



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION II

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

November 9, 2011

Mr. Joseph A. (Buzz) 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 INTEGRATED INSPECTION
REPORTS 05200011/2011-003, 05200025/2011-005, 05200026/2011-003**

Dear Mr. Miller:

On September 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 September 28, 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 (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/

George J. Khouri, Acting Chief
Construction Projects Branch 4
Division of Construction Projects

Docket Nos.: 05200011, 05200025, 05200026
Early Site Permit Number: ESP-004

Enclosure: NRC Inspection Report 05200011/2011-003; 05200025/2011-005;
05200026/2011-003 w/attachment: Supplemental Information

cc w/encl: (See next page)

<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.

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 NON-SENSITIVE
 ADAMS: Yes
 ACCESSION NUMBER: ML11313A194
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NAME	JFuller	CAbbott	GKhouri	MErnstes		
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cc w/encl:

Office of Attorney General
Law Department
132 Judicial Building
Atlanta, GA 30312

Resident Manager
Oglethorpe Power Corporation
Alvin W. Vogtle Nuclear Plant
7821 River Road
Waynesboro, GA 30830

Lucious Abram
Commissioner –
Burke's County Commissioner
P.O. Box 1626
Waynesboro, GA 30830

Anne F. Ableby
Oglethorpe Power Corporation
2100 East Exchange Place
Tucker, GA 30084

Ms. Michele Boyd
Legislative Director
Energy Program
Public Citizens Critical Mass Energy
and Environmental Program
215 Pennsylvania Avenue, SE
Washington, DC 20003

County Commissioner
Office of the County Commissioner
Burke County Commission
Waynesboro, GA 30830

Director
Consumer's Utility
Counsel Division
Governor's Office of Consumer Affairs
2 Martin Luther King, Jr. Drive
Plaza Level East, Suite 356
Atlanta, GA 30334-4600

Mr. James C. Hardeman
Environmental Radiation Program Manager
Environmental Protection Division
Georgia Dept. of Natural Resources
4220 International Pkwy, Suite 100
Atlanta, GA 30354-3906

Lisa Higdon
Southern Nuclear Op. Co.
Document Control Coordinator
42 Inverness Center Parkway
Attn: B235
Birmingham, AL 35242

Rita Kilpatrick
250 Arizona Ave.
Atlanta, GA 30307

Stephen E. Kuczynski
Chairman, President and CEO
Southern Nuclear
P.O. Box 1295
Birmingham, AL 35201

Mr. Reece McAlister
Executive Secretary
Georgia Public Service Commission
Atlanta, GA 30334

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

Resident Inspector
Vogtle Plant
8805 River Road
Waynesboro, GA 30830

Elaine Sikes
Burke County Library
130 Highway 24 South
Waynesboro, GA 30830

Mr. Jerry Smith
Commissioner
District 8
Augusta-Richmond County Commission
1332 Brown Road
Hephzibah, GA 30815

cc cont. (See next page)

J. Miller

4

cc cont.

Gene Stilp
1550 Fishing Creek Valley Road
Harrisbury, PA 17112

Mr. Robert E. Sweeney
IBEX ESI
4641 Montgomery Avenue
Suite 350
Bethesda, MD 20814

George B. Taylor, Jr.
2100 East Exchange Pl.
Atlanta, GA 30084-5336

cc email distribution:

Amy Aughtman
Ann Baker
Nicole Faulk
Adrian Heymer
Anne W. Cottingham
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Sandra Sloan
Stanford Blanton
Stephen P. Frantz
Steven Jackson
Stephan Moen
Steven Hucik
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Vanessa Quinn
Wanda K. Marshall
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Letter to Mr. Joseph A. Miller from George J. Khouri dated November 9, 2011.

