



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION II
245 PEACHTREE CENTER AVENUE NE, SUITE 1200
ATLANTA, GEORGIA 30303-1257

January 30, 2013

EA-12-230

Mr. B. L. Ivey
Vice President, Regulatory Affairs
Southern Nuclear Operating Company
P.O. Box 1295
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Birmingham, AL 35201

**SUBJECT: SOUTHERN NUCLEAR OPERATING COMPANY VOGTLE ELECTRIC
GENERATING PLANT UNITS 3 AND 4 - NRC INTEGRATED INSPECTION
REPORTS 05200025/2012-005 and 05200026/2012-005**

Dear Mr. Ivey:

On December 31, 2012, 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 were discussed on December 20, 2012, with Mr. David Jones, Vogtle 3&4 Regulatory Affairs Vice President, and on January 17, 2013, with Mr. Howard Mahan, Southern Nuclear Operating Company AP 1000 Licensing Manager, and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

On June 21, 2012, the NRC's Office of Investigations (OI) initiated an investigation to determine whether a subcontracted employee falsified a concrete laboratory shift check form, at your VEGP Units 3 & 4 construction project. Based on the investigation, completed on October 24, 2012, OI substantiated that the subcontracted employee falsified the form. Enclosure 2 provides the synopsis to the investigation. The NRC concluded that this issue is appropriately characterized as a Licensee Identified Violation, as documented in Section 4OA7 of the inspection report.

The violation was evaluated in accordance with the NRC Enforcement Policy, Section 2.3 and the temporary enforcement guidance outlined in enforcement guidance memorandum number EGM-11-006. The current Enforcement Policy is included on the NRC's Web site at <http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Website at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Michael Ernstes, Chief
Construction Projects Branch 4
Division of Construction Projects

Docket Nos.: 05200025, 05200026

License Nos: NPF-91 (Unit 3), NPF-92 (Unit 4)

Enclosure:

- 1) Inspection Report 05200025/2012005 and
05200026/2012005 w/Attachment:
Supplemental Information
- 2) Synopsis – Region II Office of Investigation
Case Number 2-2012-032

cc w/encl: *See Attached*

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Website at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

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/RA/

Michael Ernstes, Chief
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 Division of Construction Projects

Docket Nos.: 05200025, 05200026

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Enclosure:

- 1) Inspection Report 05200025/2012005 and 05200026/2012005 w/Attachment: Supplemental Information
- 2) Synopsis – Region II Office of Investigation Case Number 2-2012-032

cc w/encl: *See Attached*

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Letter To B. L. Ivey from Michael E. Ernstes dated January 30, 2013

SUBJECT: SOUTHERN NUCLEAR OPERATING COMPANY VOGTLE ELECTRIC
GENERATING PLANT UNITS 3 AND 4 - NRC INTEGRATED INSPECTION
REPORTS 05200025/2012-005 AND 05200026/2012-005

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**U.S. NUCLEAR REGULATORY COMMISSION
Region II**

Docket Numbers: 5200025
5200026

License Numbers: NPF-91
NPF-92

Report Numbers: 05200025/2012005
05200026/2012005

Licensee: Southern Nuclear Operating Company, Inc.

Facility: Vogtle Electric Generating Plant Units 3 and 4

Location: 7825 River Road
Waynesboro, GA

Inspection Dates: October 1, 2012 through December 31, 2012

Inspectors: Justin Fuller, Senior Resident Inspector, DCP
Chad Huffman, Resident Inspector, DCP
Coleman Abbott, Resident Inspector, DCP
Chad Oelstrom, Construction Inspector, DCI

Accompanying Personnel: Marieliz Vera, NSPDP

Approved by: Michael Ernstes
Branch Chief

SUMMARY OF FINDINGS

Inspection Report (IR) 05200025/2012005, 05200026/2012005; 10/01/2012 through 12/31/2012; Vogtle Unit 3 Combined License, Vogtle Unit 4 Combined License, integrated inspection report.

This report covers a three-month period of inspection by resident inspectors and announced Inspections, Tests, Analysis, and Inspection Criteria (ITAAC) inspections by regional inspectors. One Green finding associated with a licensee identified, non-cited violation was identified consistent with the NRC Enforcement Policy, Section 2.3 and the temporary enforcement guidance outlined in enforcement guidance memorandum number (EGM)-11-006. The significance of most findings is indicated by their color (Green, White, Yellow, or Red) using Inspection Manual Chapter (IMC) 2519P, "Construction Significance Determination Process". Construction Cross Cutting Aspects are determined using IMC 0613P, "Power Reactor Construction Inspection Reports - Pilot." The Nuclear Regulatory Commission's (NRC's) program for overseeing the construction of commercial nuclear power reactors is described in IMC 2506, "Construction Reactor Oversight Process General Guidance and Basis Document."

