



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II**

245 PEACHTREE CENTER AVENUE NE, SUITE 1200
ATLANTA, GEORGIA 30303-1257

September 16, 2011

Mr. Joseph A. Miller
Executive Vice President
Southern Nuclear Operating Company
241 Ralph McGill Blvd.
BIN 10240
Atlanta, GA 30308-3374

**SUBJECT: SOUTHERN NUCLEAR OPERATING COMPANY VOGTLE ELECTRIC
GENERATING PLANT UNITS 3 AND 4 - NRC INSPECTION REPORT
05200011/2011-009 AND NOTICE OF VIOLATION**

Dear Mr. Miller:

On August 18, 2011, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Vogtle Electric Generating Plant (VEGP) Units 3 and 4. The enclosed inspection report documents the inspection results, which were discussed on August 18, 2011, with Mr. David Jones and other members of your staff.

The purpose of the inspection was to determine if construction activities associated with site specific (SS) ITAAC 3.8.5.1.1 conducted under your early site permit (ESP) and limited work authorization (LWA) were in compliance with the Commission's rules and regulations and with the conditions of your ESP. Specifically, the inspection focused on addressing Unresolved Item (URI) 05200011/2011-002-001, "Waterproof Membrane Joint Detail Not Tested in Qualification Program," documented in NRC Integrated Inspection Reports 05200011/2011-02, 05200025/2011-04, and 05200026/2011-002. Within this area, the inspection consisted of the selected examination of procedures and representative records, observations of activities, and interviews with personnel.

Based on the results of this inspection, the NRC has determined that a Severity Level (SL) IV violation of NRC requirements occurred.

The violation was evaluated in accordance with the NRC Enforcement Policy. The current Enforcement Policy is included on the NRC's Web site at <http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>. The violation is cited in the enclosed Notice of Violation (Notice) and the circumstances surrounding it are described in detail in the subject inspection report. As described in Section 2.3, "Disposition of Violations," of the NRC Enforcement Policy, the violation is cited in the Notice because for reactor facilities under construction in accordance with 10 CFR Part 52, the site corrective action program must have been demonstrated to be adequate, prior to the issuance of non-cited violations, and as of this inspection, the NRC had not yet made this determination for VEGP Units 3 and 4. You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. If you have additional information that you believe the

NRC should consider, you may provide it in your response to the Notice. The NRC review of your response to the Notice will also determine whether further enforcement action is necessary to ensure compliance with regulatory requirements. If you contest the violation or significance of the NOV, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001, with copies to: (1) the Regional Administrator, Region 2; (2) the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and (3) NRC Senior Resident Inspector at VEGP Units 3 and 4.

In accordance with 10 CFR 2.390 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 document 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 or proprietary 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 is 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.

Sincerely,

/RA/

Bradley Davis, Acting Chief
Construction Inspection Branch 2
Division of Construction Inspection

Docket No. 52-00011
Early Site Permit No. ESP-004

Enclosures:

1. Enclosure 1: Notice of Violation (Notice)
2. Enclosure 2: NRC Inspection Report 052-00011/2011-009
w/attachment: Supplemental Information

cc w/encl: (See page 3)

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☒ PUBLICLY AVAILABLE
 ☐ NON-PUBLICLY AVAILABLE
 ☐ SENSITIVE
 ☒ NON-SENSITIVE
 ADAMS: ☒ Yes
 ACCESSION NUMBER: ML11259A159
 ☒ SUNSI REVIEW COMPLETE

OFFICE	RII:DCI	RII:DCI	RII:DCP			
SIGNATURE	Via email	ERH	Via Email			
NAME	R . Jackson	E. Heher	GKhour			
DATE	9/15/2011	9/15/2011	9/15/2011			
E-MAIL COPY?	YES NO	YES NO	YES NO			

OFFICIAL RECORD COPY DOCUMENT NAME: G:\CC\INSPECTION REPORTS\NEW REACTORS\VOGTLE\2011
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4

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Letter to Mr. Joseph A. Miller from Bradley Davis dated September 16, 2011.

