UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
245 PEACHTREE CENTER AVE., NE., SUITE 1200
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August 11, 2011

Mr. Joseph A. (Buzz) Miller
Executive Vice President
Southern Nuclear Operating Company
241 Ralph McGill Blvd.
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SUBJECT: SOUTHERN NUCLEAR OPERATING COMPANY VOGTLE ELECTRIC GENERATING PLANT UNITS 3 AND 4 - NRC INTEGRATED INSPECTION REPORTS 05200011/2011-002, 05200025/2011-004, 05200026/2011-002

Dear Mr. Miller:

On June 30, 2011, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Vogtle Electric Generating Plant (VEGP) Units 3 and 4. The enclosed inspection report documents the inspection results, which the inspectors discussed with Mr. David Jones and other members of your staff on June 30, 2011.

The inspection examined a sample of construction activities conducted under your early site permit (ESP) and limited work authorization as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your ESP. The inspectors also examined a sample of pre-construction activities that could affect the quality of safety-related structures, systems, and components, and were associated with the proposed inspections, tests, analyses and acceptance criteria (ITAACs) submitted in your application for a combined license for two Westinghouse Advanced Passive 1000 (AP1000) pressurized water reactors designated as VEGP Units 3 and 4. Within these areas, 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, no findings of significance were identified.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response, if you choose to provide one for cases where a response is not required, 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 (the Public Electronic Reading Room).

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.

Sincerely,

/RA/

David A. Ayres, Chief
Construction Projects Branch 4
Division of Construction Projects

Docket Nos.: 52-00011, 52-00025, 52-00026
Early Site Permit Number: ESP-004

Enclosure: NRC Inspection Report 05200011/2011-002; 05200025/2011-004; 05200026/2011-002 w/attachment: Supplemental Information

cc w/encl: (See page 3)

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Letter to Mr. Joseph A. (Buzz) Miller from David A. Ayres dated August 11, 2011.

SUBJECT: SOUTHERN NUCLEAR OPERATING COMPANY VOGTLE ELECTRIC GENERATING PLANT UNITS 3 AND 4 - NRC INTEGRATED INSPECTION REPORTS 05200011/2011-002, 05200025/2011-004, 05200026/2011-002

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U.S. NUCLEAR REGULATORY COMMISSION
Region II

Docket Numbers:	0520001; 05200025; 05200026
License Number:	ESP-004
Report Numbers:	05200011/2011-002; 05200025/2011-004; 05200026/2011-002
Licensee:	Southern Nuclear Operating Company (SNC)
Facility:	Vogtle Electric Generating Plant (VEGP) Units 3 and 4
Location:	Waynesboro, GA
Inspection Dates:	April 1 through June 30, 2011
Inspectors:	Justin D. Fuller, Senior Construction Resident Inspector, Region II Coleman B. Abbott, Construction Resident Inspector, Region II Rahsean Jackson, Senior Construction Inspector, Region II
Accompanying Personnel:	Sarah Alexander, Construction Inspector, Region II
Approved by:	David Ayres, Construction Projects Branch 4, Chief Division of Construction Projects

Enclosure

SUMMARY OF FINDINGS

Inspection Report (IR) 05200011/2011-002, IR 05200025/2011-004, IR 05200026/2011-002; 4/1/2011 through 6/30/2011; VEGP Units 3 and 4, routine integrated inspection report.

The report covered a three-month period of inspection by resident inspectors and one region based inspector, and no findings of significance were identified.

The Nuclear Regulatory Commission's (NRC's) program for overseeing the construction of commercial nuclear power reactors is described in Inspection Manual Chapter (IMC) 2506, "Construction Reactor Oversight Process General Guidance and Basis Document."

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

   No findings of significance were identified.

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

   None

REPORT DETAILS

A. ITAAC-RELATED INSPECTIONS

NRC Inspection Procedure [IP] 65001.02, "Inspection of Inspections, Tests, Analyses and Acceptance Criteria (ITAAC)-Related Installation of Structural Concrete," and IP 65001.C, "Inspection of the ITAAC-Related Construction Test Program"

a1. Inspection of Site Specific ITAAC Number 3.8.5.1.1 (05200011/2011-002)

The inspectors conducted a field inspection of construction activities associated with Site Specific ITAAC 3.8.5.1.1:

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
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.

