



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

REGION II  
SAM NUNN ATLANTA FEDERAL CENTER  
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ATLANTA, GEORGIA 30303-8931

March 16, 2007

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

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT - NRC PROBLEM  
IDENTIFICATION & RESOLUTION INSPECTION REPORT 05000424/2007007  
AND 05000425/2007007

Dear Mr. Tynan:

On February 16, 2007, the U. S. Nuclear Regulatory Commission (NRC) completed an inspection at your Vogtle Electric Generating Plant, Units 1 and 2. The enclosed inspection report documents the inspection results, which were discussed on February 16, 2007, with you and other members of your staff during the exit meeting.

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

Based on the sample selected for review, no findings of significance were identified. The team concluded that problems were properly identified, evaluated, and resolved within the problem identification and resolution programs. However, minor examples of issues not being entered into the corrective action program or entered into programs outside of the corrective action program, narrowly focused condition report effectiveness reviews, corrective actions that were ineffectively tracked or were not implemented in a timely manner, and weaknesses in the trending of issues entered into the corrective action program were identified. It was recognized that management has placed additional attention on the corrective action program and has initiated actions to improve performance in this area since late 2006.

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

(ADAMS). ADAMS is accessible from the NRC Web site at [www.nrc.gov/reading-rm/adams.html](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, NPF-81

Enclosure: Inspection Report 05000424/2007007 and 05000425/2007007  
Attachment: Supplemental Information

cc w/encl: (See page 3)

(ADAMS). ADAMS is accessible from the NRC Web site at [www.nrc.gov/reading-rm/adams.html](http://www.nrc.gov/reading-rm/adams.html) (the Public Electronic Reading Room).

Sincerely,

**/RA/**

Scott M. Shaeffer, Chief  
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Letter to T. E. Tynan from Scott M. Shaeffer dated March 16, 2007

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT - NRC PROBLEM IDENTIFICATION  
& RESOLUTION INSPECTION REPORT 05000424/2007007 AND  
05000425/2007007

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**U. S. NUCLEAR REGULATORY COMMISSION**

**REGION II**

Docket Nos: 50-424, 50-425

License Nos: NPF-68, NPF-81

Report No: 05000424/2007007, 05000425/2007007

Licensee: Southern Nuclear Operating Company, Inc.

Facility: Vogtle Electric Generating Plant, Units 1 and 2

Location: Waynesboro, GA

Dates: January 29 - February 2, 2007  
February 12 - 16, 2007

Inspectors: A. Sabisch, Senior Resident Inspector, Catawba Nuclear Station  
G. McCoy, Senior Resident Inspector, Vogtle  
J. Rivera-Ortiz, Reactor Inspector

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

Enclosure

## SUMMARY OF FINDINGS

IR 05000424/2007-007, 05000425/2007-007; 1/29/2007-2/16/2007; Vogtle Electric Generating Plant, Units 1 and 2; Identification and Resolution of Problems.

The inspection was conducted by two senior resident inspectors and a reactor inspector. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

### Identification and Resolution of Problems Summary

No findings of significance were identified. The licensee was generally effective in identifying problems at a low threshold and entering them into the corrective action program. The licensee properly prioritized issues entered into the corrective action program (CAP) and routinely performed evaluations that were technically accurate and of sufficient depth to address the issue documented in the condition reports (CRs). Station management has recently been providing increased focus and attention on the quality of root cause and apparent cause determinations based on the results of internal self assessments. Improvements were noted in the documents produced over the past quarter. Operating experience was found to be used both proactively and reactively by personnel involved in the corrective action program. The licensee's programmatic self-assessments and audits were generally effective in identifying weaknesses in the corrective action program. Weaknesses in the performance of required effectiveness reviews by the department(s) responsible for specific CRs were identified by the inspectors which have the potential to allow similar events to occur at the station by not ensuring corrective action deficiencies are identified and corrected. The inspectors concluded that the workers at Vogtle felt free to report safety concerns.

Enclosure

## REPORT DETAILS

### 4. OTHER ACTIVITIES

#### 4OA2 Problem Identification and Resolution

##### a. Assessment of the Corrective Action Program Effectiveness

###### (1) Inspection Scope

The inspectors reviewed procedures associated with the CAP which described the administrative process for identifying, evaluating and resolving problems via CRs. The inspectors reviewed selected CR's from the approximately 26,250 that had been issued between January 2005 and December 2006. The inspectors also reviewed NRC reports that documented NRC inspections over the last two years to assess how the licensee addressed findings documented in these reports. Corrective action documents associated with Licensee Event Reports (LERs) were also reviewed to ensure the actions contained in the LERs were appropriate, comprehensive in nature, and had been implemented.