SUBJECT: SOUTHERN NUCLEAR OPERATING COMPANY VOGTLE ELECTRIC
GENERATING PLANT UNITS 3 and 4 - NRC INSPECTION REPORT
05200011/2011-009

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NOTICE OF VIOLATION

Southern Nuclear Operating Company, Inc. (SNC)
Vogtle Electric Generating Plant (VEGP)
Waynesboro, GA

Docket Number: 05200011
License Number: N/A

During NRC inspections conducted between June 22 to 26, 2011 and August 17 to 18, 2011, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

Condition 3.G. of the SNC VEGP "Early Site Permit and Limited Work Authorization", states, in part, that SNC may perform the following activities under this LWA: installation of engineered backfill, retaining walls, lean concrete backfill, mudmats, and a waterproof membrane as described in the applicant's site safety analysis report (SSAR).

Section 3.8.5.1.1, "Waterproof Membrane," of the SNC VEGP SSAR states, in part, that prior to the procurement of the membrane material, a qualification program will be developed to demonstrate that the selected material will meet the waterproofing and friction requirements. The qualification program will include testing to demonstrate that the ITAAC design commitment in Table 3.8.5.1-1 for friction coefficient has been met. Testing methods will simulate field conditions to demonstrate that a minimum 0.7 coefficient of friction is achieved by the mudmat waterproof membrane structural interface.

Section 1.1, "Purpose," of Domestic AP1000 Project Specification SV0-AT01-Z0-001, "Nuclear Island Waterproofing Membrane," Revision 4, states, in part, that the membrane between the mudmats must transfer horizontal shear forces due to seismic (Safe Shutdown Earthquake) loading. This function is Seismic Category 1 and Seismic Category 1 components shall meet the same requirements as those of safety related components [10 CFR Part 50, Appendix B].

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," states, in part, that where a test program is used to verify the adequacy of a specific design feature in lieu of other verifying or checking processes, it shall include suitable qualifications testing of a prototype unit under the most adverse design conditions.

Contrary to the above, as of August 18, 2011, SNC failed to develop suitable qualification testing of a prototype unit to verify the waterproof membrane coefficient of friction for SS ITAAC 3.8.5.1.1. Specifically, SNC failed to adequately simulate the field conditions in the qualification testing to demonstrate that a minimum of 0.7 coefficient of friction would be achieved by the mudmat waterproof membrane structural interface. Several deviations were identified as evidenced by the following examples:

1. The use of Metaset Flex Sealant in the joints was not tested during qualification testing, but was used in the as-built system.
2. A 7-inch (in.) wide strip of methyl methacrylate reinforcement scrim material was embedded into the as-built waterproof membrane stripe coat, but was not tested during qualification testing.

3. Two additional 8-in. wide layers of membrane material were applied at the joints, creating a minimum thickness 80 mils greater than what was tested during qualification testing.
4. During the waterproof membrane material application and prior to pouring the upper mudmat, specific environmental conditions such as curing temperature, sunlight exposure, rain, weather cycling and aging, were not adequately addressed during qualification testing.

This is a Severity Level IV violation (Enforcement Policy Section 6.5.d).

Pursuant to the provisions of 10 CFR 2.201, Southern Nuclear Operating Company, Inc. 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 Regional Administrator, Region II, and a copy to the NRC Resident Inspector at the facility that is the subject of this Notice, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation: (1) the reason for the violation, or, if contested, the basis for disputing the violation or severity level, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken, 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. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as to why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001.

Because your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>, to the extent possible, it 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 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.

In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days of receipt.

Dated this 16th day of September 2011

U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No: 52-00011

License No: ESP-004

Report No.: 05200011/2011009

Licensee: Southern Nuclear Operating Company (SNC)

Facility: Vogtle Electric Generating Plant Units 3 and 4

Location: Burke County, GA

Inspection Dates: August 17 - 18, 2011

Inspectors: Elaine Heher, Construction Inspector, CIB2
Rahsean Jackson, Senior Resident Inspector, CPB4

Accompanying Personnel:

Anthony Ponko, Construction Inspector, CIB2
Bradley Davis, Acting Branch Chief, CIB2
Charles Ogle, Division Director, DCI

Approved by: Bradley Davis, Acting Chief
Construction Inspection Branch 2
Division of Construction Inspection

SUMMARY OF FINDINGS

IR 05200011/2011009; 8/17/2011 through 8/18/2011; Vogtle Electric Generating Plant (VEGP) Units 3 and 4; ITAAC-Related Installation of Structural Concrete.

