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

December 16, 2004

Southern Nuclear Operating Company, Inc.
ATTN: D. E. Grissette
Vice President - Vogtle Project
P. O. Box 1295
Birmingham, AL 35201-1295

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT - NRC PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION REPORT 05000424/2004008 AND 05000425/2004008

Dear Mr. Grissette:

On November 19, 2004, the U. S. Nuclear Regulatory Commission (NRC) completed a team inspection at your Vogtle Electric Generating Plant, Units 1 and 2. The enclosed inspection report documents the inspection findings, which were discussed on November 19, 2004 with Mr. Kitchens and other members of your staff.

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

On the basis of the sample selected for review, there were no findings of significance identified during this inspection. The team concluded that problems were properly identified, evaluated, and resolved within the problem identification and resolution programs. A low threshold for entering problems into your corrective action program was observed. However, during the inspection minor examples of problems were found that had not been identified and entered into the corrective action program.

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 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 by C. Rapp for/

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

Docket Nos. 50-424, 50-425
License Nos.: NPF-68, NPF-81
Enclosure: Inspection Report 05000424/2004008
and 05000425/2004008
w/Attachment: Supplemental Information

cc w/encl: (See page 3)

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U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos.:	50-424, 50-425
License Nos.:	NPF-68, NPF-81
Report Nos.:	05000424/2004008 and 05000425/2004008
Licensee:	Southern Nuclear Operating Company, Inc. (SNC)
Facility:	Vogtle Electric Generating Plant
Location:	7821 River Road Waynesboro, GA 30830
Dates:	November 1 - 5, 2004, and November 15 - 19, 2004
Inspectors:	J. Stewart, Senior Resident Inspector, Crystal River 3 T. Morrissey, Resident Inspector, Vogtle Electric Generating Plant S. Rose, Senior Operations Engineer R. Cortez, Reactor Inspector
Approved by:	Brian R. Bonser, Chief Reactor Projects Branch 2 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000424/2004-008, 05000425/2004-008; 11/01/2004 - 11/19/2004; Vogtle Electric Generating Plant, Units 1 and 2; Biennial baseline inspection of the Identification and Resolution of Problems.

The inspection was conducted by a senior resident inspector, a resident inspector, a senior operations engineer, 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

The inspection team determined that the licensee was identifying plant deficiencies at an appropriate low level and entering them into the corrective action program. After reviewing condition reports, conducting system walkdowns, and examining equipment tracking databases, the team identified some minor deficiencies. During system walkdowns, the inspectors identified three minor conditions adverse to quality that had not been identified by the licensee. Also, inspectors identified several minor documentation discrepancies. Quality Assurance audits were effective at identifying issues at a very low level. The licensee adequately prioritized issues and evaluations were technically accurate and of sufficient depth. Formal root cause evaluations using widely accepted methods were adequate in determining the root and contributing causes of problems. Corrective actions to fix problems were appropriate and timely. Because the licensee had identified a number of problems related to human error which were not restricted to any one group, the licensee had implemented a site wide human performance improvement initiative. The inspectors did not identify any reluctance on the part of the employees to document safety concerns in the corrective action program.

A. Inspector Identified Findings

None

B. Licensee Identified Violations

None

REPORT DETAILS

4. OTHER ACTIVITIES (OA)

4OA2 Problem Identification and Resolution

a. Effectiveness of Problem Identification

(1) Inspection Scope

The inspectors reviewed the licensee's corrective action program (CAP) procedures which described the administrative process for initiating problem review and resolution using Condition Reports (CRs). The inspectors walked down selected plant systems, observed control room activities, accompanied plant operators on their daily tours, reviewed selected CRs, and attended meetings where CRs were screened for significance to determine if the licensee was identifying and accurately entering problems into the corrective action program at an appropriate threshold. The CRs reviewed were selected from all CRs issued between December 2002 and November 2004.

The inspectors reviewed selected CRs covering all the cornerstones of safety identified in the NRC's Reactor Oversight Process (ROP), the licensee's CAP severity levels, and site departments. CRs associated with violations documented in NRC inspection reports were specifically selected for review. Additionally, the inspectors reviewed CRs associated with Maintenance Rule (MR) evaluations. These reviews were performed to verify that problems were being properly identified and accurately entered into the CAP. The inspectors also held discussions with various personnel to evaluate their threshold for identifying and documenting issues. The inspectors also conducted Main Control Room (MCR) board walkdowns to verify that deficiencies were entered into the CAP.

