

David H. Jones
Regulatory Affairs Vice President
Vogtle 3&4

**Southern Nuclear
Operating Company, Inc.**
7825 River Road
Waynesboro, GA 30830

Tel 706.826.4336
Fax 706.826.5600
dahjones@southernco.com



December 14, 2012

Docket Nos.: 52-025
52-026

ND-12-2557

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555-0001

Southern Nuclear Operating Company
Vogtle Electric Generating Plant Units 3 & 4
Reply to Notice of Violation

Ladies and Gentlemen:

By letter dated November 14, 2012, the U.S. Nuclear Regulatory Commission (NRC) issued Inspection Report Numbers 05200025/2012-004 and 05200026/2012-004 concerning the inspection at Vogtle Electric Generating Plant (VEGP) Units 3 and 4.

The inspection report identified two Violations of NRC requirements. Enclosure 1 contains the response to Violation 05200025/2012-004-01 and Enclosure 2 contains the response to Violation 05200025/2012-004-02.

This letter contains NRC commitments as described in Enclosure 3.

If you have any questions regarding this letter, please contact Mr. Howard Mahan at (706) 437-6417.

LEO1
DO92
MLD

Mr. David H. Jones states he is the Regulatory Affairs Vice President of Southern Nuclear Operating Company, is authorized to execute this oath on behalf of Southern Nuclear Operating Company and to the best of his knowledge and belief, the facts set forth in this letter are true.

Respectfully submitted,

SOUTHERN NUCLEAR OPERATING COMPANY



David H. Jones

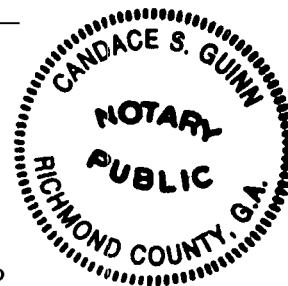
Sworn to and subscribed before me this 14th day of December, 2012

Notary Public: Candace S. Guinn

My commission expires: 06/22/2015

DHJ/DRG/kms

- Enclosures: 1) Reply to a Notice of Violation 05200025/2012-004-01
2) Reply to a Notice of Violation 05200025/2012-004-02
3) List of Regulatory Commitments



cc: Southern Nuclear Operating Company/ Georgia Power Company

Mr. S. E. Kuczynski, Chairman, President & CEO (w/o enclosures)
Mr. J. A. Miller, Executive VP, Nuclear Development
Mr. D. A. Bost, Chief Nuclear Officer (w/o enclosures)
Mr. B. L. Ivey, VP, Regulatory Affairs
Mr. M. D. Rauckhorst, VP, Vogtle 3 & 4 Construction (w/o enclosures)
Mr. D. H. Jones, VP, Regulatory Affairs, Vogtle 3 & 4
Mr. J. R. Johnson, VP, Operational Readiness, Vogtle 3 & 4 (w/o enclosures)
Mr. T. E. Tynan, Site VP, Vogtle 1 & 2
Mr. D. M. Lloyd, Project Support Director, Vogtle 3 & 4 (w/o enclosures)
Mr. C. R. Pierce, Regulatory Affairs Director
Mr. M. J. Ajluni, Nuclear Licensing Director
Mr. D. L. Fulton, Environmental Manager
Mr. C. H. Mahan, Site Licensing Manager, Vogtle 3 & 4
Ms. A. G. Aughtman, Corporate Licensing Manager, Vogtle 3 & 4
Mr. M. C. Medlock, ITAAC Project Manager, Vogtle 3 & 4
Mr. W. A. Sparkman, Licensing Supervisor
Mr. D. W. Midlik, Licensing Supervisor
Mr. B.H. Whitley, Nuclear Development Director
Document Services RTYPE: GOV0208
File AR.01.02.06

Nuclear Regulatory Commission

Mr. V. M. McCree, Region II Administrator (w/o enclosures)
Mr. F. M. Akstulewicz, Deputy Director Div. of New Reactor Licensing (w/o enclosures)
Mr. M. E. Tonacci, AP1000 Licensing Branch Chief (w/o enclosures)
Mr. R. G. Joshi, Lead Project Manager of New Reactors
Ms. D. L. McGovern, Project Manager of New Reactors
Mr. B. M. Bovol, Project Manager of New Reactors
Ms. M. A. Sutton, Environmental Project Manager
Mr. L. M. Cain, Senior Resident Inspector of VEGP 1 & 2
Mr. J. D. Fuller, Senior Resident Inspector of VEGP 3 & 4
Mr. G. Khouri, Senior Project Engineer VEGP 3 & 4
Mr. C. Abbott, Resident Inspector of VEGP 3 & 4
Mr. C. Huffman, Resident Inspector of VEGP 3 & 4

