

April 16, 2009

Mr. Joseph A. Miller, Senior Vice President
Southern Nuclear Operating Company, Inc.
40 Inverness Center Parkway
Post Office Box 1295
Birmingham, AL 35201

SUBJECT: NRC INSPECTION REPORT NOS. 05200025/2009-201 AND
05200026/2009-201 AND NOTICE OF VIOLATION

Dear Mr. Miller:

On March 3–6, 2009, the U.S. Nuclear Regulatory Commission (NRC) conducted an inspection at the Southern Nuclear Company (SNC) Nuclear Development (ND) in Birmingham, AL. The enclosed report presents the results of this inspection.

The purpose of the NRC inspection was to verify that quality assurance processes and procedures were effectively implemented with regards to the Vogtle Units 3 and 4 combined license application (COLA). The inspection focused on assessing your compliance with the provisions of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 21, "Reporting of Defects and Noncompliance," and selected portions of Appendix B, "Quality Assurance Program Criteria for Nuclear Power Plants and Fuel Processing Plants," to 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities." This NRC inspection report does not constitute NRC endorsement of your overall quality assurance (QA) or 10 CFR Part 21 programs.

Based on the results of this inspection, the NRC has determined that two Severity Level IV violations of NRC requirements occurred. The NRC evaluated these violations in accordance with the agency's Enforcement Policy, available on the NRC's Web site at http://www.nrc.gov/about_nrc/regulatory/enforcement/enforce_pol.html.

The enclosed Notice of Violation (Notice) cites the violations, and the subject inspection report describes in detail the circumstances surrounding them. The Notice cites these violations because a review of SNC ND QA program documentation and implementation found that certain SNC ND QA policies and procedures were not in compliance with the applicable requirements of Appendix B to 10 CFR Part 50.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding," of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and your response will be made available electronically for public inspection in the NRC Public Document Room or from

the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request that such material be withheld from public disclosure, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21, "Requirements for the Protection of Safeguards Information."

Sincerely,
/RA/

Juan Peralta, Chief
Quality and Vendor Branch 1
Division of Construction Inspection
& Operational Programs
Office of New Reactors

Docket Nos.: 05200025 and 05200026

Enclosures: 1. Notice of Violation
2. Inspection Report Nos. 05200025/2009-201 and 05200026/2009-201 and Attachment

from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request that such material be withheld from public disclosure, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21, "Requirements for the Protection of Safeguards Information."

Sincerely,
/RA/

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Docket Nos.: 05200025 and 05200026

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(Revised 03/04/2009)

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NOTICE OF VIOLATION

Southern Nuclear Operating Company, Inc.
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Docket Nos.: 05200025 and 05200026
Report No.: 2009-201

During a Nuclear Regulatory Commission (NRC) inspection conducted at the Southern Nuclear Company (SNC) in Birmingham, AL, on March 3–6, 2009, two violations of NRC requirements were identified. In accordance with the NRC Enforcement Policy, the violations are described below.

- A. Criterion VI, "Document Control," of Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to Part 50, "Domestic Licensing of Production and Utilization Facilities," of Title 10 of the *Code of Federal Regulations* (10 CFR) states, in part, "that measures shall be established to control the issuance of documents, such as instructions, procedures, and drawings, including changes thereto, which prescribe all activities affecting quality. These measures shall ensure that documents, including changes, are reviewed for adequacy and approved for release by authorized personnel and are distributed to and used at the location where the prescribed activity is performed."

Section 6, "Document Control," of the Southern Nuclear Company (SNC) Nuclear Development Quality Assurance Manual (NDQAM) states, in part, that SNC Nuclear Development (ND) has established the necessary measures and governing procedures to control the preparation of, issuance of, and changes to documents that specify quality requirements or prescribe how activities affecting quality, including organizational interfaces, are controlled to ensure that correct documents are being employed. The control system shall be documented and provide for, among other things, review of documents for adequacy, completeness, and correctness prior to approval and issuance.

SNC ND ND-ARL-017, "10 CFR Part 21 and 10 CFR 50.55(e) Evaluating and Reporting of Defects and Noncompliance for Vogtle Units 3 and 4," Version 2, dated March 3, 2009, provides instructions for ND personnel to ensure that potential defects and failures to comply pursuant to 10 CFR Part 21, "Reporting of Defects and Noncompliance," and 10 CFR 50.55(e) are evaluated for potential substantial safety hazards and that notifications and reports are made as required.

Contrary to the above, as of March 6, 2009, ND-ARL-017 does not (1) accurately reflect the correct definitions of 10 CFR Part 21, (2) address all the requirements of 10 CFR 50.55(e), and (3) use the correct terminology throughout the procedure. Specifically:

1. ND-ARL-017 does not include the correct definition of "defect" and "discovery," nor does it differentiate the applicability of the definitions of "dedication."
2. ND-ARL-017 does not include the records retention requirements of 10 CFR 50.55(e) and is inconsistent with the requirements of

10 CFR 50.55(e)(3)(iii)(c) with regards to a significant breakdown of the quality assurance program.

3. ND-ARL-017 uses the terms “deviation” and “defect” interchangeably throughout the procedure.

This issue has been identified as Violations 05200025/2009-201-01 and 05200026/2009-201-01.

This is a Severity Level IV violation (Supplement II).

- B. Criterion XVI, “Corrective Action” of Appendix B to 10 CFR Part 50 states that “measures shall be established to assure that conditions adverse to quality are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition. The identification of the significant condition adverse to quality, the cause of the condition, and the corrective action taken shall be documented and reported to appropriate levels of management.”

Section 16 of the SNC NDQAM requires procedures to establish high-level requirements and responsibilities for the control of conditions adverse to quality and requires personnel to report conditions adverse to quality to appropriate management for resolution in accordance with appropriate procedures. Section 16.1 of the NDQAM describes the process that SNC ND has in place to identify, evaluate, and report defects and noncompliances in accordance with 10 CFR Part 21 and/or 10 CFR 50.55(e) ,as applicable. The SNC ND reporting program applies to safety-related activities and services performed by SNC ND and/or SNC ND suppliers and subsuppliers providing input to the combined license application.

Contrary to the above, as of March 6, 2009, SNC’s NMP-GM-002 does not adequately provide procedural guidance to screen new condition reports for the potential applicability of 10 CFR Part 21 and does not provide a clear link to the 10 CFR Part 21 procedure ND-ARL-017. Specifically:

1. NMP-GM-002 does not include procedural guidance for 10 CFR Part 21 applicability under the corrective actions process and does not appropriately translate requirements of the NDQAM into the procedure.
2. NMP-GM-002 does not reference or include a mechanism to initially identify a potential 10 CFR Part 21 deviation for further evaluation using ND-ARL-017.

This issue has been identified as Violations 05200025/2009-201-02 and 05200026/2009-201-02.

This is a Severity Level IV violation (Supplement II).

Pursuant to the provisions of 10 CFR 2.201, “Notice of Violation,” SNC ND is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with a copy to the Chief, Quality and

Vendor Branch 1, Division of Construction Inspection and Operational Programs, Office of New Reactors, within 30 days of the date of the letter transmitting this Notice of Violation. This reply should be clearly marked as a "Reply to a Notice of Violation" and should include (1) the reason for the violation, or, if contested, the basis for disputing the violation, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) the date when full compliance will be achieved. Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. Where good cause is shown, the NRC will consider extending the response time.