The inspectors conducted a detailed review of Nuclear Service Cooling Water (NSCW), Component Cooling Water (CCW), Chemical Volume & Control System (CVCS), and the Diesel Generators (DGs), to verify that problems were being properly identified, appropriately characterized, and processed in accordance with the licensee's established CAP procedures. These systems were selected based on risk insights from the licensee's probabilistic risk analysis. For these systems and associated components, the inspectors reviewed CR's, system health reports, the maintenance work history, and open Work Orders (WOs). The inspectors conducted plant walkdowns of these systems to assess the material condition and to determine if any identified deficiencies had not been entered into the CAP. The inspectors reviewed selected industry and NRC operating experience items associated with plant systems and components to verify that these were appropriately evaluated for applicability and that issues identified were entered into the CAP.

The inspectors reviewed licensee audits and self-assessments, including those which focused on problem identification and resolution programs and processes, to verify that findings were entered into the CAP and to verify that these audits and assessments were consistent with the NRC's assessment of the licensee's CAP. The inspectors attended selected daily Management Review Meetings and Corrective Action Program Coordinator (CAPCO) CR screening meetings to observe management and oversight functions of the CAP. The inspectors attended a Corrective Action Review Board (CARB) meeting and reviewed the 2006 CARB meeting minutes to assess how effective the oversight provided by the CARB has been.

The inspectors also held discussions with various personnel to evaluate their threshold for identifying issues and entering them into the CAP. Documents reviewed are listed in the Attachment.

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## (2) Assessment

Effectiveness of Problems Identification. The inspectors determined that the licensee was generally effective at identifying problems and entering them into the CAP. The threshold for initiating CR's was low and employees were encouraged to initiate CRs for plant issues. Equipment performance issues were being identified and entered into the CAP for monitoring, follow-up, and resolution. Some minor issues, identified during the system walkdowns, had not been captured in the CAP including small oil leaks, minor boric acid buildup on components, housekeeping issues, and unofficial markings on plant components. Over the past few years, station management has enhanced their expectations related to the identification and reporting of equipment issues and communicated these expectations to plant personnel. Improved performance in this area was noted over the two-year inspection period based on a review of the CR database and interviews with station personnel and the Vogtle resident inspectors.

Effectiveness of Prioritization and Evaluation of Issues. The inspectors determined that the licensee had adequately prioritized issues entered into the CAP. Generally, the licensee performed evaluations that were technically accurate and of sufficient depth to ensure the issue was understood and appropriate corrective actions developed to prevent recurrence.

The station conducts trending on condition reports based on event codes assigned during the daily CAPCO meeting and generates quarterly trend reports. For consistency, a limited number of department CAPCO's were used to assign the event codes. The identification of trends was based on an automated screening process. When a threshold was reached, the resulting graphs and tables were sent to individual departments to review and they, in turn, provided issue summaries for inclusion into the quarterly CAP trend report. While these reports receive wide-spread distribution, internal and external assessments of the CAP have determined that they have been less than effective in providing station management with the tools necessary to focus attention on specific performance weaknesses. This was confirmed by the team through interviews and reviewing past trend reports. As a result of these licensee assessments, enhancements in the process for identification of trends and development of management reports were being developed by the station. Interviews with department CAPCO's revealed that informal "knowledge trending" was routinely performed when a CAPCO recognizes an issue as having occurred previously. Trend CRs have been initiated based on this informal process. Cause codes assigned to CR's following completion of Root Cause and Corrective Action Analysis (RCCA), Apparent Cause Determination (ACD), or Basic Cause Determination (BCD) have not been used for trending purposes due to the perceived limited population size. However, due to identified weaknesses in the station's trending program, this data was being evaluated for inclusion in a semi-annual consolidated Plant Performance Report which was under development.

The inspectors determined that the station conducted an adequate number of formal cause determinations based on the overall number and significance of issues entered into the CAP. The cause determinations were consistent with established CAP

procedures based on the number of Severity Level 1 (one), Severity Level 2 (46), and Severity Level 3 (392) CR's initiated between January 2005 and December 2006. The processes used ranged from the most formal tool, the RCCA, to less rigorous methods such as an ACD or a BCD. In 2006, the station performed approximately 325 cause determinations.

While most of the cause determinations reviewed were detailed and thorough, a few examples of weak or less than fully effective causal analyses were identified resulting in similar events occurring after the initial event had been evaluated. The following are examples noted by the inspectors.