SUBJECT: SOUTHERN NUCLEAR OPERATING COMPANY VOGTLE ELECTRIC
GENERATING PLANT UNITS 3 and 4 - NRC INTEGRATED INSPECTION
REPORTS 05200011/2011-003, 05200025/2011-005, 05200026/2011-003

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J. Fuller, RII
C. Abbott, RII
S. DuBose, Region II DRAC's Administrative Assistant
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**U.S. NUCLEAR REGULATORY COMMISSION
Region II**

Docket Numbers: 05200011; 05200025; 05200026

License Number: Early Site Permit (ESP) Number ESP-004

Report Numbers: 05200011/2011-003; 05200025/2011-005; 05200026/2011-003

Licensee: Southern Nuclear Operating Company, Inc. (SNC)

Facility: Vogtle Electric Generating Plant (VEGP) Units 3 and 4

Location: Waynesboro, GA

Inspection Dates: July 1 through September 30, 2011

Inspectors: Justin D. Fuller, Senior Construction Resident Inspector, Region II
Coleman B. Abbott, Construction Resident Inspector, Region II

Accompanying Personnel: None

Approved by: George J. Khouri, Construction Projects Branch 4, Acting Chief
Division of Construction Projects

Enclosure

SUMMARY OF FINDINGS

Inspection Report (IR) 05200011/2011-003, IR 05200025/2011-005, IR 05200026/2011-003; 7/1/2011 through 9/30/2011; VEGP Units 3 and 4, routine integrated inspection report.

The report covered a three-month period of inspection by resident inspectors 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 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."

1. Inspection of Site Specific ITAAC Number 3.8.5.1.1 (05200011/2011-003)

The inspectors performed a direct 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 to determine whether the licensee, Southern Nuclear Operating Company (SNC), and where appropriate, their contractors and subcontractors, performed construction activities in accordance with the applicable quality and technical requirements committed to by SNC in their site safety analysis report (SSAR) for the Vogtle Electric Generating Plant Early Site Permit (VEGP 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

65001.02-02.06, "Record Review"

The inspectors reviewed a sample of waterproofing membrane release cards and test records from work package SV3-G100-XEW-CV0246, "Unit 3 Nuclear Island Horizontal and Vertical Waterproof Membrane," Rev. 0, to determine whether the records provided objective evidence that the waterproofing membrane activities affecting quality had been performed in accordance with applicable quality and technical requirements. Specifically, the inspectors compared these test records to the technical requirements established by installation specification SV0-AT01-Z0-800001, "Nuclear Island Waterproofing Membrane Installation," Rev. 1. The inspectors reviewed the test records to determine whether the following information was appropriately recorded:

- type of test and/or method
- item tested
- date of test
- tester (or data recorder)
- Measuring and Testing Equipment (M&TE) used during the test
- results
- evaluation of acceptability
- name of independent evaluator

The inspectors also reviewed documentation to determine whether the areas where the pull-off tests were performed were repaired upon test completion.

65001.02-02.06.a, "Receipt Inspection and Material Certification"

The inspectors observed a sample of Shaw warehouse receiving activities for the waterproofing membrane material. Specifically, On August 2, 2011, the inspectors observed Shaw warehouse personnel perform material receipt, storage, and control activities for Unit 3 and Unit 4 waterproofing membrane material to determine the following:

- whether material received was in accordance with the requirements prescribed by procurement specification SV0-AT01-Z0-001, "Nuclear Island Waterproofing Membrane," Rev. 4; and purchase order (PO) 132175-J800.14, Rev. 1
- whether the field materials manager witnessed off-loading of waterproofing membrane materials
- whether warehouse personnel observed the containers for visible damage
- whether the waterproofing membrane material, once received by the warehouse, was held in a designated area and placed on hold pending quality control (QC) inspection
- whether warehouse personnel performed activities in accordance with Shaw Nuclear Procurement Procedure (NPP) 10-01, "Material Receipt, Storage and Control," Rev. 0

The inspectors also observed Shaw QC inspectors perform a receipt inspection of the waterproofing membrane material to determine whether they performed these activities in accordance with their QC inspection plan (F-Q445-5, "Receipt Inspection – NI Waterproofing Membrane," Rev. 0). During this inspection, the inspectors reviewed the

inspection plan for adequacy, to determine whether the inspection plan required the QC inspector to verify at a minimum, the attributes specified in procurement specification SV0-AT01-Z0-001, "Nuclear Island Waterproofing Membrane," Rev. 4 and PO 132175-J800.14, Rev. 1.