This report covers an announced construction inspection performed by a team of regional based inspectors. One Severity Level IV violation (ITAAC-related construction finding) was identified. The Nuclear Regulatory Commission's (NRC's) program for the inspection of Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) is described in Inspection Manual Chapter 2503, "Construction Inspection Program: Inspections of Inspections, Tests, Analysis, and Acceptance Criteria (ITAAC) Related Work".

A. NRC-Identified Findings and Licensee Identified/Self-Revealing Violations Evaluated as Findings.

1. Inspection Procedure: 65001.02 Inspection of ITAAC-Related Installation of Structural Concrete.

VIO 05200025/2011009-01: Failure to Assure That Material Qualification Testing Associated With The Waterproof System Simulated Field Conditions: Based on the review of documentation and the observation of installation practices associated with site-specific (SS) ITAAC 3.8.5.1.1, the inspectors identified several examples where Southern Nuclear Operating Company, Inc (SNC) failed to simulate field conditions during qualification testing of the waterproof system. This issue was determined to be an ITAAC-related construction finding and a severity level (SL) IV violation of 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."

B. Licensee-Identified and Self-Revealing Violations Not Evaluated as Findings

None

REPORT DETAILS

A. ITAAC-RELATED INSPECTIONS

1. Inspection of ITAAC-Related Installation of Structural Concrete (65001.02)

a. ITAAC No/Family: SS 3.8.5.1.1 / NA

1) Inspection Scope

Design Commitment	Inspection, Tests, Analyses	Acceptance Criteria
1) The friction coefficient to resist sliding is 0.7 or higher.	Testing will be performed to confirm that the mudmat-waterproofing- mudmat interface beneath the Nuclear Island basemat has a minimum coefficient of friction to resist sliding of 0.7.	A report exists and documents that the as-built waterproof system (mudmat-waterproofing- mudmat interface) has a minimum coefficient of friction of 0.7 as demonstrated through material qualification testing.

An NRC inspection was conducted between June 6, 2011, and June 9, 2011, to determine if construction activities associated with SS ITAAC 3.8.5.1.1 were being conducted in accordance with the applicant's site safety analysis report (SSAR); Early Site Permit (ESP) and Limited Work Authorization (LWA), as amended; NRC regulatory requirements; and applicable codes and standards. The inspection was documented in NRC Integrated Inspection Reports 05200011/2011-02, 05200025/2011-04, and 05200026/2011-002.

At the time of the inspection, the inspectors were unable to determine whether the qualification testing conducted offsite in the testing facility adequately simulated field conditions to demonstrate that a minimum 0.7 coefficient of friction would be achieved at the mudmat waterproof membrane structural interface. Specifically, the inspectors identified the following deviations between the as-built waterproofing system and the system tested at National Technical Systems (NTS):

- The use of Metaset Flex Sealant in the joints was not tested during qualification testing, but was used in the as-built system.
- A 7-inch (in.) wide strip of methyl methacrylate reinforcement scrim material was embedded into the as-built waterproofing membrane stripe coat, but was not tested during qualification testing.
- Two additional 8-in. wide layers of membrane material were applied at the joints, creating a minimum thickness 80 mils greater than what was tested during qualification testing.

The inspectors concluded that additional information from SNC was required in order to further evaluate the issue. As a result, the issue was identified as

Unresolved Item (URI) 05200011/2011-002-001, "Waterproof Membrane Joint Detail Not Tested in Qualification Program."

In addition, the inspectors identified other deviations between the qualification testing and as-built conditions, primarily related to differences in the environmental conditions present during qualification testing and those during field installation.

After the NRC onsite inspection, SNC's contractor issued Project Technical Report Number SV0-AT01-ITR-800001, "Vogtle Electric Generating Plant (VEGP) Units 3 & 4 ESP Part 2, Section 3.8.5.1.1, Nuclear Island Waterproof Membrane ITAAC," to evaluate the qualification testing performed by NTS and the Vogtle installation process.

On August 17-18, 2011, the NRC conducted an inspection to follow-up on URI 05200011/2011-002-001. During this inspection, the primary objective was to further evaluate the concerns identified in URI 05200011/2011-002-001, "Waterproof Membrane Joint Detail Not Tested in Qualification Program," in order to verify that the qualification testing and installation of the waterproof membrane were in compliance with the Commission's rules and regulations, the conditions of the SNC VEGP ESP and LWA, and other applicable regulatory requirements.