The inspectors reviewed construction records and observed in-process activities to determine whether the licensee, and where appropriate their contractors and subcontractors, performed construction activities in accordance with the applicable quality and technical requirements committed to by SNC in the site safety analysis report (SSAR) for the VEGP Early Site Permit (ESP) and associated limited work authorization (LWA). For construction activities that SNC had contracted to a consortium consisting of Westinghouse Electric Company, LLC (WEC) and Shaw Stone and Webster, Inc. (herein referred to as Shaw), the inspectors evaluated whether the consortium performed those activities in accordance with their quality assurance programs. The inspectors also assessed the adequacy of SNC's measures to assure that purchased material, equipment, and services conformed to the procurement documents.

The applicable quality assurance (QA) requirements included the following:

- Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants"
- American Society of Mechanical Engineers (ASME) Nuclear Quality Assurance (NQA) Standard NQA-1-1994, "Quality Assurance Requirements for Nuclear Facility Applications"

- Shaw Standard Nuclear Quality Assurance Program (SWSQAP 1-74A), Revision (Rev.) B
- APP-GW-GAH-010, "Project Quality Assurance Program Interface Plan for Domestic AP1000 Projects," Rev. 4

65001.02-02.05, "Water Barriers for Foundations and Buildings"

The inspectors observed the application of the waterproofing membrane primer material to release areas 1, 2, and 3 of the VEGP Unit 3 mud mat and mechanically stabilized earth (MSE) wall to determine whether the primer applications were performed in accordance with specification SV0-AT01-Z0-800001, "Nuclear Island Waterproofing Membrane Installation," Rev. 0.

The inspectors reviewed the work package SV3-G100-XEW-CV0246, "Unit 3 Nuclear Island Horizontal and Vertical Waterproof Membrane," Rev. 0, to determine whether the work control documents had appropriately included the quality control (QC) hold points which were established by QC inspection plan number F-S530-01, "Nuclear Island Membrane for Mud Mat," Rev. 0. The inspectors reviewed the in-process work package to determine whether the hold points were signed by qualified personnel that were independent from those who performed the activity.

The inspectors reviewed a sample of installation release cards from Shaw Work Package number SV3-G100-XEW-CV0246, "Unit 3 Nuclear Island Horizontal and Vertical Waterproof Membrane," to determine whether they were consistent with applicable quality and technical requirements. The inspectors also observed the Shaw QC inspection of a completed section of the waterproofing membrane to determine whether the inspection was performed in accordance with applicable procedures and was adequate to identify potential conditions adverse to quality.

The inspectors also observed the Shaw QC inspection of the following attributes related to the application of the waterproofing membrane primer material:

- Assessment of the surface preparation of the lower mud mat
- Inspection to verify that the surface was dry, free from oil, grease, curing compounds, loose particles, dirt, debris, and other contaminants
- Inspection of the top surface of the bottom mud mat concrete surface profile (CSP) to determine whether CSP-5 or CSP-6 was achieved
- Inspection of the environmental conditions (mud mat temperature, relative humidity, etc)
- Inspection of the mixing of primer material and application to the mud mat and MSE wall

The inspectors reviewed the installation specification (SV0-AT01-Z0-800001, "Nuclear Island Waterproofing Membrane Installation," Rev. 0) to determine whether the field

installation procedure and design details adequately duplicated the testing program and processes utilized in the laboratory. The inspectors directly observed the application of the waterproofing membrane and the installation of the joint filler material and stripe coat used at the joints, to determine whether the installation activities were conducted in accordance with the installation specification.

The inspectors observed the Shaw storage facility (warehouse) for the waterproofing membrane materials, to determine whether storage conditions met requirements of the procurement specifications, installation specifications, and the material safety data sheet. Attributes observed included:

- Temperature control and monitoring
- Humidity monitoring
- Light protection
- Storage configuration relative to other materials
- QC acceptance and rejection tags and expiration dates

The inspectors interviewed Shaw QC personnel who performed surveillance of these storage facilities and reviewed Shaw surveillance report number S-132175-2011-0035, "Nuclear Island Waterproofing Membrane Material Storage," dated 5/11/2011, to determine whether Shaw oversight of these storage facilities was adequate.