65001.02-02.06.b, "Installation Inspections"

The inspectors reviewed Shaw QC personnel inspection plans used to perform inspections of the waterproofing membrane installation activities. Inspection plans F-S5301-01, "Nuclear Island Membrane for MudMat," Rev. 0, and F-S530-02, "Nuclear Island Membrane for Mechanically Stabilized Earth (MSE) Wall," Rev. 0, were reviewed to determine whether the following attributes were appropriately considered:

- methods used to perform inspections and document results were adequate
- applicable hold points were defined
- inspection by personnel other than those that supervised or performed the work was required

The inspectors also reviewed completed inspection reports associated with the application of the waterproofing membrane system. The inspectors reviewed the reports to determine whether they were developed and documented in accordance with the following procedures: Nuclear Quality Assurance Directive (QAD) 14.1, "Inspection Report System Type "A" Inspection Report," Rev. A; and Quality Standard (QS) 14.2, "Inspection Report System," Rev. J.

65001.02-02.07, "Problem Identification and Resolution"

The inspectors reviewed a sample of nonconformance reports (Shaw Nonconformance & Disposition [N&D] Reports) to determine whether the conditions adverse to quality 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 Quality Assurance Program (SWSQAP 1-74A) and Shaw QS 15.1, "Nonconformance & Disposition Report," Rev. G.

The inspectors reviewed the following N&Ds to determine whether: (1) the disposition was appropriate and was adequately documented, (2) adequate technical justification was provided to support a disposition of use-as-is, and (3) repaired or reworked items were appropriately reexamined in accordance with applicable procedures and with the original acceptance criteria:

- V-ND-11-0175
- V-ND-11-0226
- V-ND-11-0258
- V-ND-11-0257
- V-ND-11-0261
- V-ND-11-0285
- V-ND-11-0286
- V-ND-11-0288

The inspectors observed Shaw's activities related to supplemental pull-off testing relied on to demonstrate the acceptability of the condition documented in N&D V-ND-11-0175, to determine the following:

- whether this testing was performed in accordance with American Society for Testing Materials (ASTM) D7234-05, "Standard Test Method for Pull-Off Adhesion Strength of Coatings on concrete Using Portable Pull-Off Adhesion Testers"
- whether the minimum pull-off requirements were achieved as specified by Specification SV0-AT01-Z0-800001, "Nuclear Island Waterproofing Membrane Installation," Rev. 1
- whether the portable pull-off adhesion tester (Serial Number AT05720 / Control Number 0125) was calibrated in accordance with Shaw program requirements, and that the calibration facility was listed on the approved supplier list

The inspectors reviewed the final disposition of V-ND-11-0175 in detail to determine whether Shaw had developed adequate technical justification for the acceptability of the waterproofing membrane material, and whether the disposition was subject to design control measures commensurate with those applied to the original design.

2. Inspection of proposed ITAAC Number 3.3.05a (IR 05200025/2011-005)

The inspectors noted that the construction records reviewed and field inspections performed, as documented above, were also applicable 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.

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. NON-ITAAC-RELATED INSPECTIONS

1. IP 35007, "Quality Assurance Program Implementation and Pre-Construction Activities" (05200011/2011-003)

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.