The inspectors reviewed Test Report TR63501-11N, "Final Qualification Program Report for Laboratory Testing of Integrity Waterproofing Membrane System," Rev. 0 (Shaw No.: 132175-J800.09-00015) to determine if the qualification testing adequately simulated and bounded field conditions as required by the applicant's SSAR.

The application procedures and quality assurance (QA) records were reviewed to ensure that the conditions and assumptions of the qualification testing were maintained during product application.

Project Technical Report SV0-AT01-ITR-800001, Rev. No. 2, "Vogtle Electric Generating Plant (VEGP) Units 3 & 4 ESP Part 2, Section 3.8.5.1.1, Nuclear Island Waterproof Membrane ITAAC," prepared by Shaw Nuclear Services, Inc. (Shaw) to document the basis for determining that the material would meet the required friction factor was reviewed by the inspectors to determine if the report satisfied the requirements of the ITAAC acceptance criteria.

The inspectors also reviewed Domestic AP1000 Project Specification SV0-AT01-Z0-001, "Nuclear Island Waterproofing Membrane," Revision 4, which established the technical and quality requirements for the subgrade Nuclear Island (NI) waterproofing membrane system, to verify that 10 CFR Part 50 Appendix B was applied to the coefficient of friction function of the waterproof membrane.

The inspectors observed the condition of the top surface of the Unit 3 upper mudmat and interviewed licensee personnel knowledgeable about the membrane qualification plan, installation practices, and quality control/quality assurance requirements.

2) Findings

a) Description

Section 3.8.5.1.1, "Waterproof Membrane," of the SNC VEGP SSAR states that "the testing methods will simulate field conditions to demonstrate that a minimum 0.7 coefficient of friction is achieved by the mudmat waterproof membrane structural interface."

At the end of the inspection on August 18, 2011, the inspectors determined that the applicant did not meet the requirement of the SSAR to simulate field conditions during the qualification testing to demonstrate that a minimum 0.7 COF was achieved by the mudmat waterproof membrane structural interface. The following deviations from the qualification testing and the as-built conditions were identified:

- The use of Metaset Flex Sealant in the joints was not tested during qualification testing, but was used in the as-built system.
- A 7-in. wide strip of methyl methacrylate reinforcement scrim material was embedded into the as-built waterproofing membrane stripe coat, but was not tested during qualification testing.
- Two additional 8-in. wide layers of membrane material were applied at the joints, creating a minimum thickness 80 mils greater than what was tested during qualification testing.
- During the waterproofing membrane material application and prior to pouring the upper mudmat, specific environmental conditions such as curing temperature, sunlight exposure, rain, weather cycling and aging, were not completely addressed during qualification testing.

The applicant developed Project Technical Report SV0-AT01-ITR-800001, "VEGP Units 3 & 4 ESP Part 2, Section 3.8.5.1.1, Nuclear Island Waterproof Membrane ITAAC," Rev. 2, to evaluate the qualification testing performed by NTS and the Vogtle installation process in an effort to demonstrate that the waterproof membrane system had a minimum COF of 0.7. As part of the inspection, the inspectors reviewed the Technical Report to determine whether the evaluation technically justified the use of the as-installed configuration of the waterproofing membrane. The inspectors determined that the deviations between the as-built and the as-tested waterproof membrane system could potentially affect the COF and were not adequately addressed in the qualification testing and/or were not adequately addressed in the Technical Report. The acceptance criteria of SS ITAAC 3.8.5.1.1 states that "A report exists and documents that the as-built waterproof system (mudmat waterproofing mudmat interface) has a minimum coefficient of friction of 0.7 as demonstrated through material qualification testing." The staff determined that the applicant did not demonstrate a minimum COF of 0.7 through the qualification testing, as required by the acceptance criteria of the ITAAC.

b) Analysis

The inspectors determined that SNC's failure to assure that the qualification testing adequately simulated field conditions represented a violation of regulatory requirements. The inspectors also determined that this violation was material to the acceptance criteria of SS ITAAC 3.8.5.1.1 and that the applicant had not issued the ITAAC closure letter; therefore, this violation is an ITAAC-related construction finding. The violation was greater-than-minor because it represented a condition adverse to quality that rendered the quality of the waterproofing membrane system indeterminate, required supplemental examination, and could adversely affect the closure of SS ITAAC 3.8.5.1.1. The violation did not meet the criteria to be greater than a SL IV violation. Therefore, this finding is a SL IV violation as described in NRC Enforcement Policy Section 6.5.