The inspectors conducted a detailed review of CRs for the Auxiliary Feedwater (AFW), Nuclear Service Cooling Water (NSCW), Residual Heat Removal (RHR), and Safety Injection (SI) systems. These systems were selected based on risk insights from the licensee's probabilistic risk assessment. The inspectors reviewed the maintenance history and completed Work Orders (WOs) for the systems, reviewed system health reports, and conducted system walkdowns to check for any deficiencies that had not been entered into the CAP. The inspectors reviewed selected industry operating experience items associated with the systems, including NRC generic communications, to verify that these were appropriately evaluated for applicability and, if necessary, were entered into the CAP. In addition, an extended five year review was performed for the AFW and SI systems.

The inspectors reviewed licensee Quality Assurance audits and self-assessments, including those which focused on problem identification and resolution, to verify that findings were processed in the CAP and to verify that these findings were consistent with the NRC's assessment of the licensee's programs.

Documents reviewed are listed in the Attachment.

(2) Assessment

The inspectors determined that the licensee was generally effective in identifying problems, including personnel errors and equipment issues, and entering them into the CAP. The inspectors observed that employees were encouraged to initiate CRs at an appropriate level when problems were identified. To minimize radiation exposure, the licensee specified that system engineers and operators only infrequently walkdown and assess material condition of systems in areas with higher localized radiation levels. Subsequently, during the RHR system walkdown, the inspectors identified three minor deficiencies (two motor bearing oil leaks and one boric acid leak from a compression fitting) that had not been identified by the licensee. The licensee entered these deficiencies into the CAP. Walkdowns of the other systems did not identify similar issues. The inspectors found the MCR to be well maintained and MCR deficiencies had been identified in the CAP or maintenance work order system for resolution.

The licensee was effective in evaluating internal and external industry operating experience items for applicability and entering issues into the CAP. Operating experience items of significance were immediately reviewed, assessed for applicability, and provided to management for priority attention. Quality Assurance audits were effective at identifying issues at a very low level which were then entered into the CAP where appropriate and corrected.

(3) Findings

No findings of significance were identified.

b. Prioritization and Evaluation of Issues

(1) Inspection Scope

The inspectors reviewed CRs processed since December 2002 to determine adequacy of prioritization and evaluation of problems to verify that the licensee adequately assessed issues for priority commensurate with their risk significance; determined the cause of significant problems including root cause where appropriate; and adequately addressed operability, reportability, common cause, generic concerns, and extent of condition. The review included the appropriateness of the assigned significance, the timeliness of resolution, and the scope and depth of the causal analysis, and the assignment of corrective actions to address the cause of problems. To streamline efforts, the licensee recently implemented a corporate corrective actions management process. The inspectors checked that issues continued to be identified in the new program at an appropriate threshold and received an appropriate level of evaluation. In reviewing the new process, the inspectors reviewed the activities of the recently established Corrective Actions Review Board (CARB) which involved senior site management in the review of root cause reports and corrective actions for issues of higher risk significance.

The inspectors attended various plant meetings to observe management oversight functions of the corrective action process. These included morning management meetings and Corrective Action Program Coordinator (CAPCO) meetings, where newly identified issues were screened for significance. The inspectors interviewed individuals involved in processing of corrective action reports to verify an appropriate level of technical skill to ensure that the program was completed consistently and as intended by the licensee's procedures.

Documents reviewed are listed in the Attachment.

(2) Assessment

The inspectors determined that the licensee adequately prioritized issues entered into the CAP. For issues of risk significance, the licensee performed evaluations that were technically accurate and of sufficient depth. Formal root cause evaluations using widely accepted methods were adequate in determining the root and contributing causes of more significant problems.

Site management was actively involved in the CAP process and focused appropriate attention on significant plant issues during their review and discussion of CRs. The CAPCO meetings provided timely initial assessments and assignment of initial responsibility for issues entered into the CAP. The recent use of the CARB to review root cause reports and corrective actions provided management oversight of the formal root cause process assigned to significant issues and was considered a positive addition to the program.