1) Inspection Scope (IP 35007 – Appendix 3, "Inspection of Criterion III – Design Control")

IP35007 – Appendix 3, Section A3.04.02, "Inspection of QA Program Implementation"

The NRC inspectors selected a sample of engineering and design coordination reports (E&DCRs) associated with the waterproofing membrane installation activities and erection specification SV0-AT01-Z0-800001, "Nuclear Island Waterproofing Membrane Installation," Rev. 1. Specifically, the inspectors reviewed the following E&DCRs:

- SV0-AT01-GEF-000008, Rev. 0
- SV0-AT01-GEF-000006, Rev. 0
- SV0-AT01-GEF-000011, Rev. 0
- SV0-AT01-GEF-000012, Rev. 0

The inspectors reviewed these E&DCRs to determine whether the engineering changes received the proper level of engineering review in accordance with Shaw procedure APIP 5-18-1 (WEC Document Number, APP-GW-GAP-420), "Engineering and Design Coordination Report," Rev. 4. The inspectors also reviewed these E&DCRs to determine whether the affected installation specification was reviewed to ensure its continued applicability and that all design input assumptions remained valid.

2) Inspection Scope (IP35007 - Appendix 4, "Inspection of Criterion IV – Procurement Document Control")

IP35007 – Appendix 4, Section A4.04.02, "Inspection of QA Program Implementation"

The inspectors reviewed the following purchase documents for safety related items, to determine whether measures established in Shaw's Standard Nuclear Quality Assurance Program, Section 4, "Procurement Document Control," for the control of procurement documents, were adequately implemented:

- Purchase Order (PO) number 132175-D220.07, Joseph Oat Corporation, “Nuclear Island Basemat Safety Related Embeds/Anchor- Units 3,” Rev. 0
- PO number 132175-J400A-00, Gerdau Ameristeel US, Inc., “NQA-1 concrete reinforcing steel,” Rev. 0

The inspectors reviewed the POs listed above to determine whether:

- procurement documents were prepared in accordance with implementing documents
- items were purchased from qualified contractors
- procurement documents contained requirements for the contractor to provide appropriate documentation of quality to assure adequate quality were suitably included or referenced in the documents for procurement of material
- procurement documents were maintained in a document control program

3) Inspection Scope (IP35007 - Appendix 6, “Inspection of Criterion VI – Document Control”)

IP35007 – Appendix 6, Section A6.04.02, “Inspection of QA Program Implementation”

The inspectors reviewed work package SV3-G100-XEW-CV0246, “Unit 3 Nuclear Island Horizontal and Vertical Waterproof Membrane,” Rev. 0; and the following implementing documents, which Shaw utilized to prescribe the activities affecting the quality of the waterproofing membrane installation:

- installation specification, SV0-AT0-Z0-800001, “Nuclear Island Waterproofing Membrane Installation,” Rev. 1
- SV0-G100-XE-016, “NI Waterproofing Membrane Plan,” Rev. 1
- SV0-G100-X9-800000, “NI Waterproofing Membrane Details Sheet 1,” Rev. 0
- SV0-G100-X9-800001, “NI Waterproofing Membrane Details Sheet 2,” Rev. 0

The inspectors performed this review to determine whether:

- the controlling documents in the work package were adhered to by personnel performing activities affecting quality
- installation documents were made available promptly to construction personnel
- whether all quality-affecting work was being conducted in accordance with current revisions of approved documents.

The inspectors also interviewed field personnel performing waterproofing membrane activities to determine whether they had access to the current controlled implementing documents. The inspectors compared a sample of their paper field controlled documents which were maintained in the work package, to the master list of controlled documents in Shaw’s electronic document management system, to determine whether the field personnel had the most current revisions. The inspectors also reviewed the work package to determine whether the work control documents had appropriately included the QC hold

points and whether the hold points were signed by qualified personnel that were independent from those who performed the activity.