Through document review, the inspectors determined that prior to the June 6-9, 2011 NRC inspection, SNC had previously questioned Shaw about some of the deviations between the qualification testing and the as-built conditions, as documented in Response to Request For Information (RFI) Number SVO-AT01-GF-800000, dated May 24, 2011. SNC accepted Shaw's response to the RFI, therefore missing the opportunity to question the validity of the contractor's underlying assumptions, identify possible unintended consequences and address the deviations that could impact construction quality. The inspectors determined that the issue appeared from a safety culture standpoint to have principally been associated with construction safety focus component (CSFC) A.1, Decision-Making, because the applicant did not demonstrate the use of conservative assumptions in decision-making and adopted a requirement to demonstrate that the proposed construction activity does not adversely impact construction quality or ITAAC closure (CSFC aspect A.1(b)).

c) Enforcement

During NRC inspections conducted between June 22 to 26, 2011 and August 17 to 18, 2011, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

Condition 3.G. of the SNC VEGP "Early Site Permit and Limited Work Authorization", states, in part, that SNC may perform the following activities under this LWA: installation of engineered backfill, retaining walls, lean concrete backfill, mudmats, and a waterproof membrane as described in the applicant's SSAR.

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Section 1.1, "Purpose," of Domestic AP1000 Project Specification SV0-AT01-Z0-001, "Nuclear Island Waterproofing Membrane," Revision 4, states, in part, that the membrane between the mudmats must transfer horizontal shear forces due to seismic (Safe Shutdown Earthquake) loading. This function is Seismic Category 1 and Seismic Category 1 components shall meet the same requirements as those of safety related components [10 CFR Part 50, Appendix B].

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," states, in part, that where a test program is used to verify the adequacy of a specific design feature in lieu of other verifying or checking processes, it shall include suitable qualifications testing of a prototype unit under the most adverse design conditions.

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2. A 7-in. wide strip of methyl methacrylate reinforcement scrim material was embedded into the as-built waterproof membrane stripe coat, but was not tested during qualification testing.
3. Two additional 8-in. wide layers of membrane material were applied at the joints, creating a minimum thickness 80 mils greater than what was tested during qualification testing.
4. During the waterproof membrane material application and prior to pouring the upper mudmat, specific environmental conditions such as curing temperature, sunlight exposure, rain, weather cycling and aging, were not adequately addressed during qualification testing.

This is a Severity Level IV violation (Enforcement Policy Section 6.5.d).

The applicant opened Condition Report (CR) 345481, "Potential NRC NOV resulting from inspection of Unit 3 Waterproof Membrane" to capture and track this violation. Because the applicant's corrective action program has not yet been demonstrated to be effectively implemented, this violation is being cited as a Notice of Violation (NOV), consistent with the NRC Enforcement Policy (VIO 05200025/2011009-01, Failure to Assure That Material Qualification Testing Associated With The Waterproof System Simulated Field Conditions).

B. NON-ITAAC-RELATED INSPECTIONS

None

C. OTHER INSPECTION RESULTS

None

D. EXIT MEETING SUMMARY

On August 18, 2011, the regional inspectors presented the inspection results to Mr. Jones and other members of his staff, and other management representatives for SNC and the consortium, who acknowledged the findings. On September 14, 2011, the regional inspectors re-exited with Randy Johnson who acknowledged the violation. The inspectors asked the licensee whether any of the material examined during the inspection should be considered proprietary. No proprietary information was identified.

KEY POINTS OF CONTACT

Licensee Personnel

D. Jones, SNC Site Vice President
W. Chrisler, Consortium Project Quality Assurance Director
J. Williams, SNC Site Support Manager
B. Poppell, Shaw Field Engineering Manager
D. Shepherd, Shaw Project Engineering Manager
J. Beasley, Shaw QA Engineering Manager
K. Khianey, Shaw Site Engineering Manager
J. Davis, SNC Licensing Supervisor
J. Rees, Deputy Field Engineering Manager
R. Pate, SNC Licensing Engineer

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

VIO 05200025/2011009-01: Failure to Assure That Material Qualification Testing Associated With The Waterproof System Simulated Field Conditions.

