



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

January 28, 2010

Mr. Tom E. Tynan
Vice President
Southern Nuclear Operating Company, Inc.
Vogtle Electric Generating Plant
7821 River Road
Waynesboro, GA 30830

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT - NRC INTEGRATED INSPECTION
REPORT 05000424/2009005 AND 05000425/2009005

Dear Mr. Tynan:

On December 31, 2009, the U.S. 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 19, 2010, with you and other members of your staff.

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

This report documents one self-revealing finding and three NRC-identified findings of very low safety significance (Green) which were determined to be a violation of regulatory requirements. However, because of the very low safety significance and because they were entered into your corrective action program, the NRC is treating these findings as non-cited violations (NCV) consistent with Section VI.A.1 of the NRC's Enforcement Policy. If you contest any NCV, 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. In addition, if you disagree with the characterization of any finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region II, and the NRC Resident Inspector at the Vogtle Electric Generating Plant. The information you provide will be considered in accordance with the Inspection Manual Chapter 0305.

SNC

2

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

Scott M. Shaeffer, Chief
Reactor Projects Branch 2
Division of Reactor Projects

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

Enclosures: 1. Inspection Report 05000424/2009005 and 05000425/2009005
w/Attachment: Supplemental Information

cc w/encl: (See page 3)

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

Scott M. Shaeffer, Chief
 Reactor Projects Branch 2
 Division of Reactor Projects

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

Enclosures: 1. Inspection Report 05000424/2009005 and 05000425/2009005
 w/Attachment: Supplemental Information

cc w/encl: (See page 3)

PUBLICLY AVAILABLE NON-PUBLICLY AVAILABLE SENSITIVE NON-SENSITIVE
 ADAMS: Yes ACCESSION NUMBER: _____ SUNSI REVIEW COMPLETE **SMS**

OFFICE	RII:DRP	RII:DRP	RII:DRP	RII:DRS	RII:DRS	RII:DRS	RII:DRS
SIGNATURE	Via email	Via email	Via email	Via email	Via email	Via email	Via email
NAME	LCain	TChandler	ECrowe	MCoursey	AVarga	BCaballero	ANielsen
DATE	01/28/2010	01/28/2010	01/27/2010	01/28/2010	01/28/2010	01/27/2010	01/27/2010
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO
OFFICE	RII:DRP	RII:DRP	RII:DRS				
SIGNATURE	TXL /RA/	SMS /RA/	GRW /RA/				
NAME	TLighty	SShaeffer	GWiseman				
DATE	01/28/2010	01/28/2010	01/27/2010				
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

cc w/encl:

Managing Attorney and Compliance Officer
Southern Nuclear Operating Company, Inc.
Electronic Mail Distribution

B. D. McKinney, Jr.
Regulatory Response Manager
Southern Nuclear Operating Company, Inc.
Electronic Mail Distribution

Hickox, T. Mark
Vogtle Electric Generating Plant
Electronic Mail Distribution

N. J. Stringfellow
Licensing Manager
Southern Nuclear Operating Company, Inc.
Electronic Mail Distribution

T. D. Honeycutt
Regulatory Response Supervisor
Southern Nuclear Operating Company, Inc.
Electronic Mail Distribution

Jeffrey T. Gasser
Executive Vice President
Southern Nuclear Operating Company, Inc.
Electronic Mail Distribution

L. Mike Stinson
Vice President
Fleet Operations Support
Southern Nuclear Operating Company, Inc.
Electronic Mail Distribution

Paula Marino
Vice President
Engineering
Southern Nuclear Operating Company, Inc.
Electronic Mail Distribution

Bob Masse
Resident Manager
Vogtle Electric Generating Plant
Oglethorpe Power Corporation
Electronic Mail Distribution

Moanica Caston
Vice President and General Counsel
Southern Nuclear Operating Company, Inc.
Electronic Mail Distribution

Lee Foley
Manager of Contracts Generation
Oglethorpe Power Corporation
Electronic Mail Distribution

Mr. N. Holcomb
Commissioner
Department of Natural Resources
Electronic Mail Distribution

Dr. Carol Couch
Director
Environmental Protection
Department of Natural Resources
Electronic Mail Distribution

Cynthia Sanders
Program Manager
Radioactive Materials Program
Department of Natural Resources
Electronic Mail Distribution

Jim Sommerville
(Acting) Chief
Environmental Protection Division
Department of Natural Resources
Electronic Mail Distribution

Mr. Steven M. Jackson
Senior Engineer - Power Supply
Municipal Electric Authority of Georgia
Electronic Mail Distribution

Mr. Reece McAlister
Executive Secretary
Georgia Public Service Commission
Electronic Mail Distribution

Office of the Attorney General
Electronic Mail Distribution

(cc w/encl continued next page)

SNC

4

cc w/encl continued:

Office of the County Commissioner
Burke County Commission
Electronic Mail Distribution

Arthur H. Dombay, Esq.
Troutman Sanders
Electronic Mail Distribution

Director
Consumers' Utility Counsel Division
Governor's Office of Consumer Affairs
2 M. L. King, Jr. Drive
Plaza Level East; Suite 356
Atlanta, GA 30334-4600

Susan E. Jenkins
Director, Division of Waste Management
Bureau of Land and Waste Management
S.C. Department of Health and
Environmental Control
Electronic Mail Distribution

SNC

5

Letter to Tom E. Tynan from Scott M. Shaeffer dated January 28, 2010

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT - NRC INTEGRATED INSPECTION
REPORT 05000424/2009005 AND 05000425/2009005

Distribution w/encl:

C. Evans, RII

L. Slack, RII

OE Mail

RIDSNRRDIRS

PUBLIC

RidsNrrPMVogtle Resource

U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos.: 50-424, 50-425

License Nos.: NPF-68, NPF-81

Report Nos.: 05000424/2009005 and 05000425/2009005

Licensee: Southern Nuclear Operating Company, Inc. (SNC)

Facility: Vogtle Electric Generating Plant, Units 1 and 2

Location: Waynesboro, GA 30830

Dates: October 1 through December 31, 2009

Inspectors: L. Cain, Senior Resident Inspector
T. Chandler, Resident Inspector
E. Crowe, Senior Resident Inspector
J. Hanna Senior Reactor Analyst (4OA5)
M. Thomas, Senior Reactor Inspector (4OA5)
G. Wiseman, Senior Reactor Inspector (4OA5)
M. Coursey, Reactor Inspector (1R08, 4OA5)
A. Varga, Reactor Inspector (1R08, 4OA5)
B. Caballero, Operations Engineer (1R11)
A. Nielsen, Health Physicist (2OS1, 4OA1, 4OA5)

Approved by: Scott M. Shaeffer, Chief
Reactor Projects Branch 2
Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000424/2009-005, 05000425/2009-005; 10/01/2009 - 12/31/2009; Vogtle Electric Generating Plant, Units 1 and 2; Event Followup; Other Activities.

The report covered a three-month period of inspection by two senior resident inspectors, one resident inspector, two senior reactor inspectors, two reactor inspectors, one senior reactor analysts, one operations engineers and a health physicist. Four Green, non-cited violations (NCVs) were identified. The significance of most findings is indicated by their color (Green, White, Yellow, or Red) using Inspection Manual Chapter (IMC) 0609, Significance Determination Process (SDP). Findings for which the SDP does not apply may be Green or 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, Rev 4 dated December 2006.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

- Green. A self-revealing non-cited violation (NCV) of Technical Specification 5.4, Procedures was identified. Specifically, a human performance error associated with inadvertently isolating instrument air to the turbine building, auxiliary building, and control building, resulted in an automatic trip of the B main feed pump and a subsequent manual reactor trip. The licensee immediately restored instrument air and stabilized the plant in Mode 3. The licensee has entered the issue into their corrective action program and is in the process of implementing enhanced human error reduction techniques and improving procedural rigor and compliance throughout the site organization.

This issue is more than minor because it is associated with a cornerstone attribute, and it adversely affected the objective of the Initiating Events cornerstone. Specifically, the performance deficiency is a human performance error which led to a reactor trip and adversely impacted plant stability. The finding was determined to be of very low safety significance (Green) because the event did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available. The inspectors determined that the cause of this finding was related to the Work Practices component of the Human Performance cross-cutting area. [H.4(c)] Specifically, due to less-than-adequate supervisory and management oversight of the work activity i.e., no in-field supervisory oversight for 'first-time' performers and inadequate pre-job brief. (Section 4OA3.2)

- Green. A NRC-identified NCV for failure to enter TS LCO 3.7.8 Condition A as required was identified. Specifically, the licensee's failure to follow the requirements of TS LCO 3.0.2 and enter TS LCO 3.7.8 Condition A when the NSCW tower return valves are placed in a position other than that required by TS SR 3.7.8.1. The licensee has entered the issue into their corrective action program and began procedure revisions to ensure operation of the NSCW system in accordance with Technical Specifications and the UFSAR at all times.

Enclosure

This issue is more than minor because it is associated with a cornerstone attribute and adversely affected the objective of the Mitigating Systems cornerstone. Specifically, the performance deficiency is a configuration control error which affected the operability of an entire train of emergency core cooling system equipment, and thus impacts the equipment's automatic function to respond to a loss of coolant accident. The finding was determined to be of very low safety significance (Green) because the event did not represent an actual loss of safety function of a single train for greater than its Technical Specification allowed outage time. The inspectors determined that this issue does not have a cross-cutting aspect. The issue centers on differing interpretations of the Technical Specifications and the UFSAR, and does not align itself with any cross-cutting aspect. (Section 4OA5.1)

- Green. A NRC-identified NCV for inadequate surveillance procedures was identified. Specifically, TS SR 3.7.8.2 requires the licensee to periodically verify that each NSCW system automatic valve in the system flow path actuates to the correct position on an actuation signal. The current procedures used to meet the requirements of TS SR 3.7.8.2 do not verify that the tower return header valves actuate to the correct position when demanded during an automatic actuation signal. As a result, the NSCW systems do not currently meet the requirements of TS SR 3.7.8.2. The licensee has entered the issue into their corrective action program and began procedure revisions necessary to support operation of the NSCW system in accordance with Technical Specifications and the UFSAR at all times.