65001.02-05.07, "Problem Identification and Resolution"

To determine whether conditions adverse to quality related to waterproofing membrane installation and testing activities were adequately identified and corrected, the inspectors reviewed the following Shaw Corrective Action Reports (CARs), Shaw Nonconformance and Disposition (N&D) Reports, and SNC Condition Report (CR):

- CARs: 2011-0096 and 2011-0100
- N&Ds: V-ND-11-0130 and V-ND-11-0138
- CR 2011100461

65001.C-02.03, "Licensee Acceptance and Documentation"

Site Specific ITAAC 3.8.5.1.1, was related to the waterproofing membrane system coefficient of friction qualification testing, as described by Section 3.8.5.1.1, "Waterproof Membrane," of the SNC Vogtle ESP SSAR. The testing was performed by National Technical Systems (NTS) and the results of this testing were documented in NTS test report number TR63501-11N, "Final Qualification Program Report for Laboratory Testing of Integritank Waterproofing Membrane System," Rev. 0. The inspectors reviewed this report to determine whether the scope of the test program was adequate and whether the test conditions adequately bounded the as-built waterproofing membrane system.

a2. Inspection of proposed ITAAC Number 3.3.5a (IR 05200025/2011-004)

The inspectors noted that the construction records reviewed and the construction activities observed, as documented above, also applied to proposed ITAAC 3.3.05a (Section 3.3 of the AP1000 Design Control Document (DCD), Rev. 19). This ITAAC was included in SNC's combined license application (submittal 8, dated June 24, 2011).

Proposed ITAAC 3.3.05a (AP1000 DCD, Rev. 19)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
Exterior walls and the basemat of the nuclear island have a water barrier up to site grade.	An inspection of the as-built water barrier will be performed during construction.	A report exists that confirms that a water barrier exists on the nuclear island exterior walls up to site grade.

b. Findings

At the time of the inspection, the inspectors were unable to determine whether the qualification testing adequately simulated field conditions to demonstrate that a minimum 0.7 coefficient of friction was achieved by the mudmat waterproof membrane structural interface. After the NRC onsite inspection, SNC's contractor issued Engineering Report Number SV0-AT01-ITR-800001, "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.

Specifically, the inspectors identified the following deviations between the as-built waterproofing system and the system tested at 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 seven inch wide strip of methyl methacrylate reinforcement scrim material embedded into the stripe coat was not tested during qualification testing, but was used in the as-built system
- Two additional 8 inch 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 determined that this issue required additional information from SNC in order to evaluate. Specifically, the NRC needed to review engineering report SV0-AT01-ITR-800001. Therefore, this issue was identified as Unresolved Item (URI) 05200011/2011-002-001, "Waterproof Membrane Joint Detail Not Tested in Qualification Program."

B. NON-ITAAC-RELATED INSPECTIONS

1. IP 35007, "Quality Assurance Program Implementation and Pre-Construction Activities" - (IR 05200011/2011-002)

a. Inspection Scope

The inspectors performed a direct inspection of a sample of construction-related quality assurance program (QAP) activities, to determine whether SNC, and where appropriate their contractors, had: (1) developed adequate procedures to implement the applicable project quality requirements, and (2) effectively implemented those procedures during the performance of construction activities authorized by the VEGP ESP and LWA.

a1. Inspection Scope (IP35007 - Appendix 2, "Inspection of Criterion II – Quality Assurance Program")

IP 35007 – Appendix 2, Section A2.04.02, Inspection of QA Program Implementation; Subsection A2.04.02.c

The inspectors reviewed personnel certification and qualification records for four applicators of the waterproofing membrane associated with the Unit 3 nuclear island lower mud mat and MSE walls. The inspectors reviewed these records to determine the following:

- Whether the applicators of the waterproofing membrane system received certification and training from the manufacturer prior to initial application
- Whether this certification met the requirements of American Society for Testing and Materials (ASTM) D4227-05, "Standard practice for Qualification of Coating Applicators for Application of Coatings to Concrete Surfaces"
- Whether the applicators received the appropriate indoctrination and training required by the Shaw QAP

The inspectors also reviewed the Shaw QC inspector's certificate of qualification as well as the applicable training records for special process –protective coatings.

a2. Inspection Scope (IP 35007 – Appendix 10, "Inspection of Criterion X – Inspection")

IP35007 – Appendix 10, Section A10.04.01, "Inspection of QA Implementing Documents"

The inspectors reviewed the following Shaw QC inspection plans:

- F-C173, "Soil Testing – QC monitoring," Rev. 3
- F-C131, "Backfill," Rev. 4

The inspectors reviewed F-C173 and F-C131 to determine whether they were developed in accordance with the following: Nuclear Quality Assurance Directive (QAD) 10.68, "Inspection Planning," Rev. O; Nuclear Quality Standard (QS) 10.67, "Inspection Planning System," Rev. O; and Quality Site Instruction (QSI) 10-1,

"Inspection Planning and Reporting," Rev. 0. The inspectors noted that QS 10.67 required the following:

- Shaw engineering review and approve each inspection plan to verify that inspection requirements were consistent with the design documents, and
- The Shaw construction organization sign and date the inspection plan to document their review and concurrence for awareness of QC inspection activities associated with "hold" and "notification" points

Therefore, the inspectors reviewed each plan to determine whether engineering and construction approval was appropriately documented.