A. NRC-Identified and Self Revealed Findings

No findings were identified.

B. Licensee-Identified Violations

A violation of very low safety significance that was identified by the licensee was reviewed by the inspectors and Region II Office of Investigations. Corrective actions planned or taken by the licensee have been entered into the licensee's corrective action program. This violation and associated corrective action tracking numbers are listed in Section 4OA7 of this report.

REPORT DETAILS

Summary of Plant Construction Status

1. CONSTRUCTION REACTOR SAFETY

Cornerstones: Design/Engineering, Procurement/Fabrication, Construction/Installation, Inspection/Testing

1A01 (Unit 4) ITAAC Number 93 / Family 06B

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with Unit 4 inspection, test, analysis, and acceptance criteria (ITAAC) Number 93 (2.2.01.03a):

Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
3.a) Pressure boundary welds in components identified in Table 2.2.1-1 as ASME Code Section III meet ASME Code Section III requirements.	Inspection of the as-built pressure boundary welds will be performed in accordance with the ASME Code Section III.	A report exists and concludes that the ASME Code Section III requirements are met for non-destructive examination of pressure boundary welds.

The inspectors observed the fit-up inspection and performed independent measurements for the Vogtle Unit 4 Fuel Transfer Tube Insert Plate (P11 A4-C33) to the Containment Vessel Bottom Head to determine whether the fit-up conformed to Chicago Bridge and Iron (CB&I) Procedure CMS-830-15-PR-45158, "Visual Inspection – Welds American Society of Mechanical Engineers (ASME) Section III, Division I – Subsection NE ", Revision 0 and drawing CB&I 13 Sheet 1 Revision 6.

The inspectors observed the in-process welding of the Unit 4 containment vessel bottom head to determine whether the welding was performed in accordance with the applicable quality and technical requirements. Specifically, the inspectors observed the in-process welding of the outside of weld A4-B15 to B16 to determine whether the welding activity was performed in accordance with welding procedure E91TG-H4, Revision 4. The inspectors observed in-process work and documentation to determine whether compliance with the following attributes was achieved:

- the weld joint was sufficiently protected from inclement conditions such as high wind;
- the surfaces to be welded were smooth, uniform, and free from significant surface discontinuities such as cracks or seams, and free from paint, oil, rust,

- scale, slag, grease, moisture or other harmful foreign materials that would be detrimental to welding for at least two inches from the weld joint;
- the temperature of the base material at the joint prior to welding met the minimum preheat requirements specified in the welding procedure; and
 - the maximum interpass temperature was checked to ensure that it did not exceed the value specified in the welding procedure.

The inspectors reviewed the weld records associated with the following welds to determine whether work was completed in accordance with a "traveler," which coordinated and sequenced all operations, referenced procedures and instructions, established hold points, and provided for production and inspection sign-offs. The inspectors also reviewed these travelers to determine whether the welds were traceable to the welders and filler materials used for the following:

- A4-B15 to B16, BH2 Long Seam - Assembly E to Assembly F;
- Unit 4 Fuel Transfer Tube Insert Plate (P11[A4-C33]) to Unit 4 Containment Vessel Bottom Head; and
- Unit 4 nozzle P22 assembly (A4-C36) to Unit 4 Containment Vessel Bottom Head.

The inspectors reviewed the welding and nondestructive examination (NDE) records for the above welds to determine if the welding and NDE were performed in accordance with the following:

- Article NE-4000, "Fabrication and Installation," of 2001 edition of the ASME Code, Section III, Subsection NE, "Metal Containment," including the 2002 Addenda;
- Article NE-5000, "Examination," of 2001 edition of the ASME Code, Section III, Subsection NE, "Metal Containment," including the 2002 Addenda; and
- Westinghouse Design Specification APP-MV50-Z0-001, "Containment Vessel," Rev. 7.

Specifically, the inspectors reviewed the welding and NDE records for the above welds to determine whether:

- CB&I had adequately documented that the fit-up and weld edge preparations were adequate;
- CB&I had achieved and maintained the minimum preheat temperature;
- the welder identification was properly recorded on the traveler;
- CB&I had adequately documented the acceptability of the seam fit-up (visual inspection performed by Quality Control (QC)); and
- CB&I had adequately documented the welding of the joint.

The inspectors performed an independent visual inspection of the above welds to determine if the surface of final welds met the requirements of Subsection NE-4424, "Surfaces of Welds," of ASME Section III, Article NE-4000. Specifically, the inspectors observed the surface condition of the finished welds, measured the amount of reinforcement, and measured any locations of undercut to determine if the as-welded condition was acceptable per ASME Section III, Article NE-4000, subsection NE-4424 and CB&I visual inspection procedure CMS-830-15-PR-45158.