- CRs 2005100664 and 2006101010 both described a jacket water pressure instrument on the 2A diesel generator, 2PI-19172, which indicated outside of normal operable range. In each case, the licensee used other alternative indications in order to demonstrate the operability of the system. Also, in each case the licensee wrote a work order to check the calibration of the instrument. Each time the instrument calibration was checked, the calibration was found to be satisfactory, and the work order and the condition reports closed with no further action taken. Discussions with the system engineer indicated that this instrument had a tendency to drift in and out of tolerance, and that it was intended to have the instrument replaced. There is no open work order or formal tracking document which commits to the replacement of 2PI-19172.
- CR 2005107840 documented a Train B CCW pump trip during the implementation of a design change in 2B Safety Features Sequencer System, which involved manipulation of conductors associated with CCW-2 pump. The cause of the pump trip was not specifically determined in the CR; however, based on NRC inspectors' discussions with plant staff, it was attributed to inadequate evaluation of clearances. The licensee generated corrective actions to review, in part, scheduled plant modifications to prevent recurrence of this event. As part of the completion of two corrective actions, the licensee took credit for corrective actions completed for CR 2005102185, which documented a previous event where a cable was found energized during work in an Auxiliary Feed Water Turbine Control Panel. The cause of the previous event was attributed to inadequate tag-out preparation and inadequate evaluation of cables that had to be de-energized. Even though the corrective actions for the previous event were completed at the time of the CCW pump trip, they were less than fully effective to correct deficiencies in the design change process regarding the evaluation of clearances that could impact personnel safety and plant operating equipment.

The station generates a monthly CAP performance indicator overview containing statistics on overdue action items, action item extensions, CR age, and an overall CAP composite program assessment which was provided to station management to ensure the appropriate level of attention was maintained on the CAP. In general, the licensee identified and implemented corrective actions in a timely manner; however, in the following instance, the licensee had been slow in completing corrective actions and the reasons were not documented in the CR.

- CR 2005102333 was written to evaluate information provided by Westinghouse which indicated there may be non-conservatism in the P-14 nominal trip setpoint. Once identified and verified, the licensee followed the guidance of NRC Administrative Letter (AL) 98-10 and established the administrative controls necessary to change the P-14 setpoint to the proper level. This change was on both units. It is also an expectation of AL 98-10 that, following the imposition of administrative controls, an amendment to the TS, with appropriate justification and schedule, will be submitted in a timely fashion. The issue of instrument setpoints in technical specifications was a topic of discussion between the industry and the NRC in TSTF-493. Discussions with the licensee indicated that they were withholding this change pending resolution of these discussions. The inspectors discussed this issue with NRC staff and it was determined that this topic was expected to be resolved by the end of 2007 and it was reasonable for the licensee to wait for the resolution to develop the change to their technical specifications.

Effectiveness of Corrective Actions. The team found, generally, that corrective actions developed and implemented for problems were appropriate in scope and commensurate with the safety significance of the issues.

The fleet CAP (NMP-GM-002) required that effectiveness reviews be performed on all Severity Level 1 and 2 CRs and selected Severity Level 3 CRs. Effectiveness reviews were intended to determine if corrective actions taken were effective by ensuring the causes identified in the CR have been corrected, there has been no recurrence of the same or similar event, and the corrective actions had been adequately challenged. A review of all Severity Level 1 and 2 CRs issued over the period reviewed identified that this was not being implemented consistently with approximately 35% of the affected CR's missing effectiveness reviews as an action item. Following discussions with the licensee, this deficiency was entered into the CAP and an immediate corrective action was developed to initiate action items to conduct effectiveness reviews on the affected CR's.

In addition, a review of completed effectiveness reviews determined that many of the reviews were narrowly focused and only looked for the recurrence of the identical issue or problem that had resulted in the original CR being initiated which does not meet the expectations contained in NMP-GM-002-001. The following are examples noted by the inspectors.

- CR 2005103989 documents the June 2, 2005, event in which both trains of the Unit 2 solid state protection system were placed in "input error inhibit" which rendered the High Flux Alarm at Shutdown circuit inoperable when it was required by TS. While the corrective actions developed were comprehensive, the effectiveness review stated that the actions prevented the same or similar event based on the fact that "...between the two units, there have been five instances of entering Mode 5 without rendering the High Flux Alarm at Shutdown circuit inoperable." The root cause identified contributors as the operator's "can-do" mindset and the willingness to use procedures that did not cover the activity being performed; however, the actions taken to address these human performance issues were not assessed in the

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effectiveness review.