This issue is more than minor because it is associated with a cornerstone attribute and adversely affected the objective of the Mitigating Systems cornerstone. Specifically, the performance deficiency is an equipment performance error which affected the reliability of the NSCW systems. The finding was determined to be of very low safety significance (Green) because the finding did not represent the actual loss of safety function of a single train for greater than its technical specification allowed outage time. The inspectors determined that this issue does not have a cross-cutting aspect. The issue centers on differing interpretations of the Technical Specifications and the UFSAR, and does not align itself with any cross-cutting aspect. (Section 4OA5.2)

- Green. NRC identified a NCV of Vogtle Nuclear Plant Units 1 & 2 Operating License Condition 2.G, "Fire Protection," for failure to properly maintain the NRC-approved fire protection program with regard to the location of the fire alarm computer audible and visual annunciation notification signal. Specifically, the licensee had implemented a plant change, in December 2006, for the fire alarm computer which relocated the fire alarm computer annunciation signal outside the continuously manned main control room to a clearance and tagging office which was not continuously manned. The plant change could have resulted in a delay of up to 2 minutes before the alarm would have been relayed to the main control room for actions to dispatch the fire brigade and initiate safe shutdown actions.

The finding is more than minor because it is associated with the reactor safety, mitigating systems, cornerstone attribute of protection against external factors, i.e. fire, and it affected the objective of ensuring reliability and capability of systems (i.e., fire detection) that respond to initiating events. The finding was determined to be of very low safety significance (Green) in a Significance Determination Process Phase 1 analysis because the two minute delay had only minimum impact on the feasibility or reliability of the time critical operator actions and fire brigade performance in response to a fire. This violation was entered into the licensee's corrective action program as Condition Report 2007110797. No cross cutting issue was identified, because the finding is not indicative of current plant performance. (Section 4OA5.3).

B. Licensee-Identified Violations

None

REPORT DETAILS

Summary of Plant Status

Unit 1 started the report period shutdown for a planned refueling outage. The unit was restarted on October 17 and attained full rated thermal power (RTP) power on October 27. On December 7, the unit automatically tripped at 100% RTP due to a main generator trip. Following repairs, Unit 1 was restarted on December 9 and was manually tripped at 17% RTP due to high vibrations on the main generator. Unit 1 was restarted on December 10 and reached 94% RTP on December 14. The unit remained at essentially full RTP for the remainder of the inspection period.

Unit 2 started the inspection period at full rated thermal power (RTP). The unit reduced power to 94% to complete repairs on the heater drain system and returned to full rated thermal power (RTP). On December 23, Unit 2 was manually tripped due to loss of the 2B Main Feed Pump (MFP) from the inadvertent isolation of instrument air to the turbine building. After instrument air was re-established, Unit 2 was restarted on December 24 and reached 98% RTP on December 28. The unit remained at essentially full RTP for the remainder of the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R01 Adverse Weather Protection

a. Inspection Scope

Impending Adverse Weather Condition Review. On December 11, the inspectors reviewed licensee procedure 11877-1 and 11877-2, Cold Weather Checklist, to verify the licensee had implemented actions to prepare the plant site for predicted severe weather conditions of sub-freezing temperatures. The inspectors walked down various safety-significant areas of the plant to verify the licensee's ability to respond to the predicted adverse weather conditions.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment

a. Inspection Scope

Partial System Walkdown. The inspectors performed partial walkdowns of the following two systems to verify correct system alignment. The inspectors checked for correct valve and electrical power alignments by comparing positions of valves, switches, and breakers to the documents listed in the Attachment. Additionally, the inspectors reviewed the condition report database to verify that equipment alignment problems were being identified and appropriately resolved.

Enclosure

- Unit 2 Train A NSCW system during the Unit 2 Train B NSCW maintenance outage
- Unit 2 Train A&B motor-driven auxiliary feedwater systems when the turbine-driven auxiliary feedwater pump was out of service due to replacement of the governor valve actuator remote servo

Complete System Walkdown. The inspectors performed a complete walkdown of the Unit 1 Main Feedwater and Condensate system. This inspection sample was completed using the guidance listed in Operating Experience Smart Sample FY2009-02, "Negative trend and Recurring Events Involving feedwater systems." The inspectors performed a detailed check of valve positions, electrical breaker positions, and operating switch positions to evaluate the operability of the redundant trains or components by comparing the required position in the system operating procedure to the actual position. The inspectors also reviewed control room logs, condition reports, and system health reports to verify that alignment and equipment discrepancies were being identified and appropriately resolved. The documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R05 Fire Protection

a. Inspection Scope

Fire Area Tours. The inspectors walked down the following plant areas to verify the licensee was controlling combustible materials and ignition sources as required by procedures 92015-C, Use, Control, and Storage of Flammable/Combustible Materials, and 92020-C, Control of Ignition Sources. The inspectors assessed the observable condition of fire detection, suppression, and protection systems and reviewed the licensee's fire protection Limiting Condition for Operation log and condition report (CR) database to verify that the corrective actions for degraded equipment were identified and appropriately prioritized. The inspectors also reviewed the licensee's fire protection program to verify the requirements of Updated Final Safety Analysis Report Section 9.5.1, Fire Protection Program, and Appendix 9A, Fire Hazards Analysis, were met. Documents reviewed are listed in the Attachment.

- Unit 1A emergency diesel generator room and diesel fuel oil day tank room

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measuresa. Inspection Scope

Internal Flood Review. The inspectors walked down the following area which contained risk-significant structures, systems and components below flood level to verify flood barriers were in place. Motor controllers and terminal boxes that could become potentially submerged were inspected to ensure that the sealing gasket material was intact and undamaged. The inspectors reviewed selected licensee alarm response procedures to verify alarm setpoints and setpoints for sump pump operation were consistent with the UFSAR, the setpoint index, and Technical Specifications (TSs).

- Unit 1 component cooling water pump rooms and safety injection pump rooms

Underground Bunker/Manhole Cable Review. The inspectors verified the following underground cable bunkers/manholes installed cables were not submerged in water or qualified for existing environmental conditions. Inspectors also verified splices and cable support systems intact. Inspectors verified installed dewatering devices operational and level alarm circuits set appropriately. In cases where no dewatering device was installed, inspectors determined if drainage was provided and functional.

- Pull Boxes 1NE9HAKEM07, 1NE9HAKEM08, 1NE9HAKEM09, 1NE9HAKEM10, 1NE9KAKAM48, 1NE9KAKAM49, 1NE9KBKAM50, 1NE9KBKEM51, 1NE7GKKEM60, 1NE7GKKEM61, 1NE7GKKEM62, 1NE7GKKEM63, 1NE7BBKEM02, 1NE7BBKEM03, 1NE7JBKEM04, 1NE7KBKEM05, 1NE7KBKEM06, 1NE7KAKAM46

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performancea. Inspection Scope

Annual Review. The inspectors reviewed the licensee's records of the performance tests conducted on the Unit 2, A Train Component Cooling Water Heat Exchanger. The inspectors reviewed EPRI NP-7552, "Heat Exchanger Performance Monitoring Guidelines" to ensure that the licensee's testing procedures were appropriate. The inspectors reviewed RER 2081821601, CCW Heat Exchanger 2120E04001 fouling Factor Evaluation. Additionally, the inspectors reviewed the licensee's corrective action program (CAP) for heat exchanger performance issues to ensure that discrepancies were being identified and appropriately resolved. Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R08 Inservice Inspection (ISI) Activities (IP 71111.08P, Unit 1).1 Non-Destructive Examination (NDE) Activities and Welding Activitiesa. Inspection Scope

From September 28-October 02, 2009, the inspectors reviewed the implementation of the licensee's In-service Inspection (ISI) program for monitoring degradation of the reactor coolant system (RCS) boundary and risk significant piping boundaries. The inspectors' activities consisted of an on-site review of NDE and welding activities to evaluate compliance with the applicable edition of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (BPVC), Section XI (Code of record: 2001 Edition with 2003 Addenda), and to verify that indications and defects (if present) were appropriately evaluated and dispositioned in accordance with the requirements of the ASME Code, Section XI acceptance standards.

The inspectors observed the following non-destructive examinations mandated by the ASME Section XI Code to evaluate compliance with the ASME Code Section XI and Section V requirements and if any indications and defects detected were detected, to determine if these were dispositioned in accordance with the ASME Code or an NRC approved alternative requirement.

- HELB/MS Butt
- N-3 Pressurizer Nozzle Overlay

The inspectors reviewed the following examination records (volumetric or surface) with recordable indications accepted for continued service to determine if acceptance was in accordance with the ASME Code Section XI or an NRC approved alternative.

- Upper Head to Upper Shell Barrel 'D' weld
- 12" Pipe to Valve (AI 87-0131)

The inspectors reviewed the following pressure boundary welds completed for risk significant systems during the last Unit 1 refueling outage to determine if the licensee applied the preservice non-destructive examinations and acceptance criteria required by the construction Code NRC approved Code Case, NRC approved Code relief request or the ASME Code Section XI. Additionally, the inspectors reviewed the welding procedure specification and supporting weld procedure qualification records to determine if the weld procedure(s) were qualified in accordance with the requirements of Construction Code and the ASME Code Section IX.

- Weld 255-W-01C
- Weld overlay on 1PSV8010A safety valve nozzle N-1
- Installation of 1 FO9652 flow orifice

b. Findings

No findings of significance were identified.

Enclosure

.2 PWR Vessel Upper Head Penetration (VUHP) Inspection Activities

a. Inspection Scope

For the Unit 1 vessel head, no examination was required pursuant to 10 CFR 50.55a(g)(6)(ii)(D) for the current refueling outage. Therefore, no NRC review was completed for this inspection procedure attribute.

b. Findings

No findings of significance were identified.

.3 Boric Acid Corrosion Control (BACC) Inspection Activities

a. Inspection Scope

The inspectors performed an independent walkdown of portions of the RHR system(s) which had received a recent licensee boric acid walkdown and determined whether the licensee's BACC visual examinations emphasized locations where boric acid leaks can cause degradation of safety significant components.

The inspectors reviewed the following licensee evaluations of reactor coolant system components with boric acid deposits to determine if degraded components were documented in the corrective action system. The inspectors also evaluated corrective actions for any degraded reactor coolant system components to determine if they met the component Construction Code, ASME Section XI Code, and/or NRC approved alternative

- Corrosion Assessment 1201-2009-001 Rev 1
- Corrosion Assessment 1212-2008-001

The inspectors reviewed the following corrective actions related to evidence of boric acid leakage to determine if the corrective actions completed were consistent with the requirements of the ASME Code Section XI and 10 CFR Part 50, Appendix B, Criterion XVI.