The inspectors also reviewed a sample of the calibration records for the measuring and test equipment (M&TE) used by CB&I during their receipt inspection of the Vogtle Unit 4 Fuel Transfer Tube Insert Plate and Sleeve (P11 A3-C33) to determine whether the M&TE utilized during the inspections were properly controlled and calibrated at the time of the inspection. Specifically, the inspectors reviewed calibration records for the following instruments:

- Visible Light Meter Serial Number (S/N) Q574892;
- 1" - 2" Starrett Micrometer S/N C18616;
- Ultrasonic Thickness Gauge S/N 55342 with AK284 probe; and
- Fluke 62 Mini Infrared Thermometer S/N 19470158.

b. Findings

No findings were identified.

1A02 (Unit 3) ITAAC Number 93 / Family 06B

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with Unit 3 ITAAC Number 93 (2.2.01.03a):

Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
3.a) Pressure boundary welds in components identified in Table 2.2.1-1 as ASME Code Section III meet ASME Code Section III requirements.	Inspection of the as-built pressure boundary welds will be performed in accordance with the ASME Code Section III.	A report exists and concludes that the ASME Code Section III requirements are met for non-destructive examination of pressure boundary welds.

The inspectors observed the in-process welding of the Vogtle Unit 3 horizontal ring weld between courses 1 (S1) and 2 (S2) to determine whether the welding was performed in accordance with the applicable quality and technical requirements. Specifically, the inspectors observed the in-process welding of the inside of Ring 1 weld course S1 to S2, to determine whether the welding activity was performed in accordance with CB&I

welding procedure specification ENi4 / OK 10.72. The inspectors observed welding activities to determine whether the following attributes were met:

- the welding was conducted in accordance with a "traveler," weld data record or similar document which coordinated and sequenced all operations, referenced procedures and instructions, established hold points, and provided for production and inspection signoffs;
- the weld joint was sufficiently protected from inclement conditions such as high wind;
- the surfaces to be welded were smooth, uniform, and free from significant surface discontinuities such as cracks or seams, and free from paint, oil, rust, scale, slag, grease, moisture or other harmful foreign materials that would be detrimental to welding for at least 2 inches from the weld joint;
- the temperature of the base material at the joint prior to welding met the minimum preheat requirements specified in the welding procedure;
- the maximum interpass temperature was checked to ensure that it did not exceed the value specified in the welding procedure; and
- welding variables specified in the welding procedure specification (WPS) were routinely verified.

Specifically, the inspectors observed QC measure and verify the heat input to determine whether the heat input controls were adequate to ensure that the maximum weld heat inputs specified by the WPS were not exceeded. The measurements observed by the inspectors included verification of the voltage, amperage, and travel speed. The inspectors also observed CB&I QC measure the thickness of the deposited weld metal and the width of the weld bead. The inspectors compared these measurements to the ranges specified by the WPS to determine whether these welding parameters were acceptable. The inspectors also performed an independent visual inspection of the in-process weld to determine whether the weld bead achieved adequate fusion to the other weld passes and base metal.

b. Findings

No findings were identified.

1A03 (Units 3 & 4) ITAAC Number 91 / Family 06Fa. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 91 (2.2.01.02a):

Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
2.a) The components identified in Table 2.2.1-1 as ASME Code Section III are designed and constructed in accordance with ASME Code Section III requirements.	Inspection will be conducted of the as-built components as documented in the ASME design reports.	The ASME Code Section III design reports exist for the as-built components identified in Table 2.2.1-1 as ASME Code Section III.

The inspectors reviewed the following CB&I Receiving Inspection Reports (RIRs) to determine whether CB&I had performed an adequate receipt inspection of the Certified Material Test Reports (CMTRs) supplied by the material supplier:

- RIR number U4-076 for the Vogtle Unit 4 Fuel Transfer Tube Penetration sleeve and insert plate; Assembled Penetration Block (4-P11-S, A4-C33-1) A4-C33 (P11); Piece Mark A4-C33; and
- RIR number U4-079 for the Vogtle Unit 4 Assembled Penetration Block (3-P22-S, A3-C36-1) A4-C36 (P22); Piece Mark A4-C36.

The inspectors also reviewed the related N-2 ASME Code Data Report for the above components (Part numbers IN-4851 and IN-4854).

The inspectors performed an independent review of the CMTRs for the insert plate and for the penetration sleeve, which were welded together, to determine whether the materials met the requirements of the following:

- Vogtle Units 3 and 4 Updated Final Safety Analysis Report;
- SA-738 Grade B, "Specification for the Pressure Vessel Plates, Heat-Treated, Carbon-Manganese-Silicon Steel, for Moderate and Lower Temperature Service";
- APP-MV50-Z0-037, "AP1000 Containment Vessel: SA-738 Grade B Plates"; and
- 10 CFR Part 50, Appendix B.