- CR 2005102333 documents the Hi-Hi steam generator water level setpoint calculation error that was identified in 2005. The root cause analysis identified weaknesses in TS setpoint basis control; however, this was not assessed as part of the effectiveness review.
- CR 2005102460 documents damage to the Unit 1 steam generator manways during the 2005 refueling outage. The root cause analysis identified inadequate pre-job briefings, procedure quality, lack of physical barriers to protect the seating surface, and insufficient oversight of the work as causal factors; however, the effectiveness review only states that "...during the subsequent refueling outage no similar issue was encountered or documented with respect to steam generator manway removal, inspection and installation."

(3) Findings

No findings of significance were identified.

b. Assessment of the Use of Operating Experience (OE)

(1) Inspection Scope

The team interviewed station personnel, attended selected daily Management Review Meetings and CAPCO CR screening meetings, and evaluated CAP documentation to determine if OE was being used effectively. In addition, the inspectors reviewed the licensee's evaluation of selected Southern Nuclear Operating Company and industry operating experience information, including CR's from Farley and Hatch, INPO OE, NRC Regulatory Information Summaries (RIS) and Information Notices (IN), and generic vendor notifications to verify that issues applicable to Vogtle were appropriately addressed. Procedure NMP-GM-008, Operating Experience Program, was reviewed to verify that the requirements delineated in the program were being implemented at the station. NMP-GM-002-GL03, Cause Determination Guideline, was reviewed to verify that guidance was provided for reviewing internal and external operating experience when evaluating issues in the corrective action program, with more detailed guidance provided when conducting broadness reviews on more significant issues. Documents reviewed are listed in the Attachment.

(2) Assessment

The inspectors determined that OE was regularly used proactively to prevent events from occurring and to address events or near-misses. Station personnel routinely used an automated screening tool which filters OE reports received from INPO on a daily basis and sends relevant information to individuals, using specific filter criteria, as an e-mail attachment. OE was regularly included in System Health Reports and CRs associated with station events as part of the causal investigations and corrective action development process.

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Industry OE was processed at either the corporate or plant level depending on the source and type of the document. Relevant information was then forwarded to the applicable department for further action or informational purposes. Any documents requiring action were entered into the CAP for tracking and closure.

The inspectors did note that the Vendor Technical Information Program within the licensee's OE program may warrant additional focus. Information was readily distributed to the three stations from the corporate program administrator once processed in Birmingham. However, the conduit to extract relevant information when reviewing plant issues that may subsequently occur was not well-defined or used by station personnel.

(3) Findings

No findings of significance were identified.

c. Assessment of Self-Assessments and Audits

(1) Inspection Scope

The inspectors reviewed completed self assessments and audits conducted by station and corporate organizations to assess the thoroughness of the actions items that resulted from these activities and these action items were appropriately prioritized and entered into the CAP. The inspectors verified that the self assessments and audits were consistent with the NRC's assessment of the CAP and supporting programs. Documents reviewed are listed in the Attachment.

(2) Assessment

The inspectors determined that the scopes of assessments and audits conducted over the review period were adequate and were self-critical in nature. Corrective actions were incorporated into the CAP and were being tracked to completion. Updates on the status of these action items were provided to station management at department and site-level CARB meetings. The inspectors determined that the licensee had adequately prioritized issues identified by these assessments and audits in the CAP.

(3) Findings

No findings of significance were identified.

d. Assessment of Safety-Conscious Work Environment

(1) Inspection Scope

The inspectors interviewed members of the plant staff to develop a general perspective of the safety-conscious work environment and to determine if any conditions existed that would cause employees to be reluctant to raise safety concerns. The inspectors reviewed the licensee's Employee Concerns Program (ECP) which provides an alternate

method to the CAP for employees to raise concerns and remain anonymous if so desired. The inspectors interviewed both the ECP Corporate Program Manager and the Plant Hatch ECP Coordinator (due to the unavailability of the Vogtle ECP Coordinator), and reviewed ECP documents to verify that concerns were being identified, properly reviewed and resolved. ECP documents reviewed are listed in the Attachment.

(2) Assessment

Based on the interviews held with plant staff, reviews of CRs and selected Employee Concern packages, ECP metrics, and an assessment of the implementation of the licensee's ECP, the inspectors concluded that personnel were willing to promptly identify and report problems using available administrative programs.

(3) Findings

No findings of significance were identified.