- CR 2009102713 dated 03/19/2009 for PORV 1-PV-0455A
- CR 2008105139 dated 04/30/2008 for valve 1-1212-U4-009 body to bonnet leak

b. Findings

No findings of significance were identified.

.4 Steam Generator (SG) Tube Inspection Activities

a. Inspection Scope

The NRC inspectors observed the following activities and/or reviewed the following documentation and evaluated them against the licensee's technical specifications,

commitments made to the NRC, ASME Section XI, and Nuclear Energy Institute (NEI) 97-06 (Steam Generator Program Guidelines):

- Observed in-situ pressure testing of tube(s) Row 1, Column 20.
- Reviewed the licensee's IN-situ SG tube pressure testing screening criteria. In particular, assessed whether assumed NDE flaw sizing accuracy was consistent with data from the EPRI examination technique specification sheets (ETSS) or other applicable performance demonstrations.
- Reviewed In-situ pressure test records (e.g., pressure versus time traces, pressure achieved, and hold times) and results.
- Interviewed Eddy Current Testing (ET) data analysts and reviewed 10 samples of ECT data.
- Reviewed the SG tube ET examination scope and expansion criteria.
- Evaluated if the licensee's SG tube ET examination scope included potential areas of tube degradation identified in prior outage SG tube inspections and/or as identified in NRC generic industry operating experience applicable to the licensee's SG tubes.
- Reviewed the licensee's repair criteria and processes.
- Evaluated if the ET equipment and techniques used by the licensee to acquire data from the SG tubes were qualified or validated to detect the known/expected types of SG tube degradation in accordance with Appendix H, Performance Demonstration for Eddy Current Examination, of EPRI Pressurized Water Reactor Steam Generator Examination Guidelines, Revision 7.
- Reviewed the licensee's secondary side SG Foreign Object Search and Removal (FOSAR) activities.
- Reviewed the licensee's evaluations and repairs for SG tubes damaged by foreign material or tubes surrounding inaccessible foreign objects left within the secondary side of the steam generators
- Reviewed ET personnel qualifications.
- Participated in the conference call between NRR/DCI staff and the licensee which detailed the licensee's SG tube examination activities and results.

b. Findings

No findings of significance were identified.

.5 Identification and Resolution of Problems

a. Inspection Scope

The inspectors performed a review of ISI/SG related problems entered into the licensee's corrective action program and conducted interviews with licensee staff to determine if;

- the licensee had established an appropriate threshold for identifying ISI/SG related problems;
- the licensee had performed a root cause (if applicable) and taken appropriate corrective actions; and

Enclosure

- the licensee had evaluated operating experience and industry generic issues related to ISI and pressure boundary integrity.

The inspectors performed these reviews to evaluate compliance with 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," requirements. The corrective action documents reviewed by the inspectors are listed in the Attachment to this report.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification

.1 Resident Quarterly Observation

a. Inspection Scope

The inspectors observed operator performance on December 14, during licensed operator simulator training described in Simulator Scenario V-RQ-SE-2009 AOP-4. The scenario began with a cold loop temperature instrument failure, followed by an inadvertent turbine load reject with failure of rods to automatically insert. Once the plant was stable, the scenario continued with a loss of the B 4160 1E electrical bus. The scenario concluded with a 25 gpm RCS leak, followed by a trip of RCP #3 and the subsequent automatic trip of the reactor. The inspectors specifically assessed the following areas:

- Correct use of the abnormal and emergency operating procedures
- Ability to identify and implement appropriate actions in accordance with the requirements of the Technical Specifications
- Clarity and formality of communications in accordance with 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.

.2 Annual Review of Licensee Requalification Examination Results

a. Inspection Scope

On August 10, 2009, the licensee had completed administering the annual requalification operating tests, which are required to be given to all licensed operators in accordance with 10 CFR 55.59(a) (2). The inspectors performed an in-office review of the overall pass/fail results of the individual operating tests, and the crew simulator operating tests. These results were compared to the thresholds established in Manual Chapter 609

Appendix I, Operator Requalification Human Performance Significance Determination Process.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness

a. Inspection Scope

The inspectors reviewed the following condition reports to evaluate the effectiveness of the licensee's handling of equipment performance problems and 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. The inspectors also reviewed the safety-significant system to verify that 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. The reviews included adequacy of the licensee's failure characterization, establishment of performance criteria or 50.65(a)(1) performance goals, and adequacy of corrective actions. Other documents reviewed during these inspections included control room logs, system health reports, the maintenance rule database, and maintenance work orders. Also, the inspectors interviewed system engineers and the maintenance rule coordinator to assess the accuracy of identified performance deficiencies and extent of condition.

- CR 2008111334, Unit 2 main feedwater regulating valve (MFRV) oscillations
- CR 2009108577 and CR 2009108594, failure of the Unit 2 NSCW pump #5 to start on demand

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the following three evaluations to verify they met the requirements of procedure NMP-GM-002, Corrective Action Program, and NMP-GM-002-001, Corrective Action Program Instructions. The scope of these inspections included a review of the technical adequacy of the evaluations, the adequacy of compensatory measures, and the impact on continued plant operation.

- CR 2009111428, Unit 2 containment spray pump sump suction valve, 1HV9002A has small metallic particles in lubricant sample
- CR 2009111074, gas void found in 1-1204-011-6 (SIP suction piping) during 1R15
- CR 2009112319, Part 21 regarding woodward PGPL actuators with remote servo (turbine driven auxiliary feedwater pump)

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testinga. Inspection Scope

The inspectors either observed post-maintenance testing or reviewed the test results for the following two maintenance activities to verify that the testing met the requirements of procedure 29401-C, Work Order Functional Tests, for ensuring equipment operability and functional capability was restored. The inspectors also reviewed the test procedures to verify the acceptance criteria were sufficient to meet the (TS) operability requirements.

- WO 20913458, high energy line break door closer/holder replacement for door 22108L1B50
- WO 20919301 – Unit 2 NSCW pump #2 tripped while shifting pumps

b. Findings

No findings of significance were identified.

1R20 Refueling and Other Outage Activitiesa. Inspection Scope

The inspectors performed the inspection activities described below for the Unit 1 refueling outage that began on September 20. The inspectors confirmed that, when the licensee removed equipment from service, the licensee maintained defense-in-depth commensurate with the outage risk control plan for key safety functions and applicable technical specifications and that configuration changes due to emergent work and unexpected conditions were controlled in accordance with the outage risk control plan. Documents reviewed are listed in the Attachment.

- Observed refueling activities for compliance with TS, to verify proper tracking of fuel assemblies from the spent fuel pool to the core, and to verify foreign material exclusion was maintained
- Performed containment closure activities, including a detailed containment walkdown prior to startup, to verify no evidence of leakage and that debris had not been left which could affect the performance of the containment sump
- Observed heat up and startup activities to verify that TS, license conditions, and other requirements, commitments, and administrative procedure prerequisites for mode changes were met prior to changing modes or plant conditions. Reactor Coolant System (RCS) integrity was verified by reviewing RCS leakage calculations and containment integrity was verified by reviewing the status of containment penetrations and containment isolation valves

b. Findings

No findings of significance were identified.

1R22 Surveillance Testinga. 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.

Surveillance Tests

- WO 2091138301, high energy line break door closer/holder testing for door 22108L1B50, auxiliary building room B94
- 14980B-2, diesel generator 2B fast start operability test
- 14980A-1, diesel generator 1A operability test

In-Service Tests (IST)

- 14810-2 Rev. 38.2, TDAFW pump and check valve IST response time test
- 14805B-1 Rev. 2.3, train B residual heat removal pump IST and response time test

Containment Isolation Valve (CIV)

- 14350-1 Rev. 8, Unit 1 containment penetration No. 50 CVCS charging local leak rate test

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety (OS)

2OS1 Access Control To Radiologically Significant Areasa. Inspection Scope

Access Controls The inspectors evaluated licensee performance in controlling worker access to radiologically significant areas and monitoring jobs in-progress associated with Unit 1 Refueling Outage 15 (1R15). The inspectors directly observed implementation of administrative and physical radiological controls; evaluated radiation worker (radworker) and health physics technician (HPT) knowledge of and proficiency in implementing radiation protection requirements; and assessed worker exposures to radioactive material.

During facility tours, the inspectors directly observed postings and physical controls for radiation areas, high radiation areas (HRAs), and airborne radioactivity areas established within the radiation control area (RCA) of the Unit 1 (U1) containment, U1 and Unit 2 (U2) auxiliary buildings, and radioactive waste (radwaste) processing and storage locations. The inspectors independently measured radiation dose rates or directly observed conduct of licensee radiation surveys for selected RCA areas. Results were compared to current licensee surveys and assessed against established postings and Radiation Work Permit (RWP) controls. Licensee key control and access barrier effectiveness were evaluated for selected U1 and U2 Locked High Radiation Area (LHRA) and Very High Radiation Area (VHRA) locations. Changes to procedural guidance for LHRA and VHRA controls were discussed with health physics (HP) supervisors. Controls and their implementation for storage of irradiated material within the spent fuel pool (SFP) were reviewed and discussed in detail. Established radiological controls were evaluated for selected 1R15 tasks including steam generator (S/G) maintenance activities, replacement of letdown orifice piping, radiography testing inside containment, and radwaste processing and storage. In addition, licensee controls for areas where dose rates could change significantly as a result of plant shutdown and refueling operations were reviewed and discussed.

For selected tasks, the inspectors attended pre-job briefings and reviewed RWP details to assess communication of radiological control requirements to workers. Occupational workers' adherence to selected RWPs and HPT proficiency in providing job coverage were evaluated through direct observation of job tasks and observation of remote HP monitoring activities. Electronic dosimeter (ED) alarm set points and worker stay times were evaluated against area radiation survey results for S/G maintenance activities and reactor coolant system piping replacement.

The inspectors reviewed and assessed licensee evaluations of skin dose and internal dose due to radworker contamination events during the 1R15 outage. For HRA tasks involving significant dose rate gradients, e.g. work in S/G bowls, the inspectors evaluated the use and placement of whole body and extremity dosimetry to monitor worker exposure.