Because your response will be made available electronically for public inspection in the NRC Public Document Room or through the NRC Agencywide Documents Access and Management System (ADAMS), to the extent possible, the response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21, "Requirements for the Protection of Safeguards Information."

Dated as of April 16 2009.

**U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF NEW REACTORS
DIVISION OF CONSTRUCTION INSPECTION AND
OPERATIONAL PROGRAMS**

Docket Nos.: 05200025 and 05200026

Report Nos.: 05200025/2009-201 and 05200026/2009-201

Applicant: Southern Nuclear Operating Company
40 Inverness Center Parkway
Post Office Box 1295
Birmingham, AL 35201

Applicant Contact: Brandon W. Waites
Nuclear Development Senior Engineer
205-992-7024
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Background: Southern Company is pursuing a combined license for two new units at Plant Vogtle in Burke County, GA.

Inspection Dates: March 3–6, 2009

Inspectors: Kerri Kavanagh, NRO/DCIP/CQVP, Team Leader
Milton Concepcion, NRO/DCIP/CQVP
Kenneth Heck, NRO/DCIP/CQVP
Jonathan Ortega, NRO/DCIP/CQVP
Brian Hughes, NRO/DNRL/DDLO/NWE1

Approved by: Juan D. Peralta, Branch Chief
Quality and Vendor Branch 1
Division of Construction Inspection
& Operational Programs
Office of New Reactors

EXECUTIVE SUMMARY

Southern Nuclear Company
05200025/2009-201 and 05200026/2009-201

This inspection focused on quality assurance (QA) policies and procedures implemented to support the Vogtle Units 3 and 4 combined license (COL) application, as described in U.S. Nuclear Regulatory Commission (NRC) Inspection Manual Chapter 2502, "Construction Inspection Program: Pre-Combined License (Pre-COL) Phase." The purpose of this inspection was to verify that Southern Nuclear Company (SNC) Nuclear Development (ND) had implemented an adequate QA program that complies with the requirements of Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to Part 50, "Domestic Licensing of Production and Utilization Facilities," of Title 10 of the *Code of Federal Regulations* (10 CFR). The inspection also verified that SNC ND had implemented a program under 10 CFR Part 21, "Reporting of Defects and Noncompliance," that meets NRC regulatory requirements.

The NRC inspection bases were 10 CFR Part 21 and Appendix B to 10 CFR Part 50.

During this inspection, the NRC inspectors implemented Inspection Procedure 35017, "Quality Assurance Implementation Inspection," dated July 29, 2008, and Inspection Procedure 36100, "Inspection of 10 CFR Part 21 and 50.55(e) Programs for Reporting Defects and Nonconformances," dated October 3, 2007.

The NRC had not performed any QA inspections at SNC ND for the Vogtle Units 3 and 4 COL application before this inspection.

The NRC inspectors concluded that SNC ND had not adopted appropriate procedures to evaluate deviations and failures to comply associated with substantial safety hazards. Additionally, the NRC inspectors concluded that certain SNC ND QA policies and procedures were not in compliance with the applicable requirements of Appendix B to 10 CFR Part 50 as described below.

10 CFR Part 21 and 10 CFR 50.55(e) Program

The NRC inspectors issued Violations 05200025/2009-201-01 and 05200026/2009-201-01 as a result of SNC ND failure to: (1) accurately reflect the correct definitions of 10 CFR Part 21, (2) address all the requirements of 10 CFR 50.55(e), and (3) use the correct terminology throughout the procedure.

Training and Qualification of Personnel

The NRC inspectors concluded that the training requirements established by SNC ND are consistent with the regulatory requirements of Criterion II, "Quality Assurance Program," of Appendix B to 10 CFR Part 50. SNC ND self-identified that the staff were trained in accordance with TS-005, Preparation of 10 CFR 21 Evaluations, which is the SNC corporate 10 CFR Part 21 procedure, instead of the SNC ND 10 CFR Part 21 procedure (ND-ARL-017) as required by ND-RL-008, Vogtle Deployment Training Program. The NRC inspection team issued Non-Cited Violation 0520025/2009-201-03 and 05200026/209-201-03 since SNC ND self-identified the issue and is implementing corrective action.

Procurement Document Control

The NRC inspectors concluded that the procurement document control process requirements conform to the regulatory requirements of Criterion IV, "Procurement Document Control," of Appendix B to 10 CFR Part 50 and have been implemented in accordance with applicable SNC procedures in support of Vogtle Units 3 and 4 COL engineering, procurement, and construction contract activities. No findings of significance were identified.

Nonconforming Materials, Parts, or Components

The NRC inspectors concluded that SNC ND program requirements for the control of nonconforming products are consistent with the regulatory requirements of Criterion XV, "Nonconforming Materials, Parts, or Components," of Appendix B to 10 CFR Part 50 and have been appropriately implemented as required by SNC NDQAM and associated procedures to support Vogtle Units 3 and 4 COL activities. No findings of significance were identified.

Corrective Action

The NRC inspectors issued Violations 05200025/2009-201-02 and 05200026/2009-201-02 because SNC ND NMP-GM-002 does not include guidance to screen new condition reports for potential 10 CFR Part 21 applicability and does not provide a clear link to the SNC ND 10 CFR Part 21 Procedure (ND-ARL-017).

Control of Purchase Material and Audits

The NRC inspectors concluded that the SNC ND control of purchased material, equipment, and services and internal audit programs requirements are consistent with the regulatory requirements of Criterion VII, "Control of Purchased Material, Equipment, and Services," and Criterion XVIII, "Audits," respectively, of Appendix B to 10 CFR Part 50. Based on the sample reviewed, the NRC inspectors also determined that the SNC NDQAM and associated procedures are being effectively implemented. The inspection team identified no findings of significance.

REPORT DETAILS

1. 10 CFR Part 21 and 10 CFR 50.55(e) Program

a. Inspection Scope

The U.S. Nuclear Regulatory Commission (NRC) inspection team reviewed the Southern Nuclear Company (SNC) Nuclear Development (ND) implementing policies and procedures that govern the Title 10 of the *Code of Federal Regulations* (10 CFR) Part 21, "Reporting of Defects and Noncompliance," and 10 CFR 50.55(e) process. The NRC inspection team also discussed this process with members of the SNC ND management and technical staff. Documents reviewed include the following:

- SNC, "Nuclear Development Quality Assurance Manual" (NDQAM), Version 8, March 14, 2008
- ND-ARL-017, "10 CFR Part 21 and 10 CFR 50.55(e) Evaluating and Reporting of Defects and Noncompliances for Vogtle Units 3 and 4," Version 2, March 3, 2009
- ND-001, "Conduct of Operations," Version 3, December 23, 2008
- TS-005, "Preparation of 10 CFR 21 Evaluations," Version 3, November 19, 2007
- NL-005, "10 CFR 21 Evaluations," Version 2, August 8, 2008
- Condition Report (CR)2009100139, March 5, 2009

b. 10 CFR Part 21 and 10 CFR 50.55(e) Procedure and Implementation

ND-ARL-017 provides instructions to SNC ND personnel to ensure that potential deviations and failures to comply pursuant to 10 CFR Part 21 and 10 CFR 50.55(e) are evaluated for potential substantial safety hazards and that notifications and reports are made as required. ND-ARL-017 is applicable to licensing, design, procurement, fabrication, construction, inspection, and testing activities associated with Vogtle Units 3 and 4. It also applies to personnel working in support of the ND organization, contractors, and consultants performing work for SNC ND.