Oglethorpe Power Corporation

Mr. M. W. Price, Executive VP and Chief Operating Officer
Mr. K. T. Haynes, Director of Contracts and Regulatory Oversight

Municipal Electric Authority of Georgia

Mr. J. E. Fuller, Senior VP, Chief Financial Officer
Mr. S. M. Jackson, VP, Power Supply

Dalton Utilities

Mr. D. Cope, President and Chief Executive Officer

Shaw Stone & Webster, Inc.

Mr. M. Glover, Senior VP & Consortium General Manager (w/o enclosures)
Mr. G. Grant, VP, Licensing & Regulatory Affairs (w/o enclosures)
Ms. K. Stoner, Vogtle Project Manager (w/o enclosures)
Mr. C. A. Castell, Licensing Manager
Mr. E. C. Wenzinger, Licensing Engineer, Vogtle Units 3 & 4

Westinghouse Electric Company, LLC

Mr. T. C. Geer, VP, Licensing & Regulatory Affairs (w/o enclosures)
Mr. T. H. Dent, VP, Consortium Project Director Vogtle Units 3 & 4 (w/o enclosures)
Mr. P. A. Russ, Director, AP1000 Global Licensing
Mr. R. A. DeLong, Director of U.S. & International Licensing (acting)
Mr. S. A. Bradley, Vogtle Project Licensing Manager
Mr. T. J. Ray, Manager, AP1000 COL Licensing Support

Other

Mr. J. S. Prebula, Project Engineer, Bechtel Power Corporation (w/o enclosures)
Mr. R. W. Prunty, Licensing Engineer, Bechtel Power Corporation
Ms. K. K. Patterson, Project Manager, Tetra Tech NUS, Inc.
Dr. W. R. Jacobs, Jr., Ph.D., Executive Consultant, GDS Associates, Inc.
Mr. S. Roetger, Internal Consultant Analyst, Georgia Public Service Commission
Ms. S. W. Kernizan, Director of the Electric Unit, Georgia Public Service Commission
Mr. K. C. Greene, Partner, Troutman Sanders
Mr. S. Blanton, Partner, Balch Bingham
Ms. A. Monroe, South Carolina Electric & Gas Company
Mr. B. Kitchen, Duke Energy
Mr. S. Franzone, Florida Power & Light

Southern Nuclear Operating Company

ND-12-2557

Enclosure 1

Reply to a Notice of Violation

05200025/2012-004-01

Reply to a Notice of Violation 05200025/2012-004-01

This enclosure provides Southern Nuclear Operating Company's (SNC's) reply to the Notice of Violation (NOV) issued to SNC by the U.S. Nuclear Regulatory Commission (NRC) in a letter dated November 14, 2012. The NOV was generated from NRC inspections ending on September 30, 2012 that were performed with the purpose of examining activities conducted under the combined license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of the license.

Violation 05200025/2012-004-01 states:

Criterion III, "Design Control," of Appendix B, "Quality Assurance Program Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities," requires, in part, that "Measures shall be established to assure that applicable regulatory requirements and the design basis for safety-related structures, systems, and components are correctly translated into specifications, drawings, procedures, and instructions."

Section 3.8.4.4.1, "Seismic Category 1 Structures," of the Vogtle Units 3 and 4 Updated Final Safety Analysis Report (UFSAR) required that Seismic Category I Structural Submodules, CA20-04, CA20-07A, CA20-08A, CA20-29 and CA01-24; be designed in accordance with American Concrete Institute (ACI) 349-01, "Code requirements for Nuclear Safety Related Concrete Structures," and American Institute of Steel Construction (AISC) N690-94, "Specification for the Design, Fabrication, and Erection of Steel Safety-Related Structures for Nuclear Facilities."