The inspectors also reviewed the design output documents (engineering specifications, drawings, and engineering design change requests) associated with each inspection plan, to determine whether the inspection plans appropriately translated the applicable quality and technical requirements into inspection attributes for QC personnel to perform in-process and final inspections. Specifically, for F-C173, the inspectors reviewed the following specifications:

- SV0-0000-T1-001, "Soil and Material Testing," Rev. 2
- SV0-XE-01-Z0-002, "Nuclear Island Excavation and Backfill," Rev. 4
- SV0-XE01-Z0-001, "Earthwork, Excavation, Backfill, and Grading," Rev. 5

The inspectors also reviewed F-C173 and F-C131 to determine whether the following attributes were appropriately considered by Shaw:

- Methods used to perform inspections and document results
- Frequency of inspections
- Material &Testing Equipment (M&TE)
- Sampling requirements
- Applicable hold points
- Acceptance criteria
- Inspection by personnel other than those that supervise or perform the work
- Alternative indirect controls when inspection was not practical
- Final inspection and re-inspection
- Inspection documentation, including the item, date, name of inspector, method of inspection, and results

IP35007 – Appendix 10, Section A10.04.02, "Inspection of QA Program Implementation"

The inspectors reviewed a sample of Shaw inspection reports (Shaw IRs) associated with the soil testing and backfilling for the Units 3 and 4 nuclear island backfill, a safety-related item that required inspection by Shaw QC inspectors. The inspectors reviewed the following IRs, which related to site specific ITAAC Number 2.5.4.5.5.a:

- C173-10-0381: Soils Testing – Review of Laboratory Test Results
- C173-10-0265: Soils Testing – Review of Laboratory Test Results
- C173-10-0436: Soils Testing – Review of In-Place Density Tests
- C173-10-0378: Soils Testing – Review of In-Place Density Tests

- C173-10-0466: Soil Testing – Review of In-Place Density Tests
- C131-10-0305: Backfill – In-Process Inspection

The inspectors reviewed the IRs noted above to determine the following [A10.04.02.a]:

- Whether the inspection was performed by qualified individuals other than those who performed or directly supervised the work
- Whether the item was performed at the required frequency as prescribed by the relevant inspection plan
- The applicable hold points were respected by the construction organization
- Whether re-inspections were performed appropriately

The inspectors reviewed the IRs noted above to determine whether the following attributes were properly documented [A10.04.02.d]:

- Observation or type of method used to perform inspection
- Item inspected and date of inspection
- Identification of person conducting inspection
- M&TE used during inspection
- Identification (or reference to) inspection criteria, sampling plan, or reference documents used to determine acceptance
- Results or description of inspection performed
- Evaluation of acceptability and identification of person determining acceptability
- Results indicating acceptability of characteristics inspected
- Identification of qualified computer software, if applicable
- Resolution of corrective actions for noted nonconformance or deficiency

The inspectors reviewed a sample of Shaw IRs that documented unsatisfactory inspection results (UNSAT IRs), to determine whether the item's disposition was in accordance with Shaw procedure QSI 10-1. The inspectors noted that QSI 10-1 required the initiation of an N&D for UNSAT IRs with disposition of "repair" or "use-as-is"; therefore, the inspectors reviewed an UNSAT IR that required the initiation of an N&D to determine whether the N&D adequately corrected the unacceptable condition. Specifically, the inspectors reviewed UNSAT IR C173-10-0265, and associated N&D V-ND-10-0098 to determine whether the "use-as-is" disposition was appropriate.

a3. Inspection Scope (IP35007 – Appendix 15, "Inspection of Criterion XV – Nonconforming Materials, Parts, or Components")

IP 35007 – Appendix 15, Section A15.04.02 Inspection of QA Program Implementation

The inspectors reviewed a sample of nonconformance reports (Shaw N&Ds) to determine whether the conditions were adequately reviewed and accepted, rejected, repaired, or reworked in accordance with documented procedures. The inspectors compared these N&Ds to Section 15, "Nonconforming Materials, Parts, or

Components," of the Shaw Nuclear QAP (SWSQAP 1-74A) and Shaw procedure QS 15.1, "Nonconformance & Disposition Report," Rev. G.