The NRC inspection team reviewed the implementation of the SNC ND 10 CFR Part 21 and 10 CFR 50.55(e) programs. Upon evaluation of SNC ND 10 CFR Part 21 implementation activities, the inspection team learned that SNC ND had not performed any 10 CFR Part 21 evaluations. The team verified that SNC ND had a procedure in place as required by requirements of 10 CFR 21.2(a) to evaluate potential deviations and failures to comply that could cause a substantial safety hazard at the time the Vogtle Units 3 and 4 COLA was docketed (May 2008). The NRC inspection team observed that SNC ND relied on SNC procedures from its operating fleet before the implementation of ND-ARL-017.

The NRC inspection team reviewed ND-ARL-017 and met with representatives of SNC ND to discuss the procedure. The NRC inspection team determined that ND-ARL-017 does not (1) accurately reflect the correct definitions of 10 CFR Part 21, (2) address all the requirements

of 10 CFR 50.55(e), and (3) use the correct terminology throughout the procedure. Specific examples of inaccurate definitions include the following:

- ND-ARL-017 defines “dedication” as an *acceptable* process instead of an *acceptance* process. ND-ARL-017 also includes the definition of “dedication” for both 10 CFR Part 50, “Domestic Licensing of Production and Utilization Facilities,” licenses and licenses pursuant to 10 CFR Parts 30, 40, 50 (other than nuclear power plants), 60, 61, 63, 70, 71, or 72. During the inspection, the applicant noted that Section 1.1.4 of the Vogtle Units 3 and 4 combined license application (COLA) requested necessary licenses to be issued under 10 CFR Parts 30, 40, and 70. However, ND-ARL-017 does not distinguish between the applicability of the two definitions of “dedication” and when they should be used.
- ND-ARL-017 defines “defect” as “a deviation in a portion of the site subject to the early site permit, standard design certification, standard design approval, construction permit, combined licensing requirements of 10 CFR Part 52 provided: (1) the deviation could, on the basis of an evaluation, create a substantial safety hazard, and (2) the portion of the site containing the deviation has been offered to SNC for acceptance.” ND-ARL-017 does not include the requirements of 10 CFR Part 50 in the definition of “defect.”
- ND-ARL-017 defines “discovery” as the completion of the documentation first identifying the existence of a deviation within the evaluation procedures discussed in 10 CFR 21.21(a). In this definition, ND-ARL-017 does not incorporate the phrase “potentially associated with a substantial safety hazard” following “deviation” as given in 10 CFR 21.3, “Definitions.”

The NRC inspection team determined also that ND-ARL-017 does not address the requirements of 10 CFR 50.55(e). Specific examples include the following:

- With regard to applicability, ND-ARL-017 states that “10 CFR 50.55(e) reporting requirements contained within this procedure are applicable from the time the early site permit (ESP) for Vogtle Units 3 and 4 is granted until the time the NRC makes its 10 CFR 52.103(g) finding.” The NRC inspection team noted that 10 CFR 50.55(e) does not apply to ESPs. During the inspection, the applicant noted that the description of the applicability of 10 CFR 50.55(e) should refer to the limited work authorization instead of the ESP.
- Section 6.1.6 of ND-ARL-017 states, “a determination that any significant breakdown in any portion of the quality assurance program conducted under Appendix B, “Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants,” to 10 CFR Part 50 which could have produced a defect in a basic component shall also be evaluated in accordance with 10 CFR 50.55(e)(3)(iii)(c).” The regulation in 10 CFR 50.55(e)(3)(iii) requires that the director or responsible officer of the holder of the COL be informed within 5 working days if the construction or manufacture of a facility or activity undergoes a significant breakdown in any portion of the quality assurance (QA) program. The NRC inspection team noted that ND-ARL-017, as written, calls for an evaluation after the determination has been made that a significant breakdown has occurred in the QA program. The NRC inspection team noted that Section 6.3.4 of ND-ARL-017 also requires a determination of the existence of a substantial safety hazard after a condition is identified as a significant breakdown in the QA program.

- Section 7 of ND-ARL-017 does not include the records retention requirements of 10 CFR 50.55(e).

The NRC inspection team also identified several instances within ND-ARL-017 where the terms “deviation” and “defect” appear to be used interchangeably. The NRC inspection team noted that SNC ND opened condition report (CR) CR2009100139 to address the inconsistent use of certain terms and to enhance the 10 CFR Part 21 evaluation process described in ND-ARL-017.

Based on the examples stated above, the NRC inspection team determined that SNC ND did not adopt an appropriate procedure (ND-ARL-017) to evaluate deviations and failures to comply associated with substantial safety hazards. The NRC inspection team noted that Section 6, “Document Control,” of the SNC NDQAM states that this control system shall provide for review of documents for adequacy, completeness, and correctness before their approval and issuance. The NRC inspection team identified this issue as Violations 05200025/2009-201-01 and 05200026/2009-201-01.

c. Conclusions

Except for the issues identified in Violations 05200025/2009-201-01 and 05200026/2009-201-01, the NRC inspection team concluded that the SNC ND 10 CFR Part 21 and 10 CFR 50.55(e) program requirements are consistent with regulatory requirements.

2. Training and Qualification of Personnel

a. Inspection Scope

The NRC inspection team reviewed SNC ND policies and procedures for indoctrination and training of personnel performing activities affecting quality to assess compliance with the requirements of Criterion II, “Quality Assurance Program,” of Appendix B to 10 CFR Part 50. Specifically, the NRC inspection team verified that SNC ND has adequately implemented and maintained personnel training and qualification processes to assure that proficiency was achieved and maintained by SNC ND personnel.

Within the scope of this area of the inspection, the NRC inspection team reviewed the following procedures and records:

- ND-ARL-008, “Vogtle Deployment Training Program,” Version 5, March 2, 2009
- ND-ARL-017, “10 CFR Part 21 and 10 CFR 50.55(e) Evaluating and Reporting of Defects and Noncompliances for Vogtle Units 3 and 4,” Version 2, March 3, 2009
- ND-001, “Nuclear Development Conduct of Operations,” Version 3, December 23, 2008
- TS-005, “Preparation of 10 CFR 21 Evaluations,” Version 3, November 19, 2007
- Training records for SNC ND personnel
- CR2007100736, December 21, 2007

b. Observations and Findings

Section 2.6 of the SNC NDQAM establishes that personnel assigned to implement elements of the NDQAM shall be capable of performing their assigned tasks. The NRC inspectors confirmed that SNC ND established and maintained formal indoctrination and training programs for personnel performing, verifying, or managing activities within the scope of the NDQAM. Also, the NRC inspection team verified that key SNC ND QA personnel involved with the Vogtle Units 3 and 4 COLA had records of training completion.

The NRC inspection team reviewed procedure ND-ARL-008, which provides training and qualification program requirements for ND personnel. The training program described in this procedure implements portions of the indoctrination, qualification, and training requirements specified in the NDQAM.

ND-ARL-008 requires that the supervisor develop a Qualification Guide for each individual who is performing site engineering, licensing, or construction activities for ND. The qualification guide is developed within a month of the individual's start in a position. ND supervisors are responsible for identifying which type of orientation training is needed and which job performance requirements (JPRs) should be assigned. JPRs identify the specific activities for which a person needs to be qualified to satisfy particular business needs. Personnel can meet the JPRs either by attending training or being evaluated on their understanding. Upon completion of all the qualification steps, the supervisor verifies completion of the qualifications and forwards the JPR form to the ND training coordinator for processing and filing of the JPR in the employee's training file.