Contrary to the above, on and before October 2, 2012, the licensee failed to assure that applicable regulatory requirements and the design basis for safety-related systems, structures, and components were correctly translated into specifications, drawings, and instructions. As evidenced by the following examples, the licensee failed to translate the regulatory and design basis requirements established, in part, by ACI 349-01, and AISC N690-94 into specifications, drawings, and instructions for the design and fabrication of Seismic Category I Structural Submodules CA20-04, CA20-07A, CA20-08A, CA20-29, and CA01-24:

- a. The licensee failed to properly translate design requirements into design drawings which resulted in Seismic Category I Structural Submodules CA20-07A and CA20-08A containing shear studs that did not meet minimum concrete cover requirements as specified in ACI 349-01. Specifically, ACI 349-01 required minimum concrete cover of 0.75 inches; however, the as-built Submodules CA20-07A and CA20-08A contained a concrete cover of less than 0.75 inches.
- b. The licensee failed to properly translate design requirements into design drawings, which resulted in Seismic Category I Structural Submodule CA20-04 containing shear studs that exceeded the maximum design spacing as specified by UFSAR, Figure 3.8.3.8, Sheet 1 of 3. Specifically, seven shear studs that were required in the approved design in the UFSAR were not included in Westinghouse drawing APP-CA20-S5-04004. As a result, the as-built configuration of Submodule CA20-04 failed to meet UFSAR maximum shear stud spacing requirements due to the omission of the seven shear studs.

- c. The licensee failed to properly translate design requirements into design specifications, which resulted in Seismic Category I Structural Submodule CA01-24 containing shear studs that exceeded the maximum design spacing as specified by UFSAR Figure 3.8.3.8, Sheet 1 of 3. Specifically, inspectors identified 5/8 inch shear studs located approximately 8 inches away from the plate edge for the CA01-24 submodule. Once the adjacent submodule has been joined to CA01-24, the distance between stud rows adjacent to the seam would exceed the maximum spacing requirements as specified by the UFSAR. As a result, the as-built configuration of Submodule CA01-24 failed to meet UFSAR maximum shear stud spacing requirements due to the spacing of shear studs near the plate edge.
- d. The licensee failed to properly translate design requirements into design specifications and drawings which resulted in Seismic Category I Structural Submodule CA20-04 containing embedded conduit that violated the minimum spacing requirements set forth in ACI 349-01. Specifically, ACI 349-01 required that embedded conduit not be spaced closer than three conduit diameters center to center; however, the as-built Submodule CA20-04 contained embedded conduit that had a center-to-center spacing of less than two conduit diameters.
- e. The licensee failed to properly translate design requirements into design specifications which resulted in Seismic Category I Structural Submodule CA20-29 containing shear studs which did not meet the minimum allowable spacing as required by AISC N690-94. Specifically, AISC N690-94 states that the transverse spacing for the 5/8 inch shear studs on submodule CA20-29 should have been no closer than 2.5 inches center to center. However, the as-built configuration of CA20-29 contained two rows of 5/8 inch shear studs that were located approximately 1.75 inches center-to-center.

This violation is associated with a Green SDP ITAAC finding.

Reason(s) for Violation 05200025/2012-004-01:

SNC accepts the violation and offers the following discussion regarding the circumstances which resulted in the violation:

SNC acknowledges its responsibility for providing oversight of its contractor's activities. For the AP1000, Westinghouse has the design authority for development of the specifications, drawings, and instructions necessary for the design and fabrication of Seismic Category I Structural Modules. Contributing factors resulting in this violation include:

- Industry codes for concrete and steel construction are being applied for the first time to Seismic Category I Structural Modules. Difficulty in interpreting code requirements contributed to this violation.
- Gaps in the implementation of SNC's oversight of contractor's design control contributed to this violation.

Improvements in processes for translating license basis information into detailed design documents were initiated in March 2012 and were addressed by the Westinghouse corrective action program. Identified corrective actions are ongoing and had not been fully implemented at the time the above examples were identified.

Corrective Steps Taken:

The examples identified by the NRC in this NOV have been evaluated and captured in the respective SNC and Consortium corrective action programs. Westinghouse Issue Reports (IRs) and SNC Condition Reports were generated for these issues.

Some submodules of CA20 have been received onsite. To ensure the issues are addressed prior to installation, a reject tag has been placed on nonconforming CA20 submodules in accordance with Shaw nonconformance procedures.

In June 2012, SNC performed a root cause analysis to address issues identified regarding SNC's oversight of Consortium activities to ensure that design documents are issued in accordance with the licensing basis and the licensing basis is appropriately updated to reflect design changes. As a result of the root cause analysis, the following actions were performed:

- Clear guidance on adequate oversight was proceduralized and implemented, including a clear division of responsibilities with respect to licensing basis conformance for the SNC ND Engineering and Regulatory Affairs Departments. This provides a more consistent and robust oversight of activities related to incorporating the design basis into design documents.
- Oversight metrics were established to assess the Consortium processes to maintain conformance between the design and the licensing basis. These metrics will quantify the Consortium's performance on an ongoing basis and enable prompt feedback if a negative trend is observed.