Radiation protection activities were evaluated against the guidance in Regulatory Guide 8.38, Control of Access to High And Very High Radiation Areas in Nuclear Power Plants, and the requirements of Final Safety Analysis Report (FSAR) Section 12; Technical Specifications (TS) Section 5.7; 10 CFR Parts 19 and 20; and approved licensee procedures. Records reviewed are listed in Section 2OS1 of the report Attachment.

Problem Identification and Resolution Licensee Corrective Action Program (CAP) documents associated with access control to radiologically significant areas were reviewed and assessed. This included review of selected Condition Reports (CRs) related to radworker and HPT performance. The inspectors evaluated the licensee's ability to identify, characterize, prioritize, and resolve the identified issues in accordance with procedure NPM-GM-002, Corrective Action Program, Version 8.0. The inspectors also evaluated the scope of the licensee's internal audit program and reviewed recent assessment results. Licensee CAP documents reviewed are listed in Section 2OS1 of the Attachment.

The inspectors completed 21 of the required line-item samples described in Inspection Procedure (IP) 71121.01.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator (PI) Verification

.1 Mitigating Systems Cornerstone

a. Inspection Scope

The inspectors sampled licensee submittals for the listed PIs during the period from January 1 through December 18, 2009, for Unit 1 and Unit 2. The inspectors verified the licensee's basis in reporting each data element using the PI definitions and guidance contained in procedures 00163-C, NRC Performance Indicator and Monthly Operating Report Preparation and Submittal, and Nuclear Energy Institute (NEI) 99-02, Regulatory Assessment Indicator Guideline.

- Emergency AC Power System
- Cooling Water Systems
- Safety System Functional Failures

The inspectors reviewed Unit 1 and Unit 2 operator log entries, the Vogtle MSPI basis document, the monthly operating reports and monthly PI summary reports to verify that the licensee had accurately submitted the PI data.

b. Findings

No findings of significance were identified.

.2 Occupational Radiation Safety Cornerstone

a. Inspection Scope

The inspectors reviewed Performance Indicator (PI) data collected from October 1, 2008 through June 30, 2009 for the Occupational Exposure Control Effectiveness PI. For the reviewed period, the inspectors assessed CAP records to determine whether HRA, VHRA, or unplanned exposures had occurred during the review period. In addition, the inspectors reviewed ED alarm logs for cumulative doses and/or dose rates exceeding established set-points. The reviewed data were assessed against guidance contained in Nuclear Energy Institute (NEI) 99-02, "Regulatory Assessment Indicator Guideline," Rev. 5. Documents reviewed are listed in Sections 2OS1 and 4OA1 of the report Attachment.

The inspectors completed one of the required samples specified in IP 71151.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems

.1 Daily Condition Report Review. As required by Inspection Procedure 71152, Identification and Resolution of Problems, and in order to help identify repetitive equipment failures or specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into the licensee's corrective action program. This review was accomplished by either attending daily screening meetings that briefly discussed major CRs, or accessing the licensee's computerized corrective action database and reviewing each CR that was initiated.

.2 Focused Review

a. Inspection Scope

The inspectors performed a detailed review of the operator work-arounds, operator burdens, and control room deficiencies for Unit 1 and 2 that were in effect on December 22, 2009. The inspectors reviewed the licensee's lists to determine whether any items would adversely affect the operators' ability to implement abnormal or emergency operating procedures. The inspectors reviewed proposed corrective actions and schedule for each item on the operator work-arounds, operator burdens, and control room deficiencies lists. The inspectors reviewed the compensatory actions and cumulative effects on plant operation. The inspectors verified each item was being dispositioned in accordance with plant procedure 10025-C, Work-Around Program. Documents reviewed are listed in the Attachment.

b. Findings and Observations

No findings of significance were identified.

4OA3 Event Followup

.1 Unit 1 Main Generator and Reactor Trip

a. Inspection Scope

The inspectors reviewed the circumstances of the Unit 1 automatic reactor trip on December 7 and the Unit 1 manual reactor trip on December 10. The inspectors discussed the trips with operations, engineering, and licensee management personnel to understand the events and assess follow-up actions. The inspectors reviewed operator actions taken in accordance with licensee procedures and reviewed unit and system indications to verify that actions and system responses were as expected. The inspectors discussed the trip with the licensee's event investigation team and assessed the team's actions to gather, review, and assess information leading up to and following the event. The inspectors also reviewed the initial licensee notification to verify that it

Enclosure

met the requirements specified in NUREG-1022, Event Reporting Guidelines. The inspectors later reviewed the event investigation team's initial investigation report and their recommendation for restart report to assess the detail of review and adequacy of the investigation and proposed corrective actions prior to unit restarts.

b. Findings and Observations

No findings of significance were identified.

.2 Unit 2 Reactor Trip

a. Inspection Scope

The inspectors reviewed the circumstances of the Unit 2 manual reactor trip on December 23. The inspectors discussed the trip with operations, engineering, and licensee management personnel to understand the events and assess follow-up actions. The inspectors reviewed operator actions taken in accordance with licensee procedures and reviewed unit and system indications to verify that actions and system responses were as expected. The inspectors discussed the trip with the licensee's event investigation team and assessed the team's actions to gather, review, and assess information leading up to and following the event. The inspectors also reviewed the initial licensee notification to verify that it met the requirements specified in NUREG-1022, Event Reporting Guidelines. The inspectors later reviewed the event investigation team's initial investigation report and their recommendation for restart report to assess the detail of review and adequacy of the investigation and proposed corrective actions prior to unit restart.

b. Findings and Observations

Introduction. A Green self-revealing non-cited violation (NCV) of Technical Specification 5.4, Procedures was identified. Specifically, a human performance error associated with inadvertently isolating instrument air to the turbine building, auxiliary building, and control building, resulted in an automatic trip of the B main feed pump and a subsequent manual reactor trip.

Description. On December 23, 2009, while attempting to restore the 'B' instrument air dryer to service (after removing tagout 2-DT-09-2420-00438), the system operator inadvertently isolated instrument air to the turbine building, auxiliary building, and control building by closing the respective isolation valves. Per tagout 2-DT-09-2420-00438, the system operator was directed to restore instrument air dryer 'B' to service by performing section 4.1.3 of procedure 13711. Instead, the system operator performed section 4.1.1 of procedure 13711, which directed the operator to isolate air to the turbine building, auxiliary building, and control building. The control room operators quickly identified the loss of instrument air, and dispatched operators to restore it. However, before instrument air could be restored, lowering instrument air pressure caused an automatic trip of the 'B' main feed pump. The control room operators immediately inserted a manual trip of the reactor per the alarm response procedure. Within a few minutes,

instrument air was restored to the turbine building, auxiliary building, and control building, and a normal reactor shutdown to mode 3 was conducted.

Analysis. While removing a tagout on the instrument air system, the system operator inadvertently isolated instrument air to the turbine building, auxiliary building, and control building. This is a performance deficiency because the operator did not follow the written instructions provided in tagout 2-DT-09-2420-00438. This issue is more than minor because it is associated with a cornerstone attribute, and it adversely affected the objective of the Initiating Events cornerstone. Specifically, the performance deficiency is a human performance error which caused a reactor trip and adversely impacted plant stability. The finding was determined to be of very low safety significance (Green) because the event did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available. The inspectors determined that the cause of this finding was related to the Work Practices component of the Human Performance cross-cutting area. [H.4(c)] Specifically, due to less-than-adequate supervisory and management oversight of the work activity i.e. no in-field supervisory oversight for 'first-time' performers and inadequate the pre-job brief.

Enforcement. The inspectors determined that the finding represents a violation of regulatory requirements because it involved improper implementation of procedures which necessitated a manual reactor trip. Technical Specification 5.4 requires that written procedures, specified in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978, shall be established, implemented, and maintained. Regulatory Guide 1.33 states that procedures are required for certain administrative actions, which include the locking and tagging actions. Contrary to the above, on December 23, 2009, operations personnel incorrectly isolated instrument air to the turbine building, auxiliary building, and control building because they did not follow the instructions provided in tagout 2-DT-09-2420-00438. As a result of the violation, instrument air to the turbine building, auxiliary building, and control building was lost for several minutes, resulting in the automatic trip of the 'B' main feed pump and the subsequent manual reactor trip. Because this violation was of very low safety significance and it was entered into the licensee's corrective action program (ref. CR 2009112703), this violation is being treated as an NCV, consistent with the NRC Enforcement Policy. This finding will be tracked as NCV 05000425/2009005-03, Human Performance Error Results in Manual Reactor Trip.

4OA5 Other Activities

.1 Operation of NSCW System with Tower Return Valves in Open Bypass

a. Inspection Scope

The inspectors performed a review of Task Interface Agreement (TIA) 2009-008, "Operability of the Nuclear Service Cooling Water system – Vogtle Electric Generating Plant," issued December 23, 2009. The TIA concluded that the current licensee practice of considering the Nuclear Service Cooling Water (NSCW) system operable, even though the automatic features of the tower header return valves are disabled, is a violation of Technical Specifications.

b. Findings

Introduction. A Green NRC-identified non-cited violation (NCV) was identified for a technical specification violation associated with the licensee's failure to follow the requirements of TS LCO 3.0.2 and enter TS LCO 3.7.8 Condition A when the NSCW tower return valves are placed in a position other than that required by TS SR 3.7.8.1. On several different occasions, the licensee placed the NSCW tower return header control switch in the OPEN BYPASS position, which rendered the controls for the return valve to the spray header inoperable. As a result, the associated NSCW system could no longer meet the requirements of TS SR 3.7.8.1. TS LCO 3.0.2 requires that "Upon discovery of a failure to meet an LCO, the Required Actions of the associated Conditions shall be met, except as provided in LCO 3.0.5 and LCO 3.0.6."

Description. The licensee periodically operates the NSCW system with the control switch for the tower return header valves in the OPEN BYPASS position to permit maintenance activities inside the associated NSCW cooling tower. Placing the tower return header control switch in OPEN BYPASS disables the automatic function of the tower return valves (it causes the return valve to go closed, regardless of return header temperature). Following one such occurrence on October 12, 2007, inspectors questioned the licensee's response to placing the control switch for the Unit 1 NSCW A tower return header valves in the OPEN BYPASS position. The licensee did not initially enter any LCO, but later, based upon a recommendation from corporate engineering, entered TS LCO 3.7.9 Condition A. However, after further review by operations management and engineering, the licensee determined that entry into either TS LCO 3.7.8 Condition A or TS LCO 3.7.9 Condition A was not required because even though while in OPEN BYPASS the automatic control functions of the tower return header valves were rendered inoperable, manual operation of the valves was still available. With manual operation of the valves available, the licensee determined that the NSCW system was fully operable, regardless of the position of the tower return header valves control switch. Since that time, the licensee has continued to periodically operate the NSCW trains (on both operating units) with the tower return valves in OPEN BYPASS without declaring the associated NSCW train inoperable and entering TS LCO 3.7.8 Condition A or TS LCO 3.7.9 Condition A.