The NRC inspection team reviewed a sample of training and qualification records for SNC ND. The inspection team verified that individuals were properly qualified and indoctrinated to perform safety-related work. Records reviewed included training record forms, JPRs, checklists, and attendance sheets. All training was documented on the appropriate training record forms in accordance with SNC ND procedures. Specifically, the NRC inspection team verified that all the training records reviewed as part of the sample selected required training on a 10 CFR Part 21 procedure. The NRC inspection team verified that SNC ND procedure ND-ARL-017 is one of the requirements that SNC ND personnel need to complete as part of JPR ND-001, Version 6. However, during the review of training records the inspection team noted that only one of the five samples included the requirement to complete ND-ARL-017. Four of the records include an older version of JPR ND-001 which required the individuals to complete ND-001. The previous version of JPR ND-001 did not include ND-ARL-017 as a requirement because it was not implemented as the SNC ND Part 21 procedure.

Step 8.2 in ND-001 establishes that in addition to corrective action program (CAP) identification, any member of SNC ND who obtains credible evidence of the existence of a condition as described in 10 CFR Part 21 shall immediately notify management to ensure the appropriate evaluation per TS-005. However, TS-005 has been deleted and superseded by NL-005, "10 CFR 21 Evaluations," which is the corporate program that SNC has in place for the operating fleet. The NRC inspection team asked the SNC ND training coordinator about the 10 CFR Part 21 training requirement deficiencies found in JPR ND-001 and confirmed that the training coordinator was aware that ND-001 incorrectly references TS-005 rather than ND-ARL-017. SNC ND opened CR2009100137 to address the training inconsistencies related to 10 CFR Part 21. As part of their corrective actions, SNC ND planned to revise ND-001 and JPR ND-001 to reference the correct 10 CFR Part 21 procedure (ND-ARL-017). The NRC inspection team reviewed the proposed changes to ND-001 and JPR ND-001 and found

them acceptable. Since SNC ND self-identified this deficiency and opened a CR to address this deficiency, the NRC inspection team identified this issue as Non-Cited Violation 0520025/2009-201-03 and 05200026/209-201-03.

c. Conclusion

The NRC inspection team concluded that the training and qualification requirements conform to the regulatory requirements of Criterion II of Appendix B to 10 CFR Part 50 and have been appropriately translated into SNC ND implementing procedures to support the Vogtle Units 3 and 4 COLA. SNC ND self-identified an issue where the personnel training and qualification process did not include adequate training to the SNC ND 10 CFR Part 21 program (ND-ARL-017). Since SNC ND self-identified the issue and opened a CR to correct the issue, the NRC inspection team identified this issue as Non-Cited Violation 0520025/2009-201-03 and 05200026/209-201-03 consistent with the NRC Enforcement Policy.

3. Procurement Document Control

a. Inspection Scope

The NRC inspection team reviewed SNC QA program commitments and controls for procurement of material, equipment, and services from its primary engineering, procurement, and construction (EPC) contractor, Westinghouse/Shaw Stone & Webster, to verify compliance with Criterion IV, "Procurement Document Control," of Appendix B to 10 CFR Part 50. The inspection covered procurement activities during the period from April 2007 through February 2009. Specifically, the NRC inspection team reviewed SNC supply chain upper tier and implementing procedures, procurement engineering procedures governing the imposition of contractual technical and quality requirements, and procurement documents for Vogtle Units 3 and 4. The NRC inspection team discussed related documents and activities with responsible SNC management and vendor representatives.

SNC contracted with Bechtel Power Corporation to prepare the site safety analysis report and with MACTEC Engineering and Consulting, Inc., to perform geotechnical field investigations. The NRC staff reviewed and documented these contract activities in a previous inspection report, dated October 5, 2006 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML0628304661).

Within the scope of this inspection, the NRC inspection team reviewed the following procurement-related contracts and governing policies and procedures:

- Quality Assurance Topical Report (QATR), SNC-1, Section 4, "Procurement Document Control," Version 4, December 17, 2008
- NMP-SCM-004, "Procurement of Materials and Services," Version 7, December 23, 2008
- NMP-DS-PE-001, "Development of Technical/Quality Requirements," Version 1, July 30, 2008
- Contract No. 7074592 for New Plant Support Services, Stone & Webster, Inc., and Georgia Power Company, December 1, 2006

- “Alliance Agreement for Outage Services, Equipment, and Associated Services,” (Southern Nuclear/Westinghouse Electric), January 1, 2004
- PO 8000036, issued to Stone & Webster on May 16, 2008
- PO 8000014, issued to Westinghouse on September 26, 2007

b. Observations and Findings

The QATR establishes the SNC corporate quality assurance policy for plants operated by SNC. Section 4 of the SNC QATR establishes the necessary measures and governing procedures to assure that purchased items and services are subject to quality and technical requirements to assure the items are suitable for the intended service and are of acceptable quality, consistent with their effect on safety. These controls include provisions for engineering evaluations for determining technical and QA requirements and invoking applicable technical, regulatory, administrative, quality, and reporting requirements.

NMP-SCM-004 establishes the processes and responsibilities for procurement of materials and services to support the nuclear power plants operated by SNC. Its purpose is to ensure that procurement documents properly include or reference the applicable regulatory requirements, design bases, and other QA requirements.

NMP-DS-PE-001 is a procurement engineering procedure that provides guidance for preparation, review, approval, and processing of technical/quality requirements (TQR) for the procurement of items and services to support the nuclear power plants operated by SNC. Personnel who prepare, review, and approve TQR are trained in the process and qualified to perform this activity. Three individuals perform these three activities (preparation, review, and approval) in accordance with QATR Sections 3 and 4 and the American Society of Mechanical Engineers (ASME) standard NQA-1-1994, “Quality Assurance Program Requirements for Nuclear Facilities.” The generated documents are QA records, maintained in accordance with QA program requirements.

b.1 Procurement Documents

The NRC inspection team selected a sample from a list of SNC AP1000 project purchase orders (POs) issued during the period from April 2007 to February 2009. Of the 82 POs identified, 2 were issued to Westinghouse and 8 were issued to Stone & Webster. Only 1 of these 10 procurement documents was for safety-related activities/services. The NRC inspection team discussed the general features of the SNC procurement process with specific reference to the Westinghouse and Stone & Webster POs with the Supply Chain Project Manager. The Supply Chain Project Manager described the process starting with generation of purchase requisitions by Engineering, imposition of TQR by Procurement Engineering, to the Receipt and Inspection process, which performs confirmatory inspections of delivered items. Procurement Engineering processes all engineering requisitions for materials and services and invokes applicable TQR in contracts. Procurement Engineering reports directly to the Manager, Corporate Engineering, and indirectly to the Supply Chain. The NRC inspection team found the flow of procurement documentation and the sampled POs to conform to SNC procurement policies and procedures.

b.2 Engineering, Procurement, and Construction (EPC) Agreement

A consortium consisting of Westinghouse Electric Corporation and Shaw Stone & Webster has entered into an EPC agreement with Georgia Power Company (who acts as agent for the other Vogtle Electric Generating Plant, Units 3 and 4 Owners). The NRC inspection team verified that the SNC quality suppliers list (QSL) identified Westinghouse and Stone & Webster as currently approved suppliers of safety-related items and services. The scope of the EPC agreement includes all activities necessary to comply with the commitments in the COLA to the design, procurement, construction, and startup of the facility. Work under the EPC agreement is divided into two phases: Phase 1 defines work that can be performed before the Georgia Public Service Commission (PSC) authorizes the units and Phase 2 will commence following PSC authorization and the beginning of onsite construction. POs have been released only for Phase 1 activities. The NRC inspection team reviewed the EPC agreement and discussed contractual activities with project representatives of Westinghouse and Stone & Webster.

b.3 SNC Engineering, Procurement, and Construction Contracts with Stone & Webster

PO 8000036, issued to Stone & Webster on May 16, 2008, is a blanket PO for safety-related services conducted under Contract No. 7074592. Exhibit 1 of the contract defines the general scope of work. Exhibit 6 provides detailed work descriptions in a work breakdown structure format, which defines the various project management and engineering tasks to be performed. Specific work to be performed under the contract is controlled through SNC external work authorizations, released through purchase documents.