SNC Construction Engineering has enhanced the oversight process for review of Engineering and Design Coordination Reports (E&DCRs) and Nonconformance and Disposition Reports (N&D) issued by the Consortium. This provides another layer of engineering oversight to the normal Consortium E&DCR and N&D review and approval process.

Corrective Steps to be Taken:

A License Amendment Request (LAR) is being prepared to support local variations from the stud spacing requirements specified in the licensing basis. Westinghouse initiated IRs in their corrective action program to address each example to the violation. Westinghouse training on code interpretation is under development. Below are specific actions for each example identified within the violation:

Example a: Actions have been initiated to address the referenced studs such that compliance with code requirements is achieved. Design drawings will be updated to reflect this change. Stud installation specifications are undergoing revision to ensure compliance with code requirements.

Example b: Actions have been initiated to install studs in the referenced locations such that compliance with the licensing basis is achieved. Design drawings will be updated to reflect this change. Stud installation specifications are undergoing revision ensuring compliance with licensing basis requirements.

Example c: A License Amendment Request (LAR) is being prepared to support local variations from the stud spacing requirements specified in the licensing basis.

Example d: A calculation was performed providing technical justification for the conduit spacing. Additional process improvement corrective actions are ongoing.

Example e: Stud installation specifications are undergoing revision to ensure compliance with code requirements. Additional stud spacing assessments and corrective actions are ongoing as part of the offsite fabrication process and will be completed prior to installation.

SNC Construction Engineering and other industry participants completed a focused self assessment in October 2012 that examined SNC's current approach to oversight of Consortium activities. Results from this assessment include several recommendations for improvement in the performance of Consortium oversight. Enhancements as a result of these recommendations are on-going:

- Implement changes to E&DCR and N&D review procedures.
- Review, validate, or audit proposed consortium changes to the Design Change Proposal (DCP) and E&DCR processes.
- Perform an effectiveness review following the consortium changes to the DCP and E&DCR processes.

Date When Full Compliance Will Be Achieved:

Full compliance will be achieved upon submittal of the above mentioned LAR, or completion of other actions by May 31, 2013, whichever is later.

Southern Nuclear Operating Company

ND-12-2557

Enclosure 2

Reply to a Notice of Violation

5200025/2012-004-02

Reply to a Notice of Violation 05200025/2012-004-02

This enclosure provides Southern Nuclear Operating Company's (SNC's) reply to the Notice of Violation (NOV) issued to SNC by the U.S. Nuclear Regulatory Commission (NRC) in a letter dated November 14, 2012. The NOV was generated from NRC inspections ending on September 30, 2012 that were performed with the purpose of examining activities conducted under the combined license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of the license.

Violation 05200025/2012-004-02 states:

Criterion VII, "Control of Purchased Material, Equipment, and Services," of Appendix B, "Quality Assurance Program Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," states, in part, that "Measures shall be established to assure that purchased material, equipment, and services, whether purchased directly or through contractors and subcontractors, conform to the procurement documents. These measures shall include provisions, as appropriate, for source evaluation and selection, objective evidence of quality furnished by the contractor or subcontractor, inspection at the contractor or subcontractor source, and examination of products upon delivery."

Contrary to the above, as of July 2, 2012, SNC, through its contractor Stone & Webster INC (Shaw), failed to perform adequate inspections of safety-related materials at supplier facilities and failed to perform adequate examinations of products upon delivery, to assure that purchased materials conformed to the procurement documents. Specifically, during source and receipt inspections, Shaw failed to identify that submodule CA20-04, embed plates, and nuclear island basemat reinforcing steel did not conform to the following procurement documents, respectively: SV3-CA20-S5-04004, "Auxiliary Building Areas 5 & 6 Module CA20 Sub-module CA20-04 Structural outline Vertical Sections/Views," Revision 1; SV3-SS01-Z0-003, "Embedded and Miscellaneous Steel, Westinghouse Safety Class C," Revision 2; APP-CR01-Z0-011, "Furnishing of Safety Related Reinforcing Steel, Westinghouse Safety Class C," Revision 4.

This violation is associated with a Green SDP ITAAC finding.