Inspectors questioned the applicability of the Technical Specifications and UFSAR, and informed the licensee. This position was based upon the knowledge that the Vogtle UFSAR Section 9.2.1.1.1.G in-part states that, "the NSCW system is designed to perform its cooling function following a LOCA automatically and without operator action, assuming a single failure coincident with a loss of offsite power." The licensee stated that the UFSAR provided the latitude to use manual operator actions to compensate for non-functional automatic actions. After several months of discussion between the licensee, the resident inspectors, and Region II management, the issue was formally transmitted to the Office of Nuclear Reactor Regulation (NRR) for their interpretation via the Task Interface Agreement (TIA) process. On February 2, 2009, the licensee also provided to the NRC their position regarding the licensing basis for the NSCW system. On December 23, 2009, Task Interface Agreement (TIA) 2009-008 was issued, which documents NRR's position on the issue. NRR concluded that "The correct position for [the return valves] is ready for automatic operation without operator action as assumed in

the LOCA analysis.” Thus when the tower return header control switch is placed in the OPEN BYPASS position, the NSCW system no longer meets the requirements of TS SR 3.7.8.1. The conclusion paragraph of the TIA states:

Modifying the position of the tower return valves from the position required by SR 3.7.8.1 results in a failure to meet that SR. As required by TS SR 3.0.1, this is a failure to meet TS LCO 3.7.8 and the associated NSCW train should be declared inoperable. In accordance with TS LCO 3.0.2, entry into TS LCO 3.7.8 Condition A is required. These TS requirements must be met regardless of the operability status of temperature element TE1668.

Once the TIA was issued by the NRC, the licensee entered it into their corrective action program (ref. CR 2010100103), and began procedure revisions necessary to support automatic operation of the NSCW system in line with the conclusions of the TIA.

Analysis. The licensee failed to declare the associated NSCW system inoperable and enter TS LCO 3.7.8 Condition A when the NSCW tower return valves are placed in a position other than that required by TS SR 3.7.8.1. This is a performance deficiency because the licensee did not follow the approved Technical Specifications. This issue is more than minor because it is associated with a cornerstone attribute and adversely affected the objective of the Mitigating Systems cornerstone. Specifically, the performance deficiency is a configuration control error which affected the operability of an entire train of emergency core cooling system equipment, and thus impacts the equipment’s ability to respond to a loss of coolant accident. The finding was determined to be of very low safety significance (Green) because the event did not represent an actual loss of safety function of a single train for greater than its Technical Specification allowed outage time. The inspectors determined that this issue does not have a cross-cutting aspect. The issue centers on differing interpretations of the Technical Specifications and the UFSAR, and does not align itself with any cross-cutting aspect.

Enforcement. The inspectors determined that the finding represents a violation of regulatory requirements because it involved improper implementation of the Technical Specifications and the UFSAR. As stated above, the licensee has routinely operated the tower return valves in the OPEN BYPASS for routine surveillances and during maintenance for personnel protection. Placing the tower return header control switch in OPEN BYPASS disables the automatic spray cooling function, which is required to maintain the NSCW system within its design limits following a loss-of-coolant accident. With the automatic design function disabled, the NSCW system no longer meets the requirements of TS SR 3.7.8.1. Per TS SR 3.0.1, this is a failure to meet TS LCO 3.7.8 and the associated NSCW train should be declared inoperable. In accordance with TS LCO 3.0.2, entry into TS LCO 3.7.8 Condition A is required. Contrary to the above, on numerous occasions, the licensee operated the NSCW trains on both operating units with the tower return valves in the OPEN BYPASS without declaring the associated NSCW train inoperable and entering TS LCO 3.7.8 Condition A as required. As a result of the violation, the associated ECCS trains were rendered inoperable for anywhere between 1 and 6 hours on each occasion. Because this violation was of very low safety significance and it was entered into the licensee’s corrective action program (ref. CR

Enclosure

2010100103), this violation is being treated as an NCV, consistent with the NRC Enforcement Policy. This finding will be tracked as NCV 05000424/2009005-01 and NCV 05000425/2009005-01, Operation of NSCW System with Tower Return Valves in Open Bypass.

.2 Inadequate Surveillance Procedures for TS SR 3.7.8.2

a. Inspection Scope

The inspectors performed a review of Task Interface Agreement (TIA) 2009-008, "Operability of the Nuclear Service Cooling Water system – Vogtle Electric Generating Plant." The TIA concluded that the 'correct' position of the NSCW tower header return valves (as referenced in TS SR 3.7.8.2) is that position determined by the associated automatic control logic.

b. Findings

Introduction. A Green NRC-identified non-cited violation (NCV) was identified for inadequate surveillance procedures for technical specification (TS) surveillance requirement (SR) 3.7.8.2. TS SR 3.7.8.2 requires the licensee to periodically verify that each NSCW system automatic valve in the system flow path actuates to the correct position on an actuation signal. The current procedures used to meet the requirements of TS SR 3.7.8.2 do not verify that the tower return header valves actuate to the correct position when demanded during an automatic actuation signal. As a result, the NSCW systems do not currently meet the requirements of TS SR 3.7.8.2.

Description. After removing heat from the safety-related loads, the return water to the NSCW cooling tower basin either passes through a spray header (via the return valve) or flows directly to the basin (via the bypass valve). The return valve and the bypass valve are collectively referred to as the tower return header valves. TS SR 3.7.8.2 states:

Verify each NSCW system automatic valve in the flow path that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.

The licensee credits procedures 14666 ('A' train) and 14667 ('B' train) for meeting the requirements of TS SR 3.7.8.2. However, these procedures do not verify that the tower return valves actuated to their correct position. Rather these procedures simply verify that adequate flow exists in the applicable system. This practice only verifies that one of the tower return header valves opened, not that the correct tower return header valve opened and the other valve remained closed. If the return valve fails to open when required, NSCW return header flow would bypass the spray headers and as a result, the associated NSCW tower could not perform its design safety function.

Analysis. The inspectors concluded a performance deficiency existed because the licensee's surveillance procedures do not verify that the tower return header valves actuate to the correct position when demanded during an automatic actuation signal, as required by TS SR 3.7.8.2. This issue is more than minor because it is associated with a

Enclosure

cornerstone attribute and adversely affected the objective of the Mitigating Systems cornerstone. Specifically, the performance deficiency is an equipment performance error which affected the reliability of the NSCW systems. The finding was determined to be of very low safety significance (Green) because the finding did not represent the actual loss of safety function of a single train for greater than its technical specification allowed outage time. The inspectors determined that this issue does not have a cross-cutting aspect. The issue centers on differing interpretations of the Technical Specification surveillance requirements, and does not align itself with any cross-cutting aspect.

Enforcement. The inspectors determined that the finding represents a violation of regulatory requirements because it involved improper implementation of the Technical Specification surveillance requirements. TS SR 3.7.8.2 requires the licensee to periodically verify that each NSCW system automatic valve in the system flow path actuates to the correct position on an actuation signal. Contrary to the above, the current procedures used by the licensee to meet the requirements of TS SR 3.7.8.2 do not verify that the tower return header valves actuate to the correct position when demanded during an automatic actuation signal. As previously stated, the licensee has historically verified the correct position of the tower return header valves by simply verifying that adequate flow exists in the applicable NSCW system during the performance of procedures 14666 and 14667. This practice only verifies that one of the tower return header valves opened, not that the correct tower return header valve opened and the other valve remained closed. Because this violation was of very low safety significance and it was entered into the licensee's corrective action program (ref. CR 2010100103), this violation is being treated as an NCV, consistent with the NRC Enforcement Policy. This finding will be tracked as NCV 05000424/2009005-02 and NCV 05000425/2009005-02, Inadequate Surveillance Procedures for TS SR 3.7.8.2.

.3 (Closed) URI 05000424,425/2007007-02, Fire Alarm Computer Replacement Design Change.

Inspection Scope: During the triennial fire protection inspection (TFPI) conducted October 1-19, 2007, an unresolved item (URI) was identified related to a plant design change implemented in December 2006, for the fire alarm computer. The design change relocated the plant fire alarm computer notification signal outside the main control room (MCR) to a clearance and tagging (C&T) office. The design change introduced a potential time delay of up to 2 minutes before the alarm would have been relayed to the MCR for actions to dispatch the fire brigade and initiate safe shutdown (SSD) actions. This item was unresolved pending further analysis by the licensee and NRC review.

The inspectors completed a review and characterization of the URI, including a review of additional licensee information, a review of fire brigade drill records, and qualitative evaluation of the risk significance. Documents reviewed by the inspectors are listed in the attachment.

Introduction: A Green non-cited violation (NCV) of Vogtle Units 1 & 2 Operating License Condition 2.G, Fire Protection, was identified for failure to properly maintain the NRC-approved fire protection program with regard to the Unit 1 and Unit 2 fire alarm computer notification signal. Specifically, the licensee had implemented a plant change in December 2006, for the fire alarm computer which relocated the fire alarm computer

Enclosure

notification audible and visual alarm and annunciation signal outside the continuously manned MCR to a C&T office which was not continuously manned. If the remote monitoring station at the a C&T office did not acknowledge a fire alarm condition within one minute, the alarm signal would be retransmitted to the MCR within 60 seconds. As a result, the plant change introduced a potential time delay of up to 2 minutes before the alarm would have been relayed to the MCR for actions to dispatch the fire brigade and initiate SSD actions.

b. Findings

Description: During the 2007, TFPI, the inspection team determined that the licensee's Title 10 Code of Federal Regulation Part 50.59 screening evaluation for Design Change Package C052267801, Revision 3.0, had not effectively reviewed a time delay of up to 2 minutes before the fire alarm would have been relayed to the MCR. Consequently, the licensee failed to determine the potential effects of the delay for actions to dispatch the fire brigade and initiate SSD actions. Upon discovery during the 2007 inspection, the licensee initiated Condition Report 2007110797 and immediately changed the fire alarm computer system configuration such that any fire alarm signal generated in the plant would alarm and annunciate in the continuously manned MCR without any time delay. Since the 2007, triennial fire protection inspection, the licensee performed a new evaluation with respect to performance of operator manual actions in response to fire. The action in the event of a fire alarm is to dispatch personnel to the area to determine the size of the fire. The licensee assesses whether the fire is of sufficient severity to potentially threaten cabling in the area such that spurious signals could be generated that would result in equipment repositioning to undesired states that could be detrimental. If the personnel dispatched to the fire determine that the fire was sufficiently large or that potential cable damage could occur, then operator manual actions in Procedure 17103A-C, "Annunciator Response Procedures for Fire Alarm Computer" would be taken (in addition to dispatching the fire brigade to combat the fire). The steps in Procedure 17103A-C involve operator manual actions outside the MCR to either prevent a spurious action from occurring or to terminate the impacts of such a spurious action.