The NRC inspection team examined and verified the PO against applicable regulatory requirements, in particular Appendix B to 10 CFR Part 50 and 10 CFR Part 21. The inspectors verified that provisions for right of access to the supplier facilities, submittal of nonconformance reports, and quality requirements were contractually invoked. The supplier's QA program was invoked for activities performed under the contract, and a copy of the QA program description was specified to be provided for SNC review and approval. The NRC staff has reviewed the subject QA program, "S&W Standard QA Program (SWSQAP)," 2000 Edition, Revision 4, and found it to satisfy the requirements of Appendix B to 10 CFR Part 50 (see the NRC letter at ADAMS Accession No. ML041610092). The Stone & Webster representative reported that ongoing work at its Charlotte, NC, office includes preparation of the final excavation plan, backfill plan, and design specifications for the retaining wall and preparation of purchase requisitions. The inspection team reviewed Change 1 to the PO, dated February 9, 2009, which incorporated changes in contract administration, delivery date, and additional addenda, and determined it to be subject to the same degree of control, review, and approval as the original PO.

b.4 SNC Contracts with Westinghouse Electric Company

The NRC inspection team examined PO 8000014, issued to Westinghouse on September 26, 2007, with respect to conformance with SNC implementing procedures. The NRC inspection team found that the PO included SNC TQR similar to those invoked by the Stone & Webster PO discussed above. The PO invoked the terms and conditions of the SNC Westinghouse contract for its nuclear operating fleet, "Alliance Agreement for Outage Services, Equipment, and Associated Engineering Services," dated January 1, 2004.

Contract details, as defined by a Westinghouse letter dated July 16, 2007, are incorporated by reference as included in an attachment (Exhibit 1) to the PO. Exhibit 1 provides detail for each

authorized task, including work scope, schedule, and deliverables. The authorizing PO includes non safety-related deliverables and consists of tasks related to SNC AP1000 Phase 1 tasks involving project management, contract administration, and preparation of documents for procurement of equipment with long lead or early need times. The NRC inspection team discussed with a Westinghouse representative provisions for imposing contractual requirements on subcontractors, contracts, and testing of the steam generators and reactor vessel head, and development of purchase requisitions for long-lead components. Work authorized under the PO is to be performed in accordance with the supplier's QA program, Westinghouse Quality Management System, Revision 5, dated October 1, 2002. The NRC staff has reviewed the subject QA program (Westinghouse QMS, Revision 5) and had found to satisfy the requirements of Appendix B to 10 CFR Part 50 (ADAMS Accession No. ML022540895).

c. Conclusions

The NRC inspection team concluded that the procurement document control process requirements conform to the regulatory requirements of Criterion IV of Appendix B to 10 CFR Part 50 and have been implemented in accordance with applicable SNC procedures in support of Vogtle Units 3 and 4 COL EPC procurement activities. No findings of significance were identified.

4. Nonconforming Materials, Parts, or Components

a. Inspection Scope

The NRC inspection team reviewed the SNC NDQAM and implementing policies and procedures that govern the control of conditions adverse to quality to verify compliance with the requirements of Criterion XV, "Nonconforming Materials, Parts, or Components," of Appendix B to 10 CFR Part 50. Specifically, the NRC inspection team reviewed the following documents:

- "Nuclear Development Quality Assurance Manual," Version 8, March 14, 2008
- ND-001, "Nuclear Development Conduct of Operations," Version 3, December 23, 2008
- ND-ARL-006, "Advance Reactor Licensing Implementing Procedure Reference Document," Version 5, March 3, 2009

The NRC inspection team also discussed the process for control of nonconforming products with members of SNC's management and staff. The team did not review any samples because SNC ND has not implemented the program.

b. Observations and Findings

Section 15 of the SNC NDQAM establishes the necessary measures and governing procedures to control items, including services that do not conform to specified requirements to prevent inadvertent installation or use. Necessary measures are described that govern identification, documentation, evaluation, segregation when practical, disposition of nonconforming items, notification to affected organizations, and the implementation of a reporting program which conforms to the applicable requirements of 10 CFR Part 52, "Licenses, Certifications, and Approvals for Nuclear Power Plants"; 10 CFR 50.55(e); and 10 CFR Part 21.

During conversations with SNC ND responsible management, the NRC inspection team learned that SNC ND did not have a nonconformance process in place for Vogtle Units 3 and 4. SNC ND has the necessary measures and procedures to reference the corporate procedure (SCM-005, "Warehouse Operations," Version 18, December 19, 2005) or to create its own procedure once SNC ND starts receiving parts as part of the Vogtle Units 3 and 4 construction. Additionally, ND-001 states that deficiencies, defects, noncompliances, and failure to adhere to management expectations are identified and documented in accordance with SNC CAP procedure NMP-GM-002.

To verify implementation of the control of nonconforming products process, the NRC inspection team requested copies of Vogtle Units 3 and 4 records of deviation notices and related evaluations and reports that SNC ND had completed. At the time, SNC ND had not generated any deviation notices. SNC ND will implement the control of nonconforming products process once construction of Vogtle Units 3 and 4 begins.

c. Conclusions

The NRC inspection team concluded that the requirements of the SNC ND control of nonconforming products program are consistent with the regulatory requirements of Criterion XV of Appendix B to 10 CFR Part 50 and have been appropriately implemented as required by SNC NDQAM and associated procedures described above to support Vogtle Units 3 and 4 COL activities. No findings of significance were identified.