The CMTRs were reviewed to determine if chemical and mechanical properties (including applicable impact testing, grain size and carbon equivalency), heat treatment, degassing process, and required NDE met the above requirements.

b. Findings

No findings were identified.

1A04 (Unit 3) ITAAC Number 761 / Family 01Fa. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 761 (3.3.00.02a.i.b):

Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
2.a) The nuclear island structures, including the critical sections listed in Table 3.3-7, are seismic Category I and are designed and constructed to withstand design basis loads as specified in the Design Description, without loss of structural integrity and the safety-related functions.	i) An inspection of the nuclear island structures will be performed. Deviations from the design due to as-built conditions will be analyzed for the design basis loads.	i.b) A report exists which reconciles deviations during construction and concludes that the as-built shield building structures, including the critical sections, conform to the approved design and will withstand the design basis loads specified in the Design Description without loss of structural integrity or the safety-related functions.

The inspectors observed safety-related reinforcing steel (rebar) installation associated with the Vogtle Unit 3 nuclear island basemat below the shield building to determine whether the licensee installed the rebar in accordance with the applicable specifications, drawings, procedures and codes. The inspectors also verified that that the rebar was correctly secured in the right locations, and had the proper clearances. Specifically, the inspectors observed the installation of Layer 3, the circumferential rebar located in the radius area of the nuclear island, from radius 45'-0" to 71'-6". During this inspection, the inspectors referenced the applicable code sections of American Concrete Institute (ACI) 349-01, "Code Requirements for Safety Related Concrete Structures," as well as the following Westinghouse Electric Company (WEC) design drawings:

- APP-1000-CR-001,"Nuclear Island Basemat Bottom Reinforcement," Rev. 6;
- APP-1000-CR-901,"Nuclear Island Basemat Reinforcement Sections," Rev. 9;
- APP-1210-CR-901, "Auxiliary Building Basemat Reinforcement Sections NS and Details EL 66'-6"," Rev. 4; and
- APP-1210-CR-902, "Auxiliary Building Basemat Reinforcement Sections EW and Details EL 66'-6"," Rev. 4.

The inspectors observed this rebar to determine whether the rebar spacing, size, and count conformed to the above drawings. The inspectors also verified that the lap spliced

lengths were consistent with the requirements of the ACI 349-01 code, and the drawings listed above.

b. Findings

No findings were identified.

1A05 (Unit 3) ITAAC Number 761 / Family 01F

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 761 (3.3.00.02a.i.b):

Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
2.a) The nuclear island structures, including the critical sections listed in Table 3.3-7, are seismic Category I and are designed and constructed to withstand design basis loads as specified in the Design Description, without loss of structural integrity and the safety-related functions.	i) An inspection of the nuclear island structures will be performed. Deviations from the design due to as-built conditions will be analyzed for the design basis loads.	i.b) A report exists which reconciles deviations during construction and concludes that the as-built shield building structures, including the critical sections, conform to the approved design and will withstand the design basis loads specified in the Design Description without loss of structural integrity or the safety-related functions.

The inspectors observed safety-related reinforcing steel (rebar) installation associated with the Vogtle Unit 3 nuclear island basemat below the shield building, to determine whether the rebar installation was in accordance with the applicable specifications, drawings, procedures and codes. The inspectors also verified that the rebar was correctly secured in the right locations, and had the proper clearances. Specifically, the inspectors observed the rebar installed on the exterior portion of the Vogtle Unit 3 containment vessel bottom head (CVBH). This rebar, which was attached to CVBH was associated with layers 9b and 9d (circumferential rebar) and layer 10c (radial rebar). The inspectors referenced the applicable code sections of ACI 349-01, "Code Requirements for Safety Related Concrete Structures," as well as the following WEC design drawings:

- APP-1010-CR-104, "Nuclear Island Basemat Reinforcement Area Below Containment Vessel Stud Pattern and Details" Rev. 4;
- APP-1010-CR-191, "Nuclear Island Basemat Reinforcement Area Below Containment Vessel Layer 9 Reinf Plan," Rev. 3;

- APP-1010-CR-192, “Nuclear Island Basemat Reinforcement Area Below Containment Vessel Layer 9 Reinf Details,” Rev. 3; and
- APP-1010-CR-201, “Nuclear Island Basemat Reinforcement Area Below Containment Vessel Layer 10a, b, c, & d Key Plan,” Rev. 3.

During this inspection, the inspectors independently determined whether:

- Layer 10c radial rebar was installed and maintained a minimum clear distance