4) Inspection Scope (IP 35007 - Appendix 13, "Inspection of Criterion XIII – Handling, Storage, and Shipping")

IP 35007 – Appendix 13, Section A13.04.01, Inspection of QA Implementing Documents

In order to determine whether the storage activities for the waterproofing membrane material conform to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Appendix B, Criterion 13, the inspectors reviewed the following quality and technical requirements:

- Nuclear Procurement Procedure (NPP) 10-01-00 "Material Receipt Storage and Control," Rev. 0
- erection/installation specification SV0-AT01-Z0-8000001, "Nuclear Island Waterproofing Membrane Installation," Rev. 1

IP 35007 – Appendix 13, Section A13.04.02, Inspection of QA Program Implementation

On Friday, May 13, 2011, the inspectors toured the level "B-modified" storage area where the waterproofing membrane material was stored to verify the following attributes:

- designation of graded storage level
- establishment of appropriate environmental conditions in accordance to the specification as well as the material safety data sheets
- storage areas were locked and controlled
- membrane material was identified and properly packaged
- maintenance and care of items in storage

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

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

Specifically, the inspectors reviewed the following SNC condition reports (CRs) and Shaw corrective action report (CAR):

- CR 343576
- CR 325352
- CR 343334
- CAR 2011-309

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)

6) Inspection Scope (IP 35007 - Appendix 17, "Inspection of Criterion XVII – Quality Assurance Record")

IP 35007 – Appendix 17, Section A17.04.02, "Inspection of QA Program Implementation"

The inspectors reviewed work package SV3-G100-XEW-CV0246, "Unit 3 Nuclear Island Horizontal and Vertical Waterproof Membrane," Rev. 0; to determine whether the records in the work package provided objective evidence to ensure that the waterproofing membrane had been installed in accordance with applicable quality and technical requirements. Specifically, the inspectors reviewed installation specification SV0-AT0-Z0-800001, "Nuclear Island Waterproofing Membrane Installation," Rev. 1 and the associated work package to determine whether:

- records were legible, complete, and traceable to the activity that they supported
- records were maintained in print as well as electronic media
- corrections to the records did not obscure original information on record

The inspectors also toured the onsite document control storage facility and examined the facility to verify the following:

- records were readily retrievable
- records were protected from damage and theft
- records temporarily removed from the storage facility were controlled

b. Findings

No findings of significance were identified.

2. IP 35007, "Quality Assurance Program Implementation and Pre-Construction Activities" (IMC 2502-07.02, "Pre-Construction Activity Inspections") (05200025/2011-005)

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 material, equipment, and services purchased through their contractor and subcontractor, conformed to the procurement documents.

The inspectors reviewed the following SNC surveillance report to determine whether SNC adequately implemented Section 7.1, "Acceptance of Item or Service," of their Nuclear Development Quality Assurance Manual (NDQAM) Version 9.3, and QAP implementing procedure ND-QA-013, "Quality Assurance Inspections," Version 2.0:

NDQA-2011-S26, dated August 11-12, 2011, which was related to the VEGP Unit 3 CV fabrication activities. Specifically, this SNC surveillance assessed the adequacy of a WEC surveillance [Surveillance Report Number: SV3-CBI-CV-0001, Rev. 0 – Nelson Stud Welding] of nelson stud welding to the CV plate material. The inspectors also reviewed the WEC surveillance to determine whether the surveillance was performed in accordance with WEC procedure APP-GW-GAP-138, "Quality Oversight at US AP1000 Construction Sites," Rev. 0.

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 September 28, 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 QA Manager
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
D. Oliver	Shaw Project Field Procurement Manager
W. Robinson	Shaw Warehouse Procurement Manager
D. Johnson	Shaw Warehouse Procurement Supervisor
J. Lackey	Shaw QC
A. Thomarios	Thomarios QC

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

<u>Item Number</u>	<u>Status</u>	<u>Description</u>
None	N/A	N/A

LIST OF DOCUMENTS REVIEWED

Procedures

SNC

NDQAM, "Nuclear Development Quality Assurance Manual," Version 9.3
 ND-QA-013, "Quality Assurance Inspections," Version 2.0