The inspectors reviewed the following N&Ds: V-ND-10-0103; V-ND-10-0148; V-ND-10-0034 and related MACTEC CR-SV-03; V-ND-10-0061 and related MACTEC CR-SV-10.

The inspectors noted that the above N&Ds were associated with ESP ITAAC 2.5.4.5.5.a.

a4. Inspection Scope (IP 35007 - Appendix 16, "Inspection of Criterion XVI – Corrective Action")

IP 35007 – Appendix 16, Section A16.04.01, Inspection of QA Implementing Documents

The inspectors reviewed SNC's corrective action program procedure ND-AD-002, "Nuclear Development Corrective Action Program," Version 5.0 and Shaw procedure QS 16.5, "Corrective Action System," Rev. E; to determine whether SNC had established adequate measures to assure that conditions adverse to quality were promptly identified and corrected. The inspectors reviewed this procedure to determine whether the following attributes were adequately prescribed:

- That the classification, prioritization, and evaluation for reportability of conditions adverse to quality was controlled
- That the procedure provided adequate guidance for the complete and accurate identification of the problem in a timely manner commensurate with its significance and ease of discovery
- That the procedure provided guidance for the consideration of extent of condition, generic implications, common cause, and previous occurrences
- That the procedure provided guidance for escalating to higher management those corrective actions that are not adequate or not timely

IP 35007 – Appendix 16, Section A16.04.02, Implementation of Corrective Action Program

On a routine basis, the inspectors reviewed a sample of issues entered into the SNC, Shaw, and MACTEC corrective action programs to determine whether conditions adverse to quality were controlled in accordance with each company's QAP and whether potential adverse trends were appropriately identified and corrected by SNC or their contractors. Specifically, the inspectors: (1) attended weekly issue review committee meetings at the site; (2) reviewed a sample of SNC and Shaw corrective action documents; and (3) held discussions with SNC and Shaw personnel responsible for the screening and correction of the issues. The inspectors also observed the quarterly corrective action review board meeting on April 13, 2011.

The inspectors selected a sample of issues entered in the corrective action programs to determine whether the handling of these issues were consistent with the applicable QAP requirements; and 10 CFR Part 50, Appendix B.

Specifically, the inspectors reviewed the following SNC and MACTEC CRs:

- SNC: 2011100402; 2011100461; 2011100429; and 2011100501
- MACTEC: CR-SV-69 and CR-SV-70

The inspectors reviewed the corrective action documents referenced above to determine whether:

- Conditions adverse to quality were promptly identified and corrected
- Classification and prioritization of the resolution of the problem was commensurate with its safety significance
- For significant conditions adverse to quality: (1) the cause was determined, (2) corrective actions were taken to prevent recurrence, and (3) the cause and corrective actions taken were documented and reported to appropriate levels of management
- Conditions were appropriately screened
- The organization properly evaluated and reported the condition (e.g., 10 CFR 50.55(e), 10 CFR Part 21)

The inspectors reviewed the trending program for MACTEC, to determine whether conditions adverse to quality were appropriately trended to facilitate the early identification of potential programmatic or common cause construction issues. The inspectors reviewed MACTEC Nuclear Quality Assurance Procedure (NQAP) 16-02, "Corrective Action and Performance Improvement," Rev. 2, and Section QS-2, "Quality Assurance Program," of the MACTEC Nuclear Quality Assurance Manual, Rev. 0. The inspectors reviewed these MACTEC procedures to determine whether they had incorporated the trending requirements established, in part, by SNC's commitment to the performance of trend analysis made in Section 16, "Corrective Action," of the SNC NDQAM, Version 9.2.