The CAP procedure allowed for management judgement to be applied for CR severity level classification. The inspectors recognized the need for management flexibility to effectively implement the CAP. The inspectors observed that several CRs were assigned higher levels of review than specified by their apparent risk significance. As a result, some issues of apparently low risk significance were receiving an elevated level of management attention to prevent more serious problems from developing. Similarly, because a number of problems related to human error had been identified which were not restricted to any one group, the licensee had implemented a site wide human performance improvement initiative.

(3) Findings

No findings of significance were identified.

c. Effectiveness of Corrective Actions

(1) Inspection Scope

The inspectors reviewed CRs and the licensee's Major Issues List to verify that the licensee had identified and implemented timely and appropriate corrective actions to address problems and that the corrective actions were properly documented, assigned,

and tracked to ensure completion. The review was also to verify the adequacy of corrective actions to address equipment deficiencies and MR functional failures in risk significant plant systems. For more significant problems, the inspectors reviewed the corrective actions to verify they would prevent recurrence and had received appropriate priority. Effectiveness reviews of corrective actions that had been completed for problems of higher significance were checked and compared with NRC assessments of performance to verify that issues were being properly addressed.

Documents reviewed are listed in the Attachment.

(2) Assessment

In general, corrective actions developed and implemented for problems were timely and effective. During the two year period that was reviewed, plant performance was such that no issues were assigned the highest significance (Severity Level 1). As specified by licensee procedures, Severity Level 2 was assigned to issues such as MR functional failures and uncomplicated plant transients. For these issues, corrective actions addressed the root cause and effectively prevented recurrence.

The inspectors identified an isolated issue where completed corrective actions did not prevent repeated Foreign Materials Control Log documentation problems for the spent fuel pool area. The licensee took immediate corrective action and documented the issue in the CAP. No examples involving actual loss of materials in the spent fuel pool area were identified.

The inspectors did not identify any examples of problem recurrence that resulted from not performing a root cause investigation or an example of a significant issue where it could be concluded that the actual root cause had not been determined. The inspectors noted a few documentation discrepancies where CAP files did not reflect all of the corrective actions taken in resolving problems. The inspectors also identified an isolated example where a procedure revision did not match the specified corrective actions. The licensee documented these issues in the CAP.

(3) Findings

No findings of significance were identified.

d. Assessment of Safety-Conscious Work Environment

(1) Inspection Scope

The inspectors questioned members of the plant staff to assess if any conditions existed that would cause employees to be reluctant to raise safety concerns. The inspectors also reviewed the licensee's employee concerns program (ECP) which provided a method for employees to anonymously raise safety concerns. The inspectors interviewed the ECP Manager and reviewed selected ECP reports completed in 2003

and 2004 to verify that concerns were being properly reviewed and identified deficiencies were being resolved.

Documents reviewed are listed in the Attachment.

(2) Assessment

The inspectors did not identify any reluctance to report safety concerns. Licensee management emphasized the need for all employees to promptly identify and report problems using the appropriate methods established within the administrative programs.

(3) Findings

No findings of significance were identified.

4OA6 Management Meetings

On November 19, 2004, the inspectors presented the inspection results to Mr. Kitchens and other members of the Vogtle staff. The inspectors confirmed that proprietary information was not provided or examined during the inspection.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTARY INFORMATION

KEY POINTS OF CONTACT

Licensee personnel
W. Bargeron, Plant Support Assistant General Manager
C. Buck, Chemistry Manager
W. Burmeister, Manager Engineering Support
B. Diehl, Supervisor, Outage and Scheduling
S. Douglas, Manager Operations
W. Kitchens, Nuclear Plant General Manager
C. Miller, Acting Manager, Performance Assessment
D. Monahon, Quality Assurance Engineer
S. Rucker, Quality Assurance Specialist
T. Tynan, Assistant General Manager Nuclear Operations