5. Corrective Action Program

a. Inspection Scope

The NRC inspection team reviewed the SNC NDQAM and implementing policies and procedures that govern the control of conditions adverse to quality to verify compliance with the requirements of Criterion XVI, "Corrective Action," of Appendix B to 10 CFR Part 50. Specifically, the NRC inspection team reviewed the following documents:

- "Nuclear Development Quality Assurance Manual," Version 8, March 14, 2008
- NMP-GM-002, "Corrective Action Program," Version 8, February 12, 2009
- NMP-GM-002-001, "Corrective Action Program Instructions," Version 12, February 17, 2009
- NMP-GM-002-F01, "Condition Report Form," Version 1
- NMP-GM-002-F010, "Create a New Condition Report," Version 2
- NMP-GM-002-F26, "Management Review Meeting (MRM) Charter," Version 2
- ND-ARL-006, "Advance Reactor Licensing Implementing Procedure Reference Document," Version 5, March 3, 2009
- ND-ARL-017, "10 CFR Part 21 and 10 CFR 50.55(e) Evaluating and Reporting of Defects and Noncompliance for Vogtle Units 3 and 4," Version 2, March 3, 2009

- ND-001, "Nuclear Development Conduct of Operations," Version 3, December 23, 2008
- CR2008100180, April 10, 2008
- CR2008100700, November 11, 2008

The NRC inspection team also reviewed a sample of CRs associated with the SNC ND COLA and NDQAM program development activities to verify compliance with program requirements and adequate implementation of those requirements.

b. Observations and Findings

b.1 Policies and Procedures for the Corrective Action Program

Section 16 of the SNC NDQAM establishes the high-level requirements and responsibilities for the control of conditions adverse to quality and requires personnel to report conditions adverse to quality to appropriate management for resolution in accordance with appropriate procedures. Section 16.1 of the NDQAM describes the process that SNC ND has in place to identify, evaluate, and report defects and noncompliances in accordance with 10 CFR Part 21 and/or 10 CFR 50.55(e), as applicable. The SNC ND reporting program applies to safety-related activities and services performed by SNC ND and/or SNC ND suppliers and subsuppliers providing input to the COLA.

NMP-GM-002 outlines roles and responsibilities, provides key definitions, and establishes a general outline of the SNC CAP. This upper tier procedure requires the identification, documentation, and correction of conditions adverse to quality. The procedure asserts that a CR should be written whenever an individual identifies an event, condition, problem, or process that needs improvement. Necessary actions associated with a CR must be documented in an action item (AI) report.

NMP-GM-002 provides for the assignment of a severity level on a scale from 1 to 5, based on the risk significance and consequence of the condition (Severity Level 1 is the highest risk-significance level). The procedure requires that the department assigned to handle the CR be responsible for developing appropriate and effective corrective actions to address the issue identified.

NMP-GM-002-001 is a lower tier document, which outlines CAP requirements and provides instructions for performing various aspects of the SNC CAP process. The purpose of this CAP instruction is to promote effective, consistent use of the CAP across the SNC fleet. The procedure sets forth requirements and instructions for activities such as the processing of CRs; reviews by the departmental CAP coordinator (CAPCO) and management; performance of cause analyses; development, review, approval, and completion of corrective actions; and CAP trending of events and causes. In addition, step-by-step detailed instructions are provided for initiating, reviewing, tracking, and closing CRs and AI reports into the SNC corrective action database (Syncpower).

ND-ARL-006 describes the applicable SNC procedural reference used to satisfy the requirements of SNC NDQAM and safeguard information control. This procedure provides for controls on the identification and correction of Vogtle Units 3 and 4 COL project conditions adverse to quality. Any conditions adverse to quality pertaining to the actions or functions specific to COL activities are addressed in accordance with NMP-GM-002.

b.2 Implementation of the Corrective Action Program

The NRC inspection team noted that NMP-GM-002 adequately identifies sources of quality and product safety-related problems that result in the generation of a CR. The NRC inspection team verified that NMP-GM-002-001 provides adequate guidance for the review of corrective actions to determine if they are effective in precluding the recurrence of the deficiencies. However, the inspection team found that NMP-GM-002 and NMP-GM-002-001 do not require personnel to review the issue identified in a CR to determine if a 10 CFR Part 21 evaluation is required. NMP-GM-002-F01, which is referenced as a sample CR form, does not include a space for a 10 CFR Part 21 determination.

ND-ARL-017 states, in part, that all identified deviations or failures to comply shall be evaluated to determine if a defect or failure to comply associated with a substantial safety hazard exists. However, the NRC inspection team noted that NMP-GM-002 does not reference or include a mechanism to initially identify a potential 10 CFR Part 21 deviation for further evaluation using ND-ARL-017.

The NRC inspection team found the lack of procedural guidance for the evaluation of the applicability of 10 CFR Part 21 in the corrective action process to be inconsistent with Section 16.1 of the NDQAM. This failure to provide adequate procedural guidance for 10 CFR Part 21 applicability under the corrective actions process and to appropriately translate requirements of the NDQAM into implementing procedures has been identified as part of Violations 05200025/2009-201-02 and 05200026/2009-201-02.

The NRC inspection team reviewed all the CRs and AIs that SNC ND had issued for Vogtle COL activities. The NRC inspection team noted that each CR contains a detailed description of the deficiency and verified that each corrective action was assigned to an organization responsible for its completion. For the two CRs generated as of March 5, 2009, the NRC inspection team reviewed the proposed corrective action and subsequent resolution and found them to be adequate to address the identified problem. The NRC inspection team noted that the CRs were of low risk or had minimal impact on Vogtle Units 3 and 4 COL activities. However, the NRC inspection team also noted that the CRs were not evaluated for the applicability of 10 CFR Part 21. The NRC inspection team identified this issue as another example of Violations 05200025/2009-201-02 and 05200026/2009-201-02.

The NRC inspection team verified SNC ND implementation of NMP-GM-002 by observing the use of Syncpowr to initiate a CR. During the demonstration, SNC ND personnel used NMP-GM-002-001 as described by NMP-GM-002. The NRC inspection team noted that the screen used by the initiator does not provide a section prompting the initiator to indicate if 10 CFR Part 21 applies. The NRC inspection team asked what process SNC ND has in place to evaluate the identified condition for 10 CFR Part 21 applicability. SNC ND told the NRC inspection team that the CAPCO, not the initiator, is responsible for making this determination. The NRC inspection team verified NMP-GM-002 and confirmed that the procedure is silent as to the CAPCO responsibility and the process to be followed with regards to 10 CFR Part 21 screening for applicability. The NRC inspection team verified that SNC ND has an informal process in place to screen all CRs for 10 CFR Part 21 applicability that is not proceduralized. SNC ND indicated that all CRs are assigned a CR type from a drop-down menu available in Syncpowr. Normally, the CAPCO selects and enters the CR type. The CAPCO's expertise may serve as an informal screening process. Safety-related CRs with plant applicability are normally forwarded to associated plants for 10 CFR Part 21 evaluations. If a CR is identified as affecting the SNC ND (i.e., Vogtle COLA) and is determined to have an impact on safety-related activities

or equipment, then the CR will be forwarded to SNC ND to determine 10 CFR Part 21 applicability.

SNC ND indicated that the need for 10 CFR Part 21 review may be identified at four points in the CAP process. First, the initiator or the CAPCO may assign a CR type that (Syncpower) identifies the CR as needing a 10 CFR Part 21 evaluation. Second, during the CAPCO Committee review, members of the CAPCO staff with expertise in 10 CFR Part 21 evaluations may identify the CR as needing a 10 CFR Part 21 evaluation. Third, all CRs are sent to the CAPCO and management. Knowledgeable CAPCO staff members and licensing managers may identify the CR as requiring a 10 CFR Part 21 evaluation. Finally, per ND-001 Step 8.2, all SNC ND personnel are responsible for notifying SNC ND management of any credible evidence of a condition requiring evaluation in accordance with 10 CFR Part 21. Since SNC ND management is responsible for ensuring that such evaluations are performed.