4OA3 Event Follow-up

- .1 (Closed) LER 05000425/2006-003; Unit 2 Reactor Coolant Pump #4 Tripped Resulting in an Automatic Reactor Trip. On August 27, 2006, the Unit 2 reactor tripped automatically from 100 percent power following the unexpected trip of the Loop #4 reactor coolant pump (RCP) and subsequent Reactor Protection System actuation on low reactor coolant system flow. The plant response following the reactor trip was as designed with no equipment or operational concerns identified. The cause of the event was attributed to deficiencies in a design change package that added surge protection to several large frame motors at Vogtle including the RCP motors. The package deficiencies included specifying the incorrect type of cable for the RCP motors, failure to provide detailed instructions for the installation of the modification in each type of motor, and not containing cable spacing criteria in the design change package for any of the cable / motor combinations. Prior to restarting Unit 2, the RCPs that had received the surge protection modification were inspected and the modification was verified to be properly installed. The Unit 1 RCPs affected by this modification were inspected during the fall 2006 refueling outage. This issue was previously identified as FIN 05000425/2006004. This LER was in the licensee's CAP as CR 2006109233. The inspectors reviewed the LER, the condition report, and associated action items. No additional findings of significance were identified.
- .2 (Closed) LER 05000424, 425/2005-002; Inaccurate Steam Generator Water Level Setpoint due to Design Calculation Errors: On April 4, 2005, the licensee was informed by the Nuclear Steam Supply System vendor that the steam generator high-high water level protection setpoints (P-14) were inadequate to ensure main feedwater isolation during a design basis event. In accordance with the guidance of NRC Administrative Letter (AL) 98-10, Dispositioning of Technical Specifications That Are Insufficient to Assure Plant Safety, the licensee immediately initiated administrative controls to reduce the steam generator high-high water level protection setpoints to the level necessary to ensure plant protection during a design basis event. A modification was developed and

installed which changed the applicable setpoints on both units. The industry and the NRC are addressing issues associated with setpoints and allowable value calculation methodologies as specified in ISA S67.04. A technical specification change will be submitted to the NRC when this issue has been addressed. The inspectors reviewed the LER, the associated condition reports, and action items. No findings of significance were identified.

- .3 (Closed) LER 05000425/2005-003; Reactor Coolant System Leakage Leads to Shutdown Required by Technical Specifications: On December 9, 2005, Unit 2 was placed in Mode 3 due to pressure boundary leakage from the Reactor Coolant System (RCS) loop side of the ¾-inch bypass line around valve 2VH-8701B, the residual heat removal (RHR) train A suction isolation valve. Based on the information known at that time, the cause of the leakage was attributed to a lack of fusion when the weld was installed in October 2002. The weld defect was found to be a circumferential linear flaw, approximately ¼ to ½ inch long located approximately 1/8 inch from the toe of the weld. The defective weld was ground out, replaced and examined. The unit was returned to full power operation on December 18, 2005. This LER was in the licensee's CAP as CR 2005111460. The inspectors reviewed the LER, the condition report and associated action items. No findings of significance were identified.
- .4 (Closed) LER 05000425/2005-002; Instrument Setpoint Drift Leads to Operation of the Unit in a Condition Prohibited by Technical Specifications: On February 26, 2005, the licensee identified that the output of the reactor coolant system loop 2 overtemperature delta-T (OTDT) instrument channel 2T-421 was drifting. The instrument was repaired and returned to service. On February 28, 2005, the instrument drifted again. Troubleshooting identified that the cause was a component failure which had existed on February 26, but had not been identified during troubleshooting post-maintenance testing. The failure to promptly identify and repair this instrument was cited as non-cited violation 05000425/2005003-01, Failure to Take Adequate Corrective Actions to Preclude Repetitive Failure of Unit 2 Channel 2 OTDT Instrument. Licensee evaluation determined that this channel's signal had drifted outside of the Technical Specifications allowable value longer than allowed by the action requirements. The inspectors reviewed the LER, the associated condition reports, and action items. No additional findings of significance were identified.
- .5 (Closed) LER 05000424, 425/2006-002; Three Technical Specification Instruments Were Determined to be in a Condition Which Was Prohibited by Technical Specifications: During the week of June 6, 2005, the licensee identified a potential problem with certain Rosemount transmitters. If the transmitter was installed improperly, there was a chance that a neck seal was damaged which may allow moisture to enter the casing and inhibit the safe operation of the transmitter during accident conditions. The licensee identified a transmitter with a potentially damaged neck seal in December, 2005. The licensee did not immediately search for additional damaged transmitters. In July, 2006 the licensee identified additional transmitters in risk-significant applications with potentially damaged seals. The failure to promptly identify and correct this issue was previously identified as NCV 5000424/2006004-01. The inspectors reviewed the LER, the associated condition reports, and action items. No additional findings of

significance were identified.

4OA6 Management Meetings

On February 16, 2007, the inspectors presented the inspection results to Mr. Tom Tynan, Vice President - Vogtle, and other members of his staff who acknowledged the findings. The inspectors asked the licensee if any of the material examined during the inspection should be considered proprietary. No proprietary information was identified.