Shaw

Standard Nuclear Quality Assurance Program, SWSQAP 1-74A, Rev. B
 QAD 14.1, "Inspection Report System Type "A" Inspection Report," Rev. A
 QS 14.2, "Inspection Report System," Rev. J
 QS 15.1, "Nonconformance and Disposition Report," Rev. G
 QS 16.5, "Corrective Action System," Rev. E
 NPP 10-01-00, "Material Receipt, Storage, and Control," Rev. 0
 AP1P 5-18-1 (APP-GW-GAP-420), "Engineering and Design Coordination Report," Rev. 4

WEC

APP-GW-GAP-138, "Quality Oversight at US AP1000 Construction Sites," Rev. 0

Specifications:

Shaw

SV0-AT01-Z0-800001, "Nuclear Island Waterproofing Membrane Installation," Rev. 1
 SV0-AT01-Z0-001, "Nuclear Island Waterproofing Membrane," Rev. 4

Surveillances and Audits:

SNC Surveillance NDQA-2011-S26, dated August 11-12, 2011
 WEC Surveillance Report Number: SV3-CBI-CV-0001, Rev. 0 – Nelson Stud Welding

Corrective Action / Nonconformance Records:

CR 343576
 CR 325352
 CR 343334
 CAR 2011-309
 V-ND-11-0175
 V-ND-11-0226
 V-ND-11-0246
 V-ND-11-0258
 V-ND-11-0257
 V-ND-11-0261
 V-ND-11-0285
 V-ND-11-0286
 V-ND-11-0288

Work Package:

SV3-G100-XEW-CV0246, "Unit 3 Nuclear Island Horizontal and Vertical Waterproof Membrane," Rev. 0

Shaw Inspection Plans / Reports:

F-S5301-01, "Nuclear Island Membrane for MudMat," Rev. 0
F-S530-02, "Nuclear Island Membrane for MSE Wall," Rev. 0
F-Q445-5, Receipt Inspection – NI Waterproofing Membrane," Rev. 0

Miscellaneous:

Drawing SV0-G100-XE-016, "NI Waterproofing Membrane Plan," Rev.1
Drawing SV0-G100-X9-800000, "NI Waterproofing Membrane Details Sheet 1," Rev. 0
Drawing SV0-G100-X9-800001, "NI Waterproofing Membrane Details Sheet 2," Rev. 0.

E&DCR SV0-AT01-GEF-000008, Rev. 0
E&DCR SV0-AT01-GEF-000006, Rev. 0 (which supersedes SV0-AT01-GEF-000005)
E&DCR SV0-AT01-GEF-000011, Rev. 0
E&DCR SV0-AT01-GEF-000012, Rev. 0

PO number 132175-D220.07, Joseph Oat Corporation, "Nuclear Island Basemat Safety Related Embeds/Anchor- Units 3," Rev. 0
PO number 132175-J400A-00, Gerdau Ameristeel US, Inc., "NQA-1 concrete reinforcing steel," Rev. 0

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
CR	Condition Report
CV	Containment Vessel
DCD	Design Control Document
E&DCR	Engineering and Design Coordination Report
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	Measuring and Testing Equipment
MSE	Mechanically Stabilized Earth
N&D	Nonconformance and Disposition Report
NDQAM	Nuclear Development Quality Assurance Manual
NQA	Nuclear Quality Assurance
NPP	Nuclear Procurement Procedure
NRC	Nuclear Regulatory Commission
PO	Purchase Order
QA	Quality Assurance
QAD	Quality Assurance Directive
QAP	Quality Assurance Program
QC	Quality Control
QS	Quality Standard
Rev.	Revision
Shaw	Shaw Stone and Webster, Inc.
SNC	Southern Nuclear Operating Company, Inc (Licensee)
SSAR	Site Safety Analysis Report
SWSQAP 1-74A	Shaw Standard Nuclear Quality Assurance Program
VEGP	Vogtle Electric Generating Plant
WEC	Westinghouse Electric Company LLC
10 CFR	Title 10 of the <i>Code of Federal Regulations</i>