The licensee evaluated the condition and it was documented as AX3AQ-9-1005, "Vogtle Fire Alarm Response Time Delay Evaluation." This was a qualitative evaluation of 13 time-critical operator manual actions to either prevent a spurious action from occurring or to terminate/mitigate the impacts of such a spurious action in procedure 17103A-C, for fires outside the MCR (34 plant fire zones). The inspectors reviewed the evaluation and concluded that the two minute delay had only minimal impact on the feasibility or reliability of the time-critical operator actions in response to a fire. The inspectors determined this based on low flame spread of the cabling used at Vogtle plant, which are qualified to IEEE 383-1974 flame spread tests. This testing limited fire propagation cable damage to less than 6 feet over a fire exposure of 20 minutes; therefore, over a 2 minute time period, fire would be of very limited flame spread and result in minimal cable damage to SSD system cables or components.

In addition, the inspectors performed an independent review of fire brigade fire drill response times for a sample of fire brigade drills conducted during the periods December 2006 and October 2007. The inspectors assessed whether a two minute delay to

Enclosure

dispatch the fire brigade adversely affected fire brigade performance. The inspectors determined the delay had only minimal impact on the average fire brigade response and extinguishment times to simulated fires.

Analysis: This finding is a performance deficiency because it was within the licensee's control to identify that the design change screening evaluation for relocating the plant fire alarm computer audible and visual annunciation signal outside the continuously manned MCR did not meet the UFSAR criterion for fire alarms and industry standards to which they are committed. The finding is more than minor because it is associated with the reactor safety, mitigating systems, cornerstone attribute of protection against external factors, i.e. fire, and it affected the objective of ensuring reliability and capability of systems (i.e., fire detection) that respond to initiating events. The condition had a credible impact on safety since delays in dispatching the fire brigade and initiating SSD actions may prevent a fire from being extinguished quickly or allow a fire to propagate to SSD systems or cables, and leading to a more significant event. The finding was determined to be of very low safety significance (Green) in accordance with Phase 1 of the Fire Protection Significance Determination Process (Inspection Manual Chapter 0609, Appendix F), because the two minute delay in fire notification would result in minimal cable damage to SSD system cables or components and would have only minimum impact on the feasibility or reliability of the time-critical operator actions and fire brigade performance in response to a fire. No cross cutting issue was identified, because the finding is not indicative of current plant performance.

Enforcement: Vogtle Units 1 & 2 Operating License Condition 2.G requires the licensee to implement and maintain in effect all provisions of the NRC-approved Fire Protection Program, as described in the UFSAR and as approved in the NRC SER (NUREG-1137) through Supplement 9 for the facility. The NRC-approved FPP is documented in UFSAR Section 9.5.1 and associated Appendices 9A and 9B. Vogtle UFSAR Appendix 9B, Section C.6.a (4) states that fire detection systems should give audible and visible alarm and annunciation in the control room.

Contrary to the above, on December 2006, the licensee had failed to properly maintain the NRC-approved fire protection program with regard to the relocation of the plant fire alarm computer notification signal outside of the Unit 1 and Unit 2 MCR. Specifically, the licensee implemented a plant change in December 2006, which relocated the fire alarm computer notification audible and visual alarm and annunciation signal outside the continuously manned MCR to a C&T office which was not continuously manned. The plant change introduced a potential time delay of up to 2 minutes before the alarm would have been relayed to the MCR for actions to dispatch the fire brigade and initiate SSD actions. This condition existed between December 2006, and October 17, 2007, and affected both Units. Upon discovery, the licensee initiated CR 2007110797 and changed the fire alarm computer system configuration such that any fire alarm signal generated in the plant would alarm and annunciate in the MCR without any time delay. Because this finding is of very low safety significance and was entered into the licensee's corrective action program, it is being treated as a NCV, consistent with Section VI.A.1 of the NRC's Enforcement Policy. This finding is identified as NCV 05000424,425/2009005-04, Failure to maintain the approved fire protection program with regard to the relocation of the plant the fire alarm annunciation signal outside of the MCR.

Enclosure

.4 Quarterly Resident Inspector Observations of Security Personnel and Activities

a. Inspection Scope

During the inspection period, the inspectors conducted observations of security force personnel and activities to ensure that the activities were consistent with licensee security procedures and regulatory requirements relating to nuclear plant security. These observations took place during both normal and off-normal plant working hours.

b. Findings and Observations

No findings of significance were identified.

.5 Reactor Coolant System Dissimilar Metal Butt Welds (TI 2515/172, Revision 1)

a. Inspection Scope

The inspectors conducted a review of the licensee's activities regarding licensee dissimilar metal butt weld (DMBW) mitigation and inspection implemented in accordance with the industry self-imposed mandatory requirements of Materials Reliability Program (MRP)-139, "Primary System Piping Butt Weld Inspection and Evaluation Guidelines." Temporary Instruction (TI) 2515/172, "Reactor Coolant System Dissimilar Metal Butt Welds" was issued February 21, 2008, to support the evaluation of the licensee's implementation of MRP-139.

The documents reviewed by the inspector for this inspection are listed in the Attachment. From September 28 through October 02, 2009, the inspectors performed a review in accordance with TI-172 as described in the Observation Section below:

b. Observations

Summary: Vogtle Unit 1 is a Westinghouse four loop designed plant. The licensee had identified a population of DMBWs susceptible to primary water stress corrosion cracking in accordance with MRP-139 guidelines. The licensee has completed pressurizer weld overlays to augment the margin to safety on these welds.

In accordance with requirements of TI 2515/172, Revision 0, the inspectors evaluated and answered the following questions:

(1) Implementation of the MRP-139 Baseline Inspections

1. a. Have the baseline inspection been performed or are they scheduled to be performed in accordance with MRP-139 guidance? Yes

b. Were the baseline inspections of the pressurizer temperature DMBW's of the nine plants listed in 03.01.b completed? Yes

2. Is the licensee planning to take any deviations from the MRP-139 baseline inspection requirements of MRP-139? If so, what deviations are planned, what is the general basis for the deviation, and was the NEI-03-08 process for filing a deviation followed?
No

(2) Volumetric Examinations

1. Were the examinations performed in accordance with the MRP-139, Section 5.1 guidelines and consistent with NRC staff relief request authorization for weld overlaid welds? Yes
2. Were examinations performed by qualified personnel? (Briefly describe the personnel training/qualification process used by the licensee for this activity.) Yes
3. Were examinations performed such that deficiencies were identified, dispositioned, and resolved? Yes

(3) Weld Overlays

This portion of the TI was not inspected during the period of this report.

(4) Mechanical Stress Improvement (SI)

There were no stress improvement activities performed or planned by this licensee to comply with their MRP-139 commitments.

(5) Application of Weld Cladding and Inlays

This portion of the TI was not inspected during the period of this report.

(6) Inservice Inspection Program

This portion of the TI was not inspected during the period of this report.

1. Has the licensee prepared an MRP-139 inservice inspection program? If not, briefly summarize the licensee's basis for not having a documented program and when the licensee plans to complete preparation of the program. Yes
2. In the MRP-139 inservice inspection program, are the welds appropriately categorized in accordance with MRP-139? If any welds are not appropriately categorized, briefly explain the discrepancies. Yes
3. In the MRP-139 inservice inspection program, are the inservice inspection frequencies, which may differ between the first and second intervals after the MRP-139 baseline inspection, consistent with the inservice inspections frequencies called for by MRP-139? Yes

4. If any welds are categorized as H or I, briefly explain the licensee's basis of the categorization and the licensee's plans for addressing potential PWSCC. Not applicable
5. If the licensee is planning to take deviations from the MRP - 139 inservice inspection guidelines, what are the deviations and what are the general bases for the deviations? Was the NEI 03-08 process for filing deviations followed? Not applicable

c. Findings

No findings of significance were identified.

.6 (Closed) NRC Temporary Instruction (TI) 2515/173 Review of the Implementation of the Industry Ground Water Protection Voluntary Initiative

a. Inspection Scope

The inspectors reviewed elements of the licensee's environmental monitoring program to evaluate compliance with the voluntary Groundwater Protection Initiative (GPI) as described in NEI 07-07, Industry Ground Water Protection Initiative – Final Guidance Document, August 2007 (ADAMS Accession Number ML072610036). The inspectors interviewed personnel, performed walk-downs of selected areas, and reviewed the following items:

- Records of the site characterization of geology and hydrology
- Evaluations of systems, structures, and or components that contain or could contain licensed material and evaluations of work practices that involved licensed material for which there is a credible mechanism for the licensed material to reach the groundwater
- Implementation of an onsite groundwater monitoring program to monitor for potential licensed radioactive leakage into groundwater
- Procedures for the decision making process for potential remediation of leaks and spills, including consideration of the long term decommissioning impacts
- Records of leaks and spills recorded, if any, in the licensee's decommissioning files in accordance with 10 CFR 50.75(g)
- Licensee briefings of local and state officials on the licensee's groundwater protection initiative
- Protocols for notification to the local and state officials, and to the NRC regarding detection of leaks and spills
- Protocols and/or procedures for thirty-day reports if an onsite groundwater sample exceeds the criteria in the radiological environmental monitoring program

Enclosure

- Groundwater monitoring results as reported in the annual effluent and/or environmental monitoring report
- Licensee and industry assessments of implementation of the groundwater protection initiative. (Note the NEI audit of GPI implementation was in-progress at the time of the inspection but unavailable for NRC review).

b. Findings

No findings of significance were identified with the licensee's implementation of NEI 07-07. This completes the Region II inspection requirements.