## SUPPLEMENTARY INFORMATION

### KEY POINTS OF CONTACT

#### Licensee Personnel

J. Acree; Operations Shift Supervisor  
W. Atkins; Nuclear Supply Chain  
T. Beckworth; Plant Hatch Employee Concerns Coordinator  
L. Blair, Performance Analysis Specialist  
W. Copeland; Performance Analysis Supervisor  
C. Duncan; Systems Engineering  
C. Eckert, Work Controls  
M. Hickox; NSCW System Engineer  
P. Hurst; Concerns Program Manager  
T. Mattson; Performance Analysis  
A. Rickman, Vogtle SEE-IN Coordinator  
M. Sharma; Performance Analysis Specialist  
R. Shepherd, Nuclear Network Coordinator  
K. Stokes; DG System Engineer  
T. Tynan, Vice President - Vogtle

#### NRC Personnel

S. Shaeffer, Chief, Reactor Projects Branch 2

### LIST OF ITEMS CLOSED

05000425/2006-003	LER	Unit 2 Reactor Coolant Pump #4 Tripped Resulting in an Automatic Reactor Trip (Section 4OA3.1)
05000424, 425/2005-002	LER	Inaccurate Steam Generator Water Level Setpoint due to Design Calculation Errors (Section 4OA3.2)
05000425/2005-003	LER	Reactor Coolant System Leakage Leads to Shutdown Required by Technical Specifications(Section 4OA3.3)
05000425/2005-002	LER	Instrument Setpoint Drift Leads to Operation of the Unit in a Condition Prohibited by Technical Specifications (Section 4OA3.4)
05000424, 425/2006-002	LER	Three Technical Specification Instruments Were Determined to be in a Condition Which Was Prohibited by Technical Specifications (Section 4OA3.5)

### LIST OF DOCUMENTS REVIEWED

#### Procedures

NMP-GM-002; Corrective Action Program; Version 5.0  
NMP-GM-002-001; Corrective Action Program Instructions; Version 1.0  
NMP-GM-008; Operating Experience Program; Version 2.0

NMP-GM-008; Operating Experience Program (Draft); Version 3.0  
NMP-GM-002-GL03; Cause Determination Guideline, Version 6.0  
NMP-GM-002-GL05; Corrective Action Program, Data Configuration Guideline Rev. 8.0  
NMP-ES-001; Equipment Reliability Process Description, Version 5.0  
NMP-ES-005; Scoping and Importance Determination for Equipment Reliability, Version 5.0  
13503-1; Unit 1 Reactor Control Solid-State Protection System, Rev. 19.2  
13503-2; Unit 2 Reactor Control Solid-State Protection System, Rev. 18.1  
80200C; Performance Assessment Monitoring, Rev. 01  
00163-C; NRC Performance Indicator and Monthly Operating Report Preparation and Submittal;  
Rev. 11.1  
1009-C; Operator Aids, Rev. 12.1  
13105-1; Safety Injection System; Rev. 45  
13105-2; Safety Injection System; Rev. 43  
12006-C; Unit Cooldown to Cold Shutdown, Rev. 73  
91001-C; Emergency Classification and Implementing Instructions; Rev. 25  
91501-C; Recovery; Rev. 16

#### **Operating Experience Documents**

NRC Regulatory Issue Summary 2006-24; Revised Review and Transmittal Process for  
Accident Sequence Precursor Analyses  
NRC Regulatory Issue Summary 2007-01; Clarification of NRC Guidance for Maintaining a  
Standard Emergency Action Level Scheme  
NRC Regulatory Issue Summary 2006-22; Lesson Learned from Recent 10CFR Part 72 Dry  
Cask Storage Campaign  
NRC Regulatory Issue Summary 2006-25; Requirements for the Distribution and Possession of  
Tritium Exit Signs  
NRC Information Notice 06-28; Siren System Failures due to Erroneous Siren System Signal  
NRC Information Notice 06-26; Failure of Magnesium Rotors in Motor Operated Valve Actuators  
NRC Information Notice 06-14, Supplement 1; Potentially Defective External Lead-Wire  
Connections in Barton Pressure Transmitters  
Part 21 Notice regarding Tyco Crosby Series JLT Spring Loaded Pressure Relief Valves  
Westinghouse Technical Bulletin TB-05-4; Potential Tin Whiskers on Printed Circuit Board  
Components