Closed

URI 05200011/2011-002-001: Waterproof Membrane Joint Detail Not Tested in Qualification Program.

LIST OF DOCUMENTS REVIEWED

Condition Report (CR) 345481, Potential NRC NOV resulting from inspection of Unit 3 Waterproof Membrane, dated August 19, 2011

National Technical Services Test Procedure, TP63501-11N, Initial Qualification Program for Laboratory Testing of Integritytank Waterproofing Membrane System (Shaw No: 132175-J800.09-00001), Rev. 2

National Technical Services Test Report TR63501-11N, Final Qualification Program Report for Laboratory Testing of Integritytank Waterproofing Membrane System (Shaw No: 132175-J800.09-00015), Rev. 0

Shaw Nuclear Services, Inc. Project Technical Report, Report No.: SV0-AT01-ITR-800001, Vogtle Electric Generating Plant (VEGP) Units 3 & 4 ESP Part 2, Section 3.8.5.1.1, Nuclear Island Waterproofing Membrane ITAAC, Rev. 2

Shaw Nuclear Services, Inc. Document No. SV0-AT0-Z0-800001, Domestic AP1000 Project Specification, Title: Nuclear Island Waterproofing Membrane Installation

Shaw Stone & Webster Document No. SV0-AT0-ITH-001, Vogtle ITAAC ESP 3.8.5.1.1

Shaw Nuclear Services Calculation Number SV0-AT01-XSC-800000 Revision 1, Coefficient of Friction for NI Mud Mat Waterproof Membrane

Shaw Nuclear Services, Inc. Nuclear Engineering Project Procedure No.: NEPP 4-43-1, Verification of Design Documents

Shaw Nuclear Services, Inc. Nuclear Engineering Project Procedure No.: NEPP-4-7-0, Project Specifications (Including ASME III Design Specifications

Shaw Nuclear Services, Inc. Procedure DAPP 5-11-3, Project Specifications

Shaw Nuclear Services, Inc. Nonconformance and Disposition Report No. V-ND-11-0175, Separation (delamination) of Nuclear Island Waterproofing Membrane Layers during Specified Laboratory Testing

Shaw Nuclear Services, Inc. Nonconformance and Disposition Report No. V-ND-11-0246, Separation (delamination) of Nuclear Island Waterproofing Membrane Layers during Specified Laboratory Testing

Southern Company Nuclear Development Quality Assurance Manual, Version Number 9.23

Response for Southern Nuclear Operating Company (SNOC) Request for Information (RFI) Number SVO-AT01-GF-800000, dated May 24, 2011

Stirling Lloyd letter, dated June 7, 2011, from Simon Greensted to Shaw Stone & Webster for the attention of John Enger, Roy Chowdhury & Ramesh Shimoga, subject: Vogtle Units 3 & 4: Integritytank Waterproofing Membrane Application: Lower Base Mudslab Metaset Flex Sealant and Membrane Stripe Coat – Coefficient of Friction

Stirling Lloyd Technical Report No. 621

Westinghouse Policy/Procedure WEC 3.2.1, Safety Classification

LIST OF ACRONYMS

ADAMS	Agency-wide Documents Access & Management System
ASL	Approved Supplier List
ASTM	American Society for Testing and Materials
COF	Coefficient of Friction
CR	Condition Report
CSFC	Construction Safety Focus Component
E&DCR	Engineering & Design Coordination Reports
ESP	Early Site Permit
IP	Inspection Procedure

IR	Inspection Report
ITAAC	Inspections, Tests, Analyses, and Acceptance Criteria
LWA	Limited Work Authorization
N&D	Nonconformance and Disposition
NOV	Notice of Violation
NRC	U.S. Nuclear Regulatory Commission
NTS	National Technical Systems
QAIR	Quality Assurance Inspection Report
QA	Quality Assurance
QAPD	Quality Assurance Program Description
QS	Nuclear Quality Standard
RFI	Request For Information
SNC	Southern Nuclear Operating Company
SSAR	Site Safety Analysis Report
SSC	System, Structure, and Component
URI	Unresolved item
VEGP	Vogtle Electric Generation Plant
WEC	Westinghouse Electric Corporation