NRC personnel
L. Wert, Deputy Director, DRP

LIST OF DOCUMENTS REVIEWED

Procedures
NMP-GM-002-GL02, Corrective Action Program Details and Expectations Guideline
NMP-GM-002, Corrective Action Program, Version 2
NMP-GM-003, Corrective Action Program Root Cause Determination Guideline, Version 2
NMP-GM-004, Corrective Action Program Apparent Cause Guideline, Version 2
NMP-ES-002, System Monitoring and Health Reporting, Rev. 2
00414-C, Operating Experience Program, Rev. 16
20429-C, Short Term Documentation of Temporary Jumpers and Lifter Leads, Rev. 21.1
00010-C, Pre-Job Briefings, Rev. 9
13625-1, Condensate Storage and Degasifier System, Rev. 25
85001-C, Qualification of Inspection, Examination, and Testing Personnel, Rev. 11.1
20011-C, Nuclear Electrician Training and Qualification, Rev. 26
11625-C, Condensate Storage and Degasifier System Alignment (pages 10 through 11), Rev. 15.1
60201-C, Simulator Training and Documentation, Rev. 14
IA-60502-003, Simulator Exercise Guides, Rev. 1
60002-C, Training Administrative Policies and Procedures, Rev. 22.2
13620-1, Condenser Air Ejection System, Rev. 24
13620-2, Condenser Air Ejection System, Rev. 22
00409-C, Commitment and Action Item Tracking, Rev. 22
13602-1, Steam Generator and Main Steam System Operation, Rev. 39
10000-C, Conduct of Operations, Rev. 56
SNC Concerns Program Procedure, Revision 8

Condition Reports **(* denotes a CR generated as a result of this inspection)**

1997035796	2003002151	2003003311	2004001633	2004003225
1998000119	2003002176	2002003321	2004001824	2004003383
2001000619	2003002188	2002003412	2004001840	2004003429
2002001335	2003002197	2003003436	2004001930	2004003532
2002002122	2003002389	2003003442	2004001968	2004003533
2002002125	2003002398	2003003457	2004001986	2004003575
2002002645	2003002463	2002003506	2004002068	2004003582
2002002995	2003002507	2003003594	2004002117	2004003620
2002003295	2003002566	2003003604	2004002140	2004003621
2002003311	2003002666	2003003620	2004002148	2004003844
2002003380	2003002792	2003003676	2004002154	2004003845
2002003403	2003002911	2004000072	2004002196	2004003846
2002003582	2003002918	2004000161	2004002198	2004004064
2002003584	2003003021	2004000410	2004002286	2004150610*
2003000047	2003003035	2004000531	2004002321	2004150700*
2003000155	2003003036	2004000557	2004002345	2004150611*
2003000186	2003003078	2004000598	2004002505	2004150697*
2003000228	2002003093	2004000682	2004002733	2004150799*
2003000716	2003003153	2004000708	2004002735	2004150823*
2003000732	2003003167	2004000767	2004002740	2004150925*
2003001056	2003003176	2004000807	2004002794	2004150500*
2003001126	2003003177	2004000883	2004002912	
2003001535	2003003186	2004000998	2004002944	
2003001841	2003003190	2004001124	2004003082	
2003001954	2003003193	2004001160	2004003091	
2003001973	2003003225	2004001185	2004003146	
2003002002	2003003261	2004001501	2004003160	

Work Orders:

A0300336, During release of WMT #12, pump tripped but the low level annunciator on the waster processing liquid panel did not annunciate
10201467, Various small oil leaks on CCP-B
C040376401, Construct permanent shielding supports around reactor cavity drain valve
19900911, Repair Containment Cooler vent Valve
29903247, Repair breaker 2AAO2-01 shutter mechanism
10000168, 1HV5113, Replace Grease/Test Springpack and Votes test
10000784, 1HV8821A, Clean/Inspect/Lubricate and Votes test
10003100, Boron Buildup on valve 11208X44207
10301131, Thermography of vital AC inverter 1AD1I1
10301132, Thermography of vital AC inverter 1CD1I3
20300771, Boron Buildup on flange
20300798, 2HV8811A, Votes Test
20301776, 2HV11606, Clean/Inspect/Test
10303405, 1HV5122, Inspect valve internals and Viper Test
20401058, 1HV8821A, MOV Test