4OA6 Meetings, Including Exit

.1 Exit Meeting

On January 19, the resident inspectors presented the inspection results to Mr. Tom Tynan and other members of his staff, who acknowledged the findings. The inspectors confirmed that proprietary information was not provided or examined during the inspection.

Due to closure of URI 05000424,425/2007007-02, Fire Alarm Computer Replacement Design Change, a re-exit was held with licensee management who acknowledged the finding.

On October 2 and October 7, 2009, the health physics inspectors discussed the results of the onsite inspection with Mr. Tom Tynan, Site Vice President, and other responsible staff.

An exit meeting for the ISI and SGISI portion was conducted on October 2, 2009, with licensee management. All proprietary information used in the course of the inspection was returned to the licensee.

ATTACHMENT: SUPPLEMENTAL INFORMATION

Enclosure

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel:

R. Brigdon, Training Manager
C. Buck, Chemistry Manager
J. Churchwell, ISI Program Coordinator
W. Copeland, Performance Analysis Supervisor
D. Cordes, Senior Nuclear Specialist (Level III)
R. Dedrickson, Plant General Manager
K. Dyar, Security Manager
W. Garrett, Engineer/BACCP Supervisor
M. Hickox, Licensing
I. Kochery, Health Physics Manager
M. Lloyd, Southern Nuclear Environmental Affairs
L. Mansfield, Engineering Support Manager
J. Robinson, Work Control Superintendent
T. Smith, Steam Generator
T. Tynan, Site Vice-President
D. Vineyard, Operations Manager
J. Williams, Site Support Manager
T. Youngblood, Site Engineering Director

NRC personnel:

S. Shaeffer, Chief, Region II Reactor Projects Branch 2
M. Cain, Senior Resident Inspector
T. Chandler, Resident Inspector

LIST OF ITEMS OPENED AND CLOSED

Opened

None

Opened and Closed

05000424,425/2009005-01	NCV	Operation of NSCW System with Tower Return Valves in Open Bypass (Section 4OA5.1)
05000424,425/2009005-01	NCV	Inadequate Surveillance Procedures for TS SR 3.7.8.2 (Section 4OA5.2)
05000425/2009005-03	NCV	Human Performance Error Results in Manual Reactor Trip Section (Section 4OA3.2)
05000424,425/2009005-04	NCV	Failure to properly maintain the approved fire protection program with regard to the relocation of the plant the fire alarm annunciation signal outside of the MCRs (Section 4OA5.3)

Closed

05000424,425/2515/173	TI	Review of the Implementation of the Industry Ground Water Protection Voluntary Initiative (Section 4OA5.1)
05000424,425/2007007-02	URI	Fire Alarm Computer Replacement Design Change (Section 4OA5.3)

LIST OF DOCUMENTS REVIEWED**Section 1R01: Adverse Weather Protection**Procedures

11877-1, Cold Weather Checklist, Rev. 18.1
 11877-2, Cold Weather Checklist, Rev. 17.1

Section 1R04: Equipment AlignmentProcedures

11150-2, Nuclear Service Cooling Water System Alignment, Rev. 23.2
 11610-2, Auxiliary Feedwater System Alignment, Rev. 21.3
 11615-1, Condensate and Feedwater Systems Alignment, Rev. 28
 11615-2, Condensate and Feedwater Systems Alignment, Rev. 19
 13615-1, Condensate and Feedwater Systems, Rev. 73
 13615-2, Condensate and Feedwater Systems, Rev. 63
 26851-C, Main Feedwater Isolation Valve Actuator Maintenance, Rev. 39

Drawings

2X4DB170-1, P&I Diagram Diesel Generator System, Train A System No. 2403, Rev. 38
 2X4DB133-1, P&I Diagram Nuclear Service Cooling Water System, System No. 1202, Rev. 50
 2X4DB134, P&I Diagram Nuclear Service Cooling Water System, System No. 1202, Rev. 31
 2X4DB135-1, P&I Diagram Nuclear Service Cooling Water System, System No. 1202, Rev. 28
 2X4DB135-2, P&I Diagram Nuclear Service Cooling Water System, System No. 1202, Rev. 29
 2X4DB161-1, P&I Diagram, Auxiliary Feedwater System Condensate Storage & Degasifier System, System No. 1302, Rev. 35
 2X4DB161-2, P&I Diagram, Auxiliary Feedwater System, System No. 1302, Rev. 24
 2X4DB168-3, P&I Diagram, Condensate and Feedwater System, System No. 1305, Rev. 35
 1X4DB168-1, 2, 3, P&I Diagram Condensate and Feedwater System, Rev. 29
 AX4AR01-00451, 00452, Bypass Feedwater Isolation Valve Pneumatic Actuator, Rev. 7
 1X6AU05-00006, Main Feedwater Regulating Valve, Rev. 18

Documents

DCP 1039002501, Digital Feedwater Controls Upgrade
 DCP 2039002301, Digital Feedwater Controls Upgrade
 AX6AU05-00064, Main Feedwater Regulating Valve Positioner Manual
 VEGP FSAR Chapter 10, Steam and Power Conversion System, Rev. 15
 VEGP FSAR Chapter 15, Accident Analysis, Rev. 16

System Health Reports

Condensate and Feedwater System 1305 3rd QTR 2009

Condition Reports

2008106905, 2009112409, 2009109099, 2009100908, 2009101006, 2009101594, 2009104205, 2009105234, 2009107618, 2009107798, 2009109316, 2009109678, 2009110504, 2009111865, 2009112068, 2009100454, 2009100938, 2009104251, 2009105991, 2009109518, 2009110141

Section 1R05: Fire ProtectionProcedures

Procedure 92861-1, Zone 161 – Diesel Generator Building Fire Fighting Preplan
 Procedure 92862-1, Zone 162 – Diesel Generator Building Fire Fighting Preplan
 Procedure 92863-1, Zone 162 – Diesel Generator Building Train A Diesel Fuel Oil Day Tank Fire Fighting Preplan

Section 1R06: Internal FloodingDocuments

X6CXC-28, Flooding Analysis – Auxiliary Building Level "A", Rev. 11
 X6CXC-30, Flooding Analysis – Auxiliary Building Level "B", Rev. 9

Condition Reports

2009111632, 2009111634, 2009112498

Work Orders

1091632101

Drawings

AX1D08A05-2, Auxiliary Building Floor Plan Elevation 195 FT – 0 in Level A, Rev. 11.0
 AX1D08A04-4, Auxiliary Building Floor Plan Elevation 170 FT – 6 in Level B, Rev. 6.0

Section 1R07: Heat Sink PerformanceDocuments

RER 2081821601, CCW Heat Exchanger 2120E04001 Fouling Factor Evaluation

Procedures

Procedure 88305-C, Heat Exchanger Testing/Maintenance Program, Rev. 7.5
 Procedure 88306-C, CCW and ACCW Heat Exchanger Testing, Rev. 7.3

Work Orders

2041038901

Section 1R08: Inservice Inspection (ISI) ActivitiesProcedures

VEGP-ISI-ALT-01, Version 1.0, Proposed Alternative in Accordance With 10 CFR 50.55a(a)(3)(i)
 Southern Nuclear Operating Company Boric Acid Corrosion Control Program Version 6.0
 Vogtle Electric Generating Plant Boric Acid Corrosion Control Rev. 6.1
 Vogtle Electric Generating Plant Containment General Leak Inspection Rev. 2.1

Vogtle Electric Generating Plant RCS Leakage Inspection (Inservice Test) Rev. 7.2
 Vogtle Electric Generating Plant Corrosion Assessment Rev. 7.2

Calculations

None

Corrective Action Documents (CR)

CR 2008104461 dated 04/14/2008

CR 2009102713 dated 03/19/2009

CR 2008105139 dated 04/30/2008

CR 2008105490 dated 5/9/2008

CR 2008104908 dated 4/23/2008

CR 2008105490 dated 5/9/2008

Other

NDE Examiner Certification Review for Byron H. Harmon dated 9/17/09

NDE Examiner Certification Review for Todd P. Blechinger dated 9/21/09

NDE Examiner Certification Review for Arlen W. Jensen dated 9/21/09

NDE Examiner Certification Review for Jonathan Washburn dated 9/16/09

NDE Examiner Certification Review for Timothy M. Coburn dated 9/17/09

UT Calibration Examination Sheet for HELB/MS Butt dated 9/29/09

UT Calibration Examination Sheet for N-3 Pressurizer Nozzle Overlay dated 9/26/09

Thermometer Certification Cert No: 10910 for Surface Thermometer P.O. No: S85730 dated 7/30/09

UT Instrument Calibration Data Record and Certification Serial Number 01R5NW dated 8/24/2009

Corrosion Assessment 1201-2009-001 Rev 1

Corrosion Assessment 1212-2008-001

Section 1R12: Maintenance EffectivenessEngineering DocumentsSystem Health Report for the Nuclear Service Cooling Water System, 3rd quarter 2009

Prompt Determination of Operability # 2-09-003

Engineering Maintenance Rule Implementation A1 SSC Classification/Monthly Status Report, Nuclear Service Cooling Water System SSC #1202, December 2009

System Health Report for the Condensate and Feedwater System, 3rd quarter 2009

A1 SSC Classification/ Monthly Status Report for SSC 1305-1, Condensate and Feedwater System for report period: 10/09

Proceduralized Temp Mod, T-ENG-2009-04, MFRV Potentiometer Test, Rev. 1.0

Procedures

Procedure 22412-C, Replacement of Feedback Units on Main Feedwater Regulating Valves, Rev. 6

Section 1R15: Operability EvaluationsCondition Reports:

2009105723, 2009112319, 2009112378

Other

Engine Systems, Inc. "Woodward PGPL Actuator with Remote Servo P/N 5296-044 & P/N 9903-539

Westinghouse letter LTR-SEE-III-08-167, Rev. 5, Vogtle Units 1 and 2 Pump Suction Criteria for Gas Accumulation Locations, dated October 9, 2009

Work Orders:

1090978501, 1092044101, 2092044001

Section 1R18: Plant Modifications

Condition Reports

Section 1R19: Post Maintenance Testing

Procedures

29140-C, Work Order Functional Tests, Rev. 28

14802B-2, Train B NSCW Pump / Check Valve IST and Response Time Test, Rev. 3

29410-C, Smok-Chek V Automatic Fire door Inspection, Rev. 7.1

Section 1R20: Refueling and Other Outage Activities

Procedures

12005-C, Reactor Shutdown to Hot Standby (Mode 2 to Mode 3)