#### **Self-Assessment Documents**

Surveillance SNC-2007-001; Fleet QA Surveillance of the implantation and effectiveness of the  
Corrective Action Program  
QA Audit of the Corrective Action Program (CAP), V-CAP-2006-1  
Operating Experience Point of Contact Effectiveness Review; December 13 – 15, 2006  
Effectiveness Review for Action Item 2005203075

#### **Condition Reports**

2007101485, 2005100146, 2005100178, 2005101787, 2005102333, 2005102571,  
2005103063, 2005103632, 2005103989, 2005105374, 2005105859, 2005106118,  
2005106877, 2005108493, 2005109484, 2005109531, 2005109973, 2005110364,  
2005111178, 2005111254, 2005111460, 2005111583, 2005111982, 2006100539,  
2006100755, 2006100839, 2006100906, 2006101112, 2006101137, 2006102023,

2006102295, 2006103134, 2006103594, 2006104417, 2006105424, 2006105426, 2006107236, 2006107383, 2006107603, 2006109187, 2006109233, 2006109869, 2006110322, 2006110981, 2006112318, 2006112454, 2006113261, 2007100013, 2007100130; 2005101787, 2005104571, 1006109233, 2006109187, 2005103989, 2006104417, 2006109233, 2007101722, 2006101127, 2005102333, 2005101325, 2005101343, 2005105374, 2005104189, 2005111542, 2006102910, 2006107580, 2006107603, 2006108450, 2006108514, 2006108517, 2006109187

**Action Items**

2005201207, 2005201208, 2005201209, 2005201210, 2005201211, 2005201639, 2005201690, 2005201861, 2005201862, 2005201866, 2005201868, 2006203971, 2006203972, 2006203973, 2006203974, 2006203975, 2006203976, 2006203976, 2006203977, 2006203977, 2006204070, 2006204183, 2006204187, 2006204188, 2006204189, 2006204228, 2006205227, 2006205228, 2006205229, 2006205230, 2006205232, 2006205234, 2006205235, 2007200355, 2005202666, 2005202667, 2005202668, 2005202669

**Miscellaneous Documents**

Vogtle Key Performance Indicator Report; December 2006  
Vogtle Electric Generating Plant Quarterly CAP Trend Report, August through October 2006  
“Valuing the CAP, Leadership in Action” presented by T. Tynon on 3/17/06  
MWOs 1060183801 and 1060183901  
Design Change Package 2051624801  
Training Handout, “Current Events” presented during Licensed Operator Requalification Segment 20052, April – May 2005

**Nuclear Service Cooling Water (NSCW)**

Condition Reports: 2006100553, 2006105837, 2006105921, 2006106438, 2006110938, 2005109036, 2005117274  
Work Orders: 2062103601, 2061070801, 2054150601  
Procedures: 83308-C; Testing of Safety-Related NSCW Sys. Coolers; Rev. 30.1  
Miscellaneous Documents:  
Vogtle Engineering Maintenance Rule Performance Monitoring and Evaluation Reports; Unit 1: Reporting Periods 1/2005 through 11/2006  
Vogtle Engineering Maintenance Rule Performance Monitoring and Evaluation Reports; Unit 2: Reporting Periods 1/2005 through 11/2006  
System Health Reports: 1<sup>st</sup> Quarter 2005 through 3<sup>rd</sup> Quarter 2006  
Vogtle Key Performance Indicators, December 2006; MSPI – Cooling Water Systems, Unit 1 and Unit 2  
Vogtle Maintenance Equipment Reliability Overall Report Card, July 2006

**Chemical Volume and Control System (CVCS)**

**Condition Reports**

2005108955, 2005103124, 2006108383, 2006107514, 2006105424, 2006105428, 2006100502, 2005104876, 2004003039, 2004003187, 2004003291, 2004003436, 2005110553, 2005101076, 2005105013, 2005109906, 2005110199, 2005111901, 2006105775, 005101693, 2005102505, 2006105553, 2005107840

**Work Orders**

2061290301, 1061046701, 2040097801, 2052151801, 2040242101, 1040333301,  
2040324501, 2050374501, 2052123701, 1060970401, 1051511401, 1051624401, 1061046701

**Procedures**

13006-1; Chemical and Volume Control; Rev. 80  
13006-2; Chemical and Volume Control; Rev. 66.  
125039-C; Valve Packing Removal, Installation, and Adjustment; Rev. 13.1

**Miscellaneous Documents**

Operator Shift Briefing items SB 2005-11, and SB 2006-41  
Repetitive Tasks: 200600000911, 200600000912, and LUB70032  
Vogtle Engineering Maintenance Rule Performance Monitoring and Evaluation Reports; Units 1:  
Reporting Periods 1/2005 through 11/2006  
Vogtle Engineering Maintenance Rule Performance Monitoring and Evaluation Reports; Units 2:  
Reporting Periods 1/2005 through 11/2006  
System Health Reports: 1<sup>st</sup> Quarter 2005 through 3<sup>rd</sup> Quarter 2006

