3/20/02
CR 2002001788, Clearance 10200208 Hung Three Weeks Prior to Scheduled Work, 6/10/02
CR 2002002225, Full Dress Requirements Not Implemented, 8/09/02
CR 2002002258, ALARA Planning Recommendation for Decon Group, 8/14/02

Section 2PS2: Radioactive Material Processing and Transportation

Procedures, Instructions, Guidance Documents:

Process Control Program, Rev. 8
46004-C, Shipment of Radioactive Material, Rev. 14
46023-C, Dry Active and Wet Waste Sorting and Segregation, Rev. 3
46100-C, 10 CFR 61 Waste Classification Sampling Program, Rev. 3
46104-C, Shipment of Radwaste to a Licensed Waste Processor, Rev. 3
46106-C, Waste Classification Resin Shipments, Rev. 5
46108-C, Waste Classification Filter Shipments, Rev. 6

Records, Worksheets, and Surveys:
License Design Change Request, 2002008, Alternate Media for Primary System Demineralizers, Rev 0, dated February 13, 2002
Shipment Number RVRS-02-015 Records, Radioactive Material, LSA, n.o.s., 7, UN2912, Fissile Excepted, RQ-Radionuclides, Dewatered Ion Exchange Bed Resin, conducted 7/24/02
Shipment Number RVRS-02-020 Records, Radioactive Material, LSA, n.o.s., 7, UN2912, Fissile Excepted, RQ-Radionuclides, DAW and Spent Filters for Processing, conducted 9/30/02
Shipment Number 02-CL-024 Records, Radioactive Material, LSA, n.o.s., 7, UN2912, Fissile Excepted, Large Contaminated Laundry, conducted 10/16/02
Part 61 Analyses, Vendor Data For: Bead Resin collected 3/7/02; Filter Media collected 05/09/02 Unit 1 (U1) & Unit 2 (U2) Reactor Coolant System (RCS) liquid collected 01/22/99; U1 Steam Generator Blow-down (SGBD) Resin collected 02/19/01; U2 SGBD Resin collected 02/26/01; Dry Active Waste (DAW) collected 03/04/02
Filter Concentration Averaging Report for: Filter Elements HDR-86-001 through 008, 9/16/02; HDR-88-001 through 008, 9/16/02; HDR 55-001 through 55-006, 2/12/02; HDR-44-001 through 44006, 2/12/002

Corrective Action Program Documents:
CR 2001002747, Resin Transfer Piping for Radioactive Waste Processing Facility Less than 5d Bend Radii, 11/12/01
CR 2001002831, Inadequacies and Planning and Clearances for Tie-In of New Radwaste Purification facility, 11/26/2001
CR 2001002879, Wrong Bolting Materials Installed New Radwaste Processing Facility, 12/3/01
CR 2002002040, Overflow of U1 Waste Holdup Tank during Resin De-watering Activities, 7/11/02

Audits and Assessments:
Nuclear Utilities Procurement Issues Committee (NUPIC), Joint Quality Assurance Program Final Audit Report Number SR-2000-221, dated 1/08/01
NUPIC, Joint Quality Assurance Program Audit Report Number SR-2000-221, Audit Closure, dated 10/31/01

Section 4OA1: Performance Indicator Verification
Procedures:
00163-C, NRC Performance Indicator Preparation and Submittal Procedure, Rev. 3

Records:
Access Control Alarm Report, 05/01/02 to 09/13/02
Individual RWP Access Records, 07/01/02 to 09/27/02
DRMS Status and Parameter Management Records, November 1, 2001 through October 1, 2002

CRs:
CR 2002002306, At-power U2 Containment Entry Made Without Activating Flashing Light, 8/20/02
CR 2002000985, Carpenter Entered Posted Locked High Radiation Area, 3/20/02
CR 2002000934, Unplanned Dose to Plant Staff Traversing Bio-shield, 3/18/02
CR 2002000716, Door Latch to Locked High Radiation Area Damaged, 3/6/02
CR 2002001657, Discovered Hi RAD Lock Open, 5/22/02

CR 2002001822, 2 RE-2565C Source Actuator is Stuck, Unable to Perform Monthly Source Check Surveillance, 6/13/02
CR 2002001845, Release of Unit 1 Waste Monitor Tank Number 13 (WMT) to River Automatically Isolated on High Rad Signal, 6/17/02
CR 2002001858, WMT 13 Isolated on High Radiation Signal, 6/19/02
CR 2002001869, WMT 13, Action Statement No 37 Samples Out of Agreement, 06/20/02
CR 2002002045, Obtaining one sample for a week for Containment Releases not in Compliance with ODCM, 7/15/2002

Section 4O2A: Identification and Resolution of Problems

Procedures:
83308-C, Testing of Safety-Related NSCW System Coolers

Design Documents:
REA 97-V2A026, NSCW Pump Thrust Bearing Cooler Low Flow
REA 98-VAA136, Evaluation of Adequacy of NSCW Pump Motor Cooler Flow Orifices
GE Letter dated May 6, 1997, NSCW Pump Motor Cooler Evaluation
DCP 99-V2N0057, Remove Motor Cooler Throttle Valves Associated with Unit 2 NSCW Pumps

SYNOPSIS

The U.S. Nuclear Regulatory Commission, Office of Investigations, Region II, initiated this investigation on June 28, 2002, to determine if a former senior health services specialist/fitness for duty coordinator at the Southern Nuclear Operating Company, Inc., Vogtle Electric Generating Plant (Vogtle), deliberately falsified drug screening results.

Based upon evidence developed, testimony, and documentation obtained during this investigation, the allegation that a senior health services specialist/fitness for duty coordinator at Vogtle deliberately falsified drug screening results was substantiated.

Approved for Release 1/22/03
Oscar de Miranda

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