2. IP 35007, "Quality Assurance Program Implementation and Pre-Construction Activities" (IMC 2502-07.02, "Pre-Construction Activity Inspections" – IR 05200025/2011-004)

a. Inspection Scope

The inspectors performed a direct inspection of a sample of pre-construction activities that could affect the quality of the VEGP Unit 3 containment vessel (CV) bottom head. The purpose of this inspection was to gather information associated with SNC's implementation of their QAP and oversight of their contractors and subcontractors who perform pre-construction activities. The inspectors used IP 35007 *(Subsection A7.04.02.e of Appendix 7, "Inspection of Criterion VII – Control of Purchased Material, Equipment, and Services")* to evaluate SNC's implementation of Criterion VII, "Control of Purchased Material, Equipment, and Services," of 10 CFR Part 50, Appendix B. Specifically, the inspectors evaluated SNC's measures to assure that purchased material, equipment, and services, purchased through their contractor and subcontractor, conformed to the procurement documents.

The inspectors reviewed the following SNC surveillance reports to determine whether SNC adequately implemented Section 7.1, "Acceptance of Item or Service,"

of their NDQAM, and QAP implementing procedure ND-QA-013, "Quality Assurance Inspections," Version 1.0:

- NDQA-2011-S12, dated 06/22/2011, which was related to the VEGP Unit 3 CV fabrication activities. Specifically, this SNC surveillance assessed the adequacy of WEC's QA oversight measures used to verify the subcontractor's (Chicago Bridge & Iron [CB&I]) receipt inspection activities of the CV bottom head plates.
- NDQA-2011-S13, dated 5/27/2011, which was which was related to the VEGP Unit 3 CV fabrication activities. Specifically, this SNC surveillance assessed the adequacy of WEC's QA oversight measures used to verify the subcontractor's (CB&I) welder qualification testing.

The results of this inspection may be used to support the NRC's future closure of proposed ITAAC Number 2.2.01.02a [Reference AP1000 DCD, Rev. 19], that includes the design commitment that the CV be designed and constructed in accordance with ASME Section III requirements.

b. Findings

No findings of significance were identified.

C. OTHER INSPECTION RESULTS

None

D. EXIT MEETING SUMMARY

On June 30, 2011, the NRC resident inspectors presented the inspection results to Mr. David H. Jones, Site Vice President for VEGP Units 3 and 4, and other management representatives for SNC and the consortium. The inspectors stated that no proprietary information would be included in the inspection report.

KEY POINTS OF CONTACT

SNC and Contractor Personnel

D. Jones	SNC Site Vice President VEGP Units 3 & 4
R. Johnson	SNC Quality and Compliance Vice President
J. Davis	SNC Licensing Supervisor
R. Pate	SNC Licensing Engineer
T. O'Brien	SNC QC Supervisor
M. Sawyers	SNC QC
W. Crisler	Consortium Project Quality Assurance Director
J. Beasley	Shaw QA Engineering Manager
W. Poppell	Shaw Field Engineering Manager
C. Davis	Shaw Project Security/Facilities Manager
D. Oliver	Shaw Project Field Procurement Manager
W. Robinson	Shaw Warehouse Procurement Manager
D. Johnson	Shaw Warehouse Procurement Supervisor
E. Medlin	Shaw M&TE QC
M. Bezanson	Shaw Quality Engineering
D. Shepard	Shaw Engineering
J. Lackey	Shaw QC
A. Thomarios	Thomarios QC
J. Martin	MACTEC Quality Assurance Manager

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Item Number	Status	Description
URI 05200011/2011-002-001	Open	Waterproof Membrane Joint Detail Not Tested in Qualification Program (Section A)

LIST OF DOCUMENTS REVIEWED

Procedures

SNC

NDQAM, "Nuclear Development Quality Assurance Manual," Version 9.2
ND-AD-002, "Nuclear Development Corrective Action Program," Version 5.0
ND-QA-013, "Quality Assurance Inspections," Version 1.0

Shaw

Standard Nuclear Quality Assurance Program, SWSQAP 1-74A, Rev. B
QAD 10.68, "Inspection Planning," Rev. O
QS 10.67, ""Inspection Planning System," Rev. O
QS 12.1, "Shaw Nuclear Calibration Program," Rev. G
QS 15.1, "Nonconformance and Disposition Report," Rev. G
QS 16.5, "Corrective Action System," Rev. E
QSI 10-1, "Inspection Planning and Reporting," Rev. 0
NPP 10-01-00, "Material Receipt, Storage, and Control," Rev. 0

MACTEC

MACTEC Nuclear Quality Assurance Manual, Rev. 0
NQAP 16-02, "Corrective Action and Performance Improvement," Rev. 2

Specifications:

Shaw

SV0-AT01-Z0-800001, "Nuclear Island Waterproofing Membrane Installation," Rev. 0
SV0-GS-GF-009-001, "Waterproof Membrane Design Basis," 5/20/2011
SV0-CC02-Z0-001, "Nuclear Island Mud Mat," Rev. 2
SV0-AT01-Z0-001, "Nuclear Island Waterproofing Membrane," Rev. 4
SV0-0000-T1-001, "Soil and Material Testing," Rev. 2
SV0-XE-01-Z0-002, "Nuclear Island Excavation and Backfill," Rev. 4
SV0-XE01-Z0-001, "Earthwork, Excavation, Backfill, and Grading," Rev. 5

Surveillances and Audits:

S-132175-2011-0035, "Nuclear Island Waterproofing Membrane Material Storage," 5/11/2011
SNC surveillance report NDQA-2011-S12, dated 6/22/2011
NDQA-2011-S13, dated 5/27/2011

Corrective Action / Nonconformance Records:

V-ND-11-0130
V-ND-11-0138
V-ND-10-0098
CR Number 2011100461; 2011100402; 2011100429; and 2011100501
CAR 2011-0096

CAR 2011-0100
CR-SV-69 AND CR-SV-70

Work Package:
Shaw Work Package Number SV3-G100-XEW-CV0246, "Unit 3 Nuclear Island Horizontal and Vertical Waterproof Membrane"

Material Safety Data Sheets

Perkadox CH-50, Product Number: 660171, Date of Issue: 2009/08/25
Stirling Lloyd, Integritank Part A, SDS Number: 10231, Revision Date: 2010-11-01
Stirling Lloyd, Integritank Part B, SDS Number: 10232, Revision Date: 2010-11-01
Stirling Lloyd, Metaset Flex Sealant, SDS Number 10073, Revision Date 2009/09/08

Shaw Inspection Plans / Reports:
Inspection Plan Number F-C173, "Soil Testing – QC monitoring," Rev.3
Inspection Plan Number F-C131, "Backfill," Rev. 4
Inspection Plan Number F-S530-01, "Nuclear Island Membrane for Mud Mat," Rev. 0

C173-10-0381: Soils Testing – Review of Laboratory Test Results
C173-10-0265: Soils Testing – Review of Laboratory Test Results
C173-10-0436: Soils Testing – Review of In-Place Density Tests
C173-10-0378: Soils Testing – Review of In-Place Density Tests
C131-10-0305: Backfill – In-Process Inspection

Miscellaneous:

TR63501-11N, "Final Qualification Program Report for Laboratory Testing of Integritank Waterproofing Membrane System," Rev. 0 (NTS Test Report)
Shaw Water Proof Membrane Manual Inventory J800.14
APP-GW-GAH-010, "Project Quality Assurance Program Interface Plan for Domestic AP1000 Projects," Rev. 4

LIST OF ACRONYMS

ADAMS	Agency-wide Documents Access & Management System
AP1000	Westinghouse Advanced Passive Pressurized Water Reactor
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
CAR	Corrective Action Report
CB&I	Chicago Bridge & Iron
CR	Condition Report
CSP	Concrete Surface Profile
CV	Containment Vessel
DCD	Design Control Document
ESP	Early Site Permit
IMC	Inspection Manual Chapter
IP	Inspection Procedure
IR	Inspection Report
ITAAC	Inspection, Test, Analysis and Acceptance Criteria
LWA	Limited Work Authorization
M&TE	Material & Testing Equipment
MSE	Mechanically Stabilized Earth
N&D	Nonconformance and Disposition Report
NDQAM	Nuclear Development Quality Assurance Manual
NQA	Nuclear Quality Assurance
NDQAM	Nuclear Development Quality Assurance Manual
NQAP	Nuclear Quality Assurance Program
NRC	Nuclear Regulatory Commission
NTS	National Technical Systems
QA	Quality Assurance
QAD	Quality Assurance Directive
QAP	Quality Assurance Program
QC	Quality Control
QS	Quality Standard
QSI	Quality Site Instructions
Rev.	Revision
SNC	Southern Nuclear Operating Company, Inc (Licensee)
SSAR	Site Safety Analysis Report
SWSQAP 1-74A	Shaw Standard Nuclear Quality Assurance Program
UNSAT IR	Unsatisfactory Inspection Report
URI	Unresolved Item
VEGP	Vogtle Electric Generating Plant
WEC	Westinghouse Electric Company LLC
10 CFR	Title 10 of the *Code of Federal Regulations*