Reason for Violation 05200025/2012-004-02:

SNC accepts the violation and offers the following discussion regarding the circumstances which resulted in the violation:

SNC acknowledges its responsibility for providing oversight of its contractor's activities. For the AP1000, the design authority and contractor are to perform adequate inspections of safety-related materials at supplier facilities and perform adequate examinations upon delivery, to assure that these materials conform to the procurement documents. Shaw's quality oversight and inspection program did not provide an effective strategic, integrated, and graded approach to assure the required quality of material, equipment and services.

Additionally, gaps were identified in implementation of SNC's oversight of contractor's source and receipt inspection activities.

Corrective Steps Taken:

Shaw initiated a Corrective Action Report (CAR), designated as a Significant Condition Adverse to Quality, to perform a Root Cause Analysis to address the issue described in this violation. The following actions are being taken:

- Submodule CA20-04 - Shaw initiated nonconformance and disposition (N&D) reports and a CAR to evaluate and correct the nonconforming condition associated with this issue. Shaw established restriction for Shaw Modular Solutions (SMS) on the Quality Rating List (QRL) to require a final review of as-built configuration and required that hold points be established during fabrication of selected modules, with primary focus on stud placement. Shaw also revised the purchase order to SMS to direct that exceptions to the procurement documents be documented on the certificate of compliance for the associated material.
- Auxiliary Building Embed Plates - Shaw initiated Unsatisfactory Inspection Reports (Unsat IRs) to evaluate and correct the nonconforming condition associated with the nonconforming embed plates and to evaluate and correct the nonconforming conditions for bend testing of repaired studs. The bend testing IR was closed on August 7, 2012, based on bend testing of the repaired studs. Shaw has invoked site inspection of embed plates, utilizing more comprehensive inspection criteria. Shaw completed QA surveillances of selected criteria in the embed plates contractor's QA program and included a review of Shaw source inspection activities.
- Nuclear Island Reinforcing Steel - Shaw removed the nonconforming rebar from the Vogtle Unit 3 nuclear island and invoked a site inspection requirement to verify rebar bend diameter prior to installation. Shaw also completed QA surveillances at the three rebar fabrication facilities and conducted rebar bend diameter inspection guideline training for rebar source inspection personnel.

To provide assurance that purchased material, equipment, and services continue to conform to the procurement documents, Shaw has taken the following additional actions:

- Increased the frequency and sampling method of Source Inspection activities and the number of resident procurement source inspectors supporting AP1000 work.
- Provided refresher training for procurement source inspectors.
- Revised purchasing procedures to capture operating experience and lessons learned (OE/LL).
- Directed embed plate vendor to obtain an independent audit of their Quality Assurance Program.

SNC has performed a review of the module to design drawings for those modules that have been delivered to the site.

SNC has performed an Apparent Cause Determination (ACD) for the purpose of determining corrective actions necessary to preclude the circumstances that led to this violation. Corrective actions currently being implemented include a risk-based CMP plan. This plan requires increased focus on receipt inspection activities, and increased monitoring of construction and fabrication schedules related to vendors and suppliers.

SNC performed detailed surveillances associated with the Unit 3 Basemat to ensure any deficiencies within the Shaw source inspection process would not result in additional unidentified nonconforming safety related equipment or commodities being installed.

Additionally, SNC has performed limited scope audits of the source inspection processes both at Shaw and Westinghouse to identify any gaps in the source inspection process. Increased focus on this program by SNC has contributed to increased inspections by Shaw and SNC to preclude reoccurrence of nonconforming items being installed.

Corrective Actions to be Taken:

Shaw will develop and implement a graded approach to quality oversight and inspection.

Shaw will develop and implement an integrated approach to affect quality oversight and inspection.

Date When Full Compliance Will Be Achieved:

Full compliance regarding issues of oversight of source and receipt inspection activities will be achieved by May 31, 2013.

Southern Nuclear Operating Company

ND-12-2557

Enclosure 3

Vogtle Electric Generating Plant (VEGP) Units 3 and 4

List of Regulatory Commitments

List of Regulatory Commitments

The following table identifies those actions committed to by the Southern Nuclear Operating Company in this submittal. Any other statements are provided for information purposes and are not considered to be regulatory commitments.

Regulatory Commitments	Due Date
1) Complete the Corrective Actions identified in the SNC response related to NOV 5200026/2012-004-01	May 31, 2013 or Submittal of LAR, whichever is later
2) Complete the Corrective Actions identified in the SNC response related to NOV 5200026/2012-004-02	May 31, 2013