The NRC inspection team was unable to identify any objective evidence of who is responsible or what procedural guidance SNC ND has in place for the screening of new CRs for 10 CFR Part 21 applicability. NMP-GM-002 does not adequately define either the responsibilities or the process used by SNC ND for screening new CRs for 10 CFR Part 21 applicability. Also, NMP-GM-002 does not adequately define either the responsibilities or the process utilized by SNC ND for screening of new CRs for 10 CFR Part 21 applicability. Additionally, NMP-GM-002 does not provide a link to the Part 21 reportability process (ND-ARL-017) once a determination is made that 10 CFR Part 21 is applicable. The NRC inspection team noted that SNC ND opened CR2009100138 to address the lack of procedural guidance for screening new CRs for 10 CFR Part 21 applicability. The NRC inspectors identified this issue as another example of Violations 05200025/2009-201-02 and 05200026/2009-201-02.

c. Conclusions

Except for the issues identified in Violations 05200025/2009-201-02 and 05200026/2009-201-02, SNC ND CAP requirements are consistent with the requirements of Criterion XVI of Appendix B to 10 CFR Part 50. Based on the review of the SNC ND corrective action process and a sample of CRs, the NRC inspection team concluded that strengthening the integration of 10 CFR Part 21 evaluation requirements into NMP-GM-002 is necessary to adequately implement the CAP consistent with regulatory requirements.

6. Control of Purchased Material, Equipment, and Services, and Audits

a. Inspection Scope

The NRC inspection team reviewed the SNC NDQAM and implementing policies and procedures that govern the control of purchased material, equipment, and services and the audit process to verify compliance with the requirements of Criterion VII, "Control of Purchased Material, Equipment, and Services," and Criterion XVIII, "Audits," respectively, of Appendix B to 10 CFR Part 50. The NRC inspection team also evaluated a sample of internal and external audit reports to verify compliance with program requirements and adequate implementation of those requirements. Specifically, the NRC inspectors reviewed the following documents:

- NMP-FO-201, "Supplier Quality Program Evaluation," Version 1, March 10, 2008
- NMP-FO-202, "Supplier Safety-Related Program Audits," Version 1, March 10, 2008

- NMP-FO-203, "Supplier Commercial Program Surveys," Version 1, March 10, 2008
- NMP-FO-204, "Supplier Audit/Survey Report Review," Version 1, March 10, 2008
- external audit of quality activities associated with the NuStart AP1000 Project at Westinghouse Electric Company, conducted June 5–6, 2006
- external surveillance of quality activities associated with the NuStart AP1000 Project at Westinghouse Electric Company, conducted June 26–29, 2007
- external audit by NUPIC of Westinghouse Electric Company, conducted August 18–22, 2008
- external audit of quality activities associated with MACTEC Engineering and Consulting, Inc., conducted August 6–7, 2008
- external audit of quality activities associated with Shaw Stone & Webster, conducted August 20–23, 2007
- external audit of quality activities associated with Bechtel Power Corporation, conducted March 3–7, 2008
- internal audit of quality activities associated with the VD organization, conducted November 14–30, 2007
- internal audit of quality activities associated with the Supply Chain management, conducted from August 6 through October 3, 2007
- internal audit of the CAP, conducted from January 10 through February 20, 2007

b. Observations and Findings

The NRC inspection team reviewed a sample of audits conducted by SNC ND in support of the Vogtle Units 3 and 4 COLA. The NRC inspection team reviewed the scope and depth of the audits and also reviewed the corrective actions associated with these audits.

(1) External Audit of Westinghouse Electric Company

The NRC inspection team reviewed Audit Report No. W06-01, which documented an audit performed at Westinghouse Electric Company. This audit focused on the progress of activities performed by the Westinghouse AP1000 projects organization. The audit report identified five concerns in the areas of software QA, document control, nonconforming items, and records. The findings were considered administrative in nature and deemed not to have a significant impact on the project. The audit report determined that controls in place and their implementation are adequate. In addition, the evaluation concluded that the performance of activities related to the AP1000 project was satisfactory and that the Westinghouse QA program had been effectively implemented. The NRC inspection team noted that SNC generated a Supplier Quality

Assurance Audit Report Review form, which documented the review and acceptance of the audit results in order to maintain Westinghouse on the Qualified Suppliers List (QSL).

(2) External Surveillance of Westinghouse Electric Company

The NRC inspection team reviewed Audit Report No. 2007S-07, which documented surveillance performed at Westinghouse Electric Company. This surveillance was performed to determine the adequacy of implementation of Westinghouse's QA program related to design activities for the AP1000 project. The surveillance verified implementation of corrective actions related to five open findings identified during a NuStart audit performed June 5–9, 2006. The NRC inspection team noted that the surveillance report documented the closure of four of the five open findings based on the satisfactory implementation of corrective actions by Westinghouse. During the surveillance, the auditors identified one finding in the area of design control, specifically concerning the completeness of closed design change proposals. The auditors considered this discrepancy to be administrative and without impact on the technical adequacy of the design change proposal data.

(3) NUPIC External Audit of Westinghouse Electric Company

The NRC inspection team reviewed Audit Report No. VA08111, which documented a NUPIC audit performed at Westinghouse Electric Company. The audit scope included the review of Westinghouse's QA program (QMS, Revision 5), and implementing procedures for the control of contract review, design, commercial-grade dedication, software QA, procurement, document control, organization, nonconforming items/10 CFR Part 21, internal audit, corrective action, training/certification, and records. The audit report identified 11 findings in the areas of design, commercial-grade dedication, procurement, and corrective action. The NRC inspection team noted that SNC had documented the review of the NUPIC audit and determined that Westinghouse's status was acceptable, pending the evaluation of the findings' safety significance by SNC ND. During conversations with SNC ND's responsible management, the NRC inspection team learned that SNC ND would not reset the clock for the Westinghouse QSL listing because of the findings of this audit. SNC ND will review the proposed resolution of findings by Westinghouse associated with this NUPIC audit and the findings associated with an NRC inspection performed October 27–31, 2008.

(4) External Audit of MACTEC Engineering and Consulting, Inc.

The NRC inspection team reviewed Audit Report No. 2008-003, which documented an audit performed by Bechtel Power Corporation at MACTEC Engineering and Consulting, Inc. The audit scope included safety-related geotechnical subsurface investigation, sample identification and control, calibration of measuring and test equipment, and materials testing laboratory activities. The audit included a review of the MACTEC QA manual, implementing procedures, in-process and completed records, and interviews with personnel. The audit report identified two findings in the areas of test control and QA program assessments. With the exception of the two identified findings, the audit report concluded that MACTEC's QA program had been effectively implemented. The NRC inspection team reviewed the audit report review form that was documented by SNC ND to evaluate the audit report results. The NRC inspectors noted that SNC ND

had reviewed MACTEC's report and found it acceptable. In addition, SNC ND included MACTEC on its QSL based on the results of this audit.

(5) External Audit of Shaw Stone & Webster

The NRC inspection team reviewed Audit Report No. CQA2007-117, which documented an audit performed at Shaw Stone & Webster (Shaw). The audit focused on the evaluation of Shaw's quality control measures established and implemented for design and engineering support services. The audit report identified four recommendations. The audit report also noted that the team could not verify implementation of several elements of Shaw's QA program because no safety-related work had been performed before or during the audit. However, the NRC inspection team noted that Shaw is included on the SNC ND's QSL. The NRC inspection team questioned the basis for accepting Shaw on the QSL without adequate assessment of the implementation of Shaw's QA program. After discussions with responsible personnel, the NRC inspection team learned that SNC ND imposed conditions on Shaw in the QSL that require an additional audit at the Charlotte facility to verify implementation of the controls for safety-related work before acceptance of safety-related products from the Charlotte location. The NRC inspection team reviewed the QSL and confirmed that the QSL documents these conditions. The NRC inspection team also noted that SNC ND conducted two additional limited-scope audits on November 13, 2008, to verify Shaw's implementation of activities related to the procurement of safety-related services and safeguards information storage.