NRC Non-Cited Violations (NCV)/LER Reviewed

NCV 05000424/2002004-01, Failure to Properly Assemble Component Cooling Water Valve Results in Transient
NCV 05000424,425/2003002-01,Failure to Follow Chemical Control Procedures Results in Excessive Steam Generator Sodium Concentrations and Dual Unit Forced Shutdown
NCV 05000425/2003002-02, Failure to Follow Power Ascension Procedure Results in Manual Reactor Trip
NCV 0500050-425/2003004-02, Failure to Assess Increase in Risk of Unavailable Reactor Coolant System Instrumentation During Leak Repair Outage
NCV 05000425/2003004-03, Failure to Provide Suitable Reactor Vessel Vent Results in Inaccurate Reactor Vessel Level Indication
LER 05000424/2002-001, Improperly Wired Interlocks affects ECCS Recirculation Valve
LER 1-2003-1, Debris in containment could have resulted in safety system loss of function.
LER 1-2003-2, Ruptured steam hose coupling leads to manual steam line isolation.
LER 1-2004-1, Manual reactor trip following loss of main feedwater pump speed control.
LER 1-2004-2, Closure of control room air damper results in tech. spec. non-compliance.
LER 2-2002-1, Unstaked capscrews renders residual heat removal pump inoperable.
LER 2-2002-2, Steam generator level control problems lead to manual reactor trip.
LER 2-2003-1, Tech. spec. required shutdown not performed following issuance of NOED
LER 2-2004-1, Breaking condenser vacuum.
LER 2-2004-2, Containment debris could have resulted in loss of safety system function.

Operating Experience

NRC Information Notice (IN) or Generic Letter (GL)
IN04-01, Auxiliary Feedwater Pump Recirculation Line Orifice Fouling
GL 96-05, Periodic Verification of Design-Basis Capability of Safety-Related Motor-Operated Valves
IN 2004-09, Corrosion of Steel Containment and Containment Liner
IN 2003-02, Recent Experience with Reactor Coolant System Leakage and Boric Acid Corrosion
IN 2004-07, Plugging of Safety Injection Pump Lubrication Oil Coolers with Lakeweed

System Health Reports

Nuclear Services Cooling Water System 1st Quarter, 2004
Auxiliary Feedwater System Health Reports 1302A 2nd Quarter 2002, 1st, 2nd, 3rd, 4th Quarter 2003, 1st, 2nd, 3rd Quarter 2004
Residual Heat Removal System Quarterly Health Reports 2004
Safety Injection System Quarterly health reports 2004
Safety Injection System Quarterly health reports 2003
Archived System Health Report Database

Audits and Self-Assessments

QA Audit of Emergency Planning, V-EP-2004, VQA-2004-019, dated April 20, 2004
QA Audit of Fire Protection V-FP-2004, VQA-2004-036, dated August 24, 2004
QA Audit of Corrective Action Program (CAP), V-CAP-2004-1, VQA-2004-037, dated September 20, 2004
QA Audit of the Corrective Actions Program, OP21-03/12, dated October 8, 2003
QA Audit of the Corrective Actions Program, OP21-03/02, dated June 5, 2003

QA Audit of the Corrective Actions Program, V-CAP-2003-3, dated February 13, 2004
Audit of Chemistry/Radwaste; V-CRW-2004
Audit of Refueling Outage; V-RFA-2004
OP13-03/10, Design Change and Modification Control
OP08-03/09, Quality Control
OP 09-03/17, Technical Specifications and Surveillances
Annual Audit of the Plant Vogtle Concerns Program - 2003

Trend Reports/ Performance Indicators

Maintenance Rule Monthly Status Report, September 2004
Vogtle Key Performance Indicators, October 2004

Miscellaneous Documents

Corrective Action Review Board Meeting Minutes, 2004-01
Corrective Action Review Board Meeting Minutes, 2004-02
Corrective Action Review Board Meeting Minutes, 2004-03
Nuclear Operator Logs: Units 1 and 2, August 2004; Unit 1 May 2004
DCP 99-VAN0071, Replacement of Citation series starters with Freedom series starters.
REA 00-VAA662, Request to provide support for the Reactor Trip Event Critique 1-200-002
REA 02-V1A050, Hazard analysis to identify any effects on ECCS sump performance due to debris found in containment.
RER-2003-0243, Containment sump blockage evaluation.
RER-2004-V0129, Failure analysis of Fuse “F9” to determine if the fuse opened due to an overcurrent condition or some kind of mechanical failure.
RER-2004-V0143, Additional inverter failure modes
Interoffice Memo: 2003 VEGP Generic Letter 89-10 Trending summary