**Component Cooling Water (CCW)**

Condition Reports:  
2006112223, 2005106222, 2005105036, 2005106072, 2006100717, 2006104873,  
2006105632, 2006107212, 2005104851, 2006108358, 2005106861, 2005103178,  
2005106256, 2005103892, 2005105267, 2005108970, 2005103977, 2006110904,  
2006111950, 2006112182, 2005106581

**Work Orders**

1051942901, 2020292301, 1052097701, 2061437201, 1051922301, 1061975601,  
1062142901, 2052492401

**Procedures**

29401-C; Work Order Functional Tests; Rev. 24.1  
35311-C; Chemical Control of Closed Cooling Water Systems; Rev. 39.2  
35312-C; Chemical Control of Turbine Plant Closed Cooling Water Systems; Rev. 13

**Miscellaneous Documents**

Vogtle Engineering Maintenance Rule Performance Monitoring and Evaluation Reports; Unit 1:  
Reporting Periods 1/2005 through 11/2006  
Vogtle Engineering Maintenance Rule Performance Monitoring and Evaluation Reports; Unit 2:  
Reporting Periods 1/2005 through 11/2006  
System Health Reports: 1<sup>st</sup> Quarter 2005 through 3<sup>rd</sup> Quarter 2006  
Check valve IST results per procedure 14803-1, "CCW Pumps and Check Valve IST and  
Response Time Tests," Rev. 22.1 (10/5/06)

**Diesel Generators  
Condition Reports**

2005100352, 2005100529, 2005100605, 2005100633, 2005100641, 2005100653,  
2005100664, 2005102314, 2005102891, 2005104123, 2005106203, 2005106349,  
2005106877, 2005109047, 2005110566, 2005111137, 2005111317, 2006100471,  
2006100549, 2006100761, 2006100854, 2006100874, 2006100951, 2006101010,  
2006101683, 2006102448, 2006104013, 2006104225, 2006104800, 2006109696,  
2006110219, 2006111878, 2006111947, 2006112175, 2006112568, 2006113255, 2006113283

**Work Orders**

1054160201, 1054160901, 1060689401, 1061157901, 1061964101, 1062066201,  
1062106201, 1062158301, 2052155401, 2052331801, 2052331901, 2052443501,  
2052443601, 2052543601, 2052550801, 2052551001, 2053733901, 2060097301,  
2060167901, 2060201801, 2060202101, 2060319001, 2060462001, 2060497001,  
2060786101, 2060994301, 2061267901, 2091294001, 2061660901, 2061860201, 2062211401

**Miscellaneous Documents**

Vogtle Engineering Maintenance Rule Performance Monitoring and Evaluation Reports; Unit 1:  
Reporting Periods 1/2005 through 11/2006

Vogtle Engineering Maintenance Rule Performance Monitoring and Evaluation Reports; Unit 2:  
Reporting Periods 1/2005 through 11/2006

System Health Reports: 1<sup>st</sup> Quarter 2005 through 3<sup>rd</sup> Quarter 2006

Vogtle Key Performance Indicators, December 2006; MSPI – Emergency AC Power System,  
Unit 1 and Unit 2

Vogtle Maintenance Equipment Reliability Overall Report Card, July 2006

**Condition Reports/Action Items Generated for NRC-Identified Issues**

2007101098; Damaged insulation on piping in the 1A and 1B NSCW cooling towers

2007101099; Debris and equipment found in the 1A NSCW cooling tower electrical tunnel

2007101100; Insulation around NSCW slow fill line check valve 21202U4A09 is missing and  
needs to be replaced

2007101487; Effectiveness reviews were not identified as action items in a number of Severity  
Level 2 CR's are required by NMP-GM-002, CAP

2007101712; Questions arose concerning the timeliness of picking up quality concerns from  
boxes in the plant

2007101734; Scaffolding issues identified by the NRC during a plant walkdown

2005204105; Missing action item to perform effectiveness review for CR 2005109484

2006200614; Missing action item to perform effectiveness review for CR 2005111254

2007101202; Boron residue at the body to bonnet area of valve 1-1208-U4-4293

2007101203; Boron residue at the tail pipes downstream of valves 1-1208-X-4950 and 1-1208-  
U-4600

2007101206; Insulation at flow transmitter 2FT0183 not secured and apparent boron residue on  
insulation above the flow transmitter

2007101713; Deficiencies identified in the CR 2005107840 closure package