(6) External Audit of Bechtel Power Corporation

The NRC inspection team reviewed Audit Report No. BPC-1-08, which documented a NUPIC audit performed at Bechtel Power Corporation. The audit focused on the areas of contract review, design, software QA, procurement, document control, nonconforming items, audits, corrective action, training, and field services. The audit identified one finding in the area of corrective action. The audit report stated that Bechtel completed corrective action for the finding after the audit and before issuance of the audit report, and the finding was closed. The audit report concluded that Bechtel had successfully implemented its "Nuclear Quality Assurance Manual." Additionally, the NRC inspection team reviewed the audit report review form that SNC ND documented to evaluate the Bechtel audit report results.

(7) Internal Audit of Vogtle Deployment (VD) Organization

The NRC inspection team reviewed Audit Report No. C-NVND-2007, which documented an internal QA audit of ND's VD Organization. The audit verified compliance with the NDQAM as applied to the VD Organization. The audit report contained one finding in the area of training, two comments in the areas of QA records and corrective action, respectively, and two recommendations in the areas of corrective action and procedure control. The NRC inspection team reviewed CR2007100733, dated December 21, 2007, which documented the resolution of the finding associated with training. This finding was closed based on the corrective actions taken by the VD Organization. The report concluded that, with the exception of the identified finding, the VD Organization had effectively implemented the NDQAM elements and administrative controls.

(8) Internal Audit of Supply Chain Management

The NRC inspection team reviewed Audit Report No. C-SCM-2007, which documented an internal QA audit of the Supply Chain management. The audit verified compliance with NDQAM policies and procedures as applied to Supply Chain management. The report identified six audit findings in the areas of dedication, corrective action, and QA record control. Additionally, the report made six comments in the areas of dedication, training, corrective action, records, and control of purchased material and equipment. The NRC inspection team reviewed the following CRs associated with the finding identified in the audit report: CR2007100577, CR2007100580, CR2007100581, CR2007100578, CR2007100579, and CR2007100582. The NRC inspection team noted that each CR identified the finding and proposed corrective action and was closed in a timely fashion.

(9) Internal Audit of the Corrective Action Program

The NRC inspection team reviewed Audit Report No. C-CAP-2007, which documented an internal QA audit of the CAP. The audit focused on the implementation of the NDQAM in the area of corrective action. The following organizations were audited: SNC Technical Support, SNC Corporate Services, SNC General Counsel, and SNC ND. The audit focused on the following areas: CAP, regulatory events, safety culture, corrective actions, and self-assessment. The report included one audit finding, one comment, and one recommendation. The NRC inspection team reviewed CR2007100091, dated February 20, 2007, which documented the resolution of the identified finding. The report concluded that the SNC corrective actions, as applied to SNC Corporate activities, had been effectively implemented.

c. Conclusions

The NRC inspection team concluded that the SNC control of purchased material and external and internal audit program requirements are consistent with the regulatory requirements of Criterion VII and Criterion XVIII, respectively, of Appendix B to 10 CFR Part 50. Based on the sample reviewed, the NRC inspection team also determined that the SNC NDQAM and associated procedures are being effectively implemented. No findings of significance were identified.

7. Entrance and Exit Meetings

On March 3, 2009, the NRC inspection team presented the inspection scope during an entrance meeting with Dale Lloyd, Vogtle Deployment Director; Charles R. Pierce, Vogtle Deployment Licensing Manager; and other SNC ND personnel. On March 6, 2009, the NRC inspection team presented the inspection results during an exit meeting with Joseph A. (Buzz) Miller, Senior Vice President; Charles R. Pierce; and other SNC ND personnel.

ATTACHMENT 1

1. PERSONS CONTACTED

Al Moore	Senior Engineer, Nuclear Development
Amy Aughtman	Senior Engineer, Nuclear Development
Brandon Waites	Senior Engineer, Nuclear Development
Brian Sweeney	Corrective Action Program Coordinator, Nuclear Development
Charles R. Pierce	Vogtle Deployment Licensing Manager, Nuclear Development
David McCorkle	Quality Assurance Manager, Shaw
Gary Becker	Licensing Engineer-Contractor, Nuclear Development
Jim Davis	Vogtle Deployment Training Coordinator
John M. Giddens, Jr.	Quality Assurance Manager, Nuclear Development
John Kurtik	Principal Quality Engineer, AP1000 Projects Quality
Ken Lowery	Corrective Action Program Supervisor, Southern Company
Rozelle Harris	Supply Chain Project Manager, Nuclear Development
Wesley Sparkman	Project Engineer, Nuclear Development

2. INSPECTION PROCEDURES USED

Inspection Procedure 35017, "Quality Assurance Implementation Inspection," July 29, 2008

Inspection Procedure 36100, "Inspection of 10 CFR Part 21 and 50.55(e) Programs for Reporting Defects and Nonconformances," October 3, 2007

3. LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

The NRC had performed no previous implementation inspections of the QA program governing the Vogtle Units 3 and 4 COL application.

<u>Item Number</u>	<u>Status</u>	<u>Type</u>	<u>Description</u>
05200025/2009-201-01 and 05200026/2009-201-01	Opened	NOV	Criterion VI
05200025/2009-201-02 and 05200025/2009-201-02	Opened	NOV	Criterion XVI
05200025/2009-201-03 and 05200025/2009-201-03	Closed	NCV	Criterion II

ATTACHMENT 2

Vogtle Units 3 & 4 QA Implementation Inspection Entrance and Exit Meeting Attendance

List of Attendees: (1) Entrance Meeting March 1, 2009, (2) Exit Meeting on March 6, 2009

<u>(1)</u>	<u>(2)</u>		
X	X	Kerri Kavanagh	NRC Inspection Team Leader
X	X	Jonathan Ortega-Luciano	NRC Inspection Team
X	X	Milton Concepcion	NRC Inspection Team
X	X	Kenneth Heck	NRC Inspection Team
	X	Brian Hughes	NRC Project Manager
	X	Mike Cash	NRC Office of the Inspector General
	X	Michael Zeitler	NRC Office of the Inspector General
X	X	Al Moore	Southern Nuclear Company
	X	Amy Aughtman	Southern Nuclear Company
	X	Angela Thornhill	Southern Nuclear Company
X	X	Brandon Waites	Southern Nuclear Company
X		Brian Sweeney	Southern Nuclear Company
X	X	Charles R. Pierce	Southern Nuclear Company
X	X	Dale Lloyd	Southern Nuclear Company
X		Dana Williams	Southern Nuclear Company
X		David McCorkle	Shaw
	X	Joseph (Buzz). Miller	Southern Nuclear Company
X		John Kurtik	Westinghouse, AP1000 Projects Quality
X	X	John M. Giddens, Jr.	Southern Nuclear Company
X	X	Mike Smith	Southern Nuclear Company
X	X	Randy Culver	Southern Nuclear Company
X	X	Rozelle Harris	Southern Nuclear Company
X		Tom Moorer	Southern Nuclear Company
X	X	Wesley Sparkman	Southern Nuclear Company