12006-C, Unit Cooldown to Cold Shutdown

12007-C, Refueling Operations

12001-C, Unit Heatup to Hot Shutdown

12002-C, Unit Heatup to Normal Operating Temperature

12003-C, Reactor Startup (Mode 3 to Mode 2)

14900-C, Containment Exit Inspection

Section 1R22: Surveillance Testing

Procedures

14350-1, Containment Penetration No. 50 CVCS Charging Local Leak Rate Test, Rev. 8

14980B-2, Diesel Generator 2B Operability Test, Rev. 22

Drawings

1X4DB114, P&I Diagram Chemical & Volume Control System, System No. 1208, Rev. 40

1X4DB116-1, P&I Diagram Chemical & Volume Control System, System No. 1208, Rev. 49

Section 2OS1: Access Control To Radiologically Significant Areas

Procedures, Guidance Documents, and Manuals

43005-C, Establishing and Posting Radiation Controlled Areas and High Radiation Area Access Control, Rev. 36.1

43000-C, Radiation and Contamination Surveys, Rev. 32.1

43018-C, Radiological Controls for Diving Operations, Rev. 2.1

NMP-HP-004, Skin Dose Assessment, Ver. 2.0

NMP-HP-005, Alpha Radiation Monitoring, Ver. 2.0

NPM-GM-002, Corrective Action Program, Version 8.0

Records and Data

Radiography Plan for Letdown Flow Orifices in the Unit 1 Containment Bldg 184' el Col 7/8

RWP 09-1301, Install/Remove Nozzle Dams on U1 S/Gs and All Associated Work, Rev. 0

RWP 09-1302, Eddy Current Testing on U1 S/Gs to Include Equipment Set-up and Removal, Rev. 0

RWP 09-0110, Changeout Reactor Coolant Filters, Rev. 0
 RWP 09-1611, CVCS Letdown Flow Orifice Piping Modification and All Associated Work, Rev. 2
 RWP 09-1613, Radiography in U1 Containment 184' el on Letdown Flow Orifice Piping, Rev. 0
 Radiological Survey 120472, Reactor Head West Side
 Radiological Survey 120164, S/G 1 Channel Head Cold Leg
 Radiological Survey 119897, S/G Manway Platform #1
 Radiological Survey 120380, S/G Manway Platform #4
 Radiological Survey 120236, U1 Containment 184' el Letdown Orifices
 Radiological Survey 118289, Valve Gallery CVCS Mixed Bed Demin
 Radiological Survey 119795, U2 D Level Filter Pits
 Air Sample Record 09-0978, Welding of Letdown Flow Orifices
 Personnel Contamination Event 265 and 276, Investigation Surveys and Dose Assessment Records
 DOP testing records for HEPA units HV-2000-02 and HV-2000-03, 4/30/09
 U1 Spent Fuel Pool Inventory Log

CAP Documents

V-HP-2009, Fleet Oversight Audit of Health Physics
 CR 2009109807, Worker pulled center out of shield plug over wrong filter pit
 CR 2009109270, Worker briefly entered RCA without ED
 CR 2008111157, New PCs degrade easily
 CR 2008113200, Workers not logging off RWPs
 CR 2008113275, Need better temporary storage of high rad trash
 CR 2009109328, Contamination found on worker during inspection of letdown flow orifices

Section 40A1: Performance Indicator (PI) Verification

Condition Reports:

2008112290, 2008112783, 2009100496, 2009100565, 2009100566, 2009100720, 2009100843,
 2009100851, 2009100946, 2009101082, 2009101091, 2009101196, 2009101258, 2009101559,
 2009101891, 2009102079, 2009102149, 2009102898, 2009103632, 2009104074, 2009104897,
 2009105100, 2009105105, 2009106050, 2009108424, 2009108594, 2009108930, 2009109322,
 2009110057, 2009110257, 2009111056, 2009111850, 2009112268_

Documents:

LER 2009-001, Vogtle Electric Generating Plant Unit 1, Ultimate Heat Sink Inoperable Longer Than Allowed by Technical Specifications
 MSPI Cooling Water System Unavailability Index, Unit 1, MSPI Derivation Report, September 2009
 MSPI Cooling Water System Unreliability Index, Unit 1, MSPI Derivation Report, September 2009
 MSPI Cooling Water System Unavailability Index, Unit 2, MSPI Derivation Report, September 2009
 MSPI Cooling Water System Unreliability Index, Unit 2, MSPI Derivation Report, September 2009
 MSPI Emergency AC Power System Unavailability Index, Unit 1, MSPI Derivation Report, September 2009
 MSPI Emergency AC Power System Unreliability Index, Unit 1, MSPI Derivation Report, September 2009
 MSPI Emergency AC Power System Unavailability Index, Unit 2, MSPI Derivation Report, September 2009

MSPI Emergency AC Power System Unreliability Index, Unit 2, MSPI Derivation Report, September 2009
 CR 2009107711, LHRA in Alternate Radwaste Building may need more robust barriers
 CR 2009105258, Ladder found near LHRA wall

System Health Reports:

Component Cooling Water System 3rd Quarter 2009
 Emergency Diesel Generator Systems 3rd Quarter 2009
 Nuclear Service Cooling Water System 3rd Quarter 2009

Procedures

45016-C, Investigation, Evaluation and Management of Damaged, Lost, Malfunctioning, or Alarming Dosimetry, Rev. 8.1
 00163-C, NRC Performance Indicator and Monthly Operating Report Preparation and Submittal, Rev. 14

Records and Data Reviewed

Access Control Alarms Report 9/29/08 – 9/29/09

Section 40A2: Identification and Resolution of Problems

Procedures/Calculations/Engineering Documents

10025-C Rev. 3.0, Work Around Program

Work Orders:

WO 1092065501, 1PV-4176 suction valve failed to open on suction
 WO 2092204901, LZIP 2S32 and Zone 57A have an active trouble alarm
 WO 2092203701, Unit 2 NSCW tower B level control valve 2LV-16
 WO 2091969402, Remove/reinstall door 22111L1B17 for eng inspection
 WO 2081728201, 2HV-8096A is leaking based on testing
 WO 1081055101, Unit 1 SMSVR has to be trained due to ARV seat leakage
 WO 2081055001, Unit 2 SMSVR has to be trained due to ARV seat leakage
 WO A080397101, River water blowdown sump flow excessive drift
 WO 1060792801, Demin pre-coat tank return valve and actuator
 WO 2092000001, Failed red light on hand switch for Unit 2 NSCW train A fan#1
 WO 1091971401, 5B FWH hi/lo annunciator ALB18-D04 is in solid
 WO 1091798901, 5B FWH hi/lo annunciator ALB18-D04 is alarming intermittently
 WO 1091736501, 1B RHR Hx outlet flow 1FIC619A potentiometer counter failed
 WO 2091717000, ALB16E05 TDAFW Main Steam Drain Trouble
 WO 1091686101, 1LSH9133 Turb Bldg Mixed Bed Demin leak detection
 WO 1091682101, QPCP ALB 62-F01 MFPT Lo Press Steamline Drn Hi Level
 WO 2091606801, 2RE—019 Taken out of service for spiking into Hi EOOS
 WO 2090947601, RPU A3 A/D input card failed
 WO 2090886101, 2HV6799 TPCW Pmp 2 Discharge MOV indication
 WO 2090065101, Found 2RE-12444C detector tube environmental seal broken
 WO 1082079801, Center pot light is not lit on QEAB for 1NB10.1
 WO 2082000901, ALB16 A03 MFW Loop 1 Isl Vlv Hyd Hi Press
 WO 1080722501, 1ZI-13005 is acting erratically

Condition Reports:

2009112239, 2009112626, 2009112597, 2009111199, 2008111483, 2008101502,
 2008101130, 2008102399, 2008103694, 2006104878, 2009111736, 2009111293,
 2009110885, 2009110396, 2009110117, 2009109731, 2009109634, 2009108963,
 2009104966, 2009100357, 2008113459, 2008113234, 2007112297, 2009111865

Section 4OA3: Event FollowupCondition Reports:

2009112145, 2009112234, 2009112703, 2009112704, 2009112705, 2009112706,
 2009112707,

Documents:

VEGP Unit 1 Sequence of Events Log 12/07/2009
 VEGP Unit 2 Sequence of Events Log 12/23/2009
 Unit 2 Operator Logs, 12/23/2009

Section 4OA5: Other ActivitiesTemporary Instruction 2515/173 – Review of the Implementation of the Industry Ground Water Protection Voluntary Initiative

Offsite Dose Calculation Manual, Ver. 25
 NMP-EN-002, Actions for Potential Groundwater Contamination Events, Ver. 2.0
 NMP-ES-036-001, Buried Pipe and Tanks Monitoring Program Implementation, Ver. 1.0
 Groundwater Monitoring Plan for Radionuclides, April 2007
 Groundwater Monitoring Plan for Radionuclides, May 2009
 Monitoring Well Sample Results, 4th quarter 2007 – 1st quarter 2009
 10 CFR 50.75(g) Leak/Spill Decommissioning Record
 11881-2, Auxiliary Building Rounds Sheets, Rev. 51.2
 Reptask ID A2109SFUELHA, SFP liner plate leakage inspection
 Central Savannah River Area-Radiological Environmental Monitoring Programs, Tentative Agenda for March 4-5, 2008
 C-1460116-01, Calculation of Tritium Deposition at the Vogtle Electric Generating Plant, 3/13/08
 AI 2008201119, Establish audit frequencies for groundwater monitoring programs
 AI 2008201146, Update FSAR to include groundwater monitoring program
 CFO-2009-059, Audit of Georgia Power Company Environmental Laboratory
 Southern Nuclear Fleet Focused Groundwater Self Assessment, 8/5/08 – 8/6/08
 Condition Report 2007110797, Time delay in notification to control room operators of fire conditions was not adequately evaluated, dated 10/17/2007
 Fire Brigade Drill Records for five announced and unannounced drills conducted during the period December 2006 and October 2007
 IEEE Standard 383-1974, IEEE Standard for Type Test of Class IE Electric Cables, Field Splices, and Connections for Nuclear Power Generating Stations, Section 2.5, Flame Tests

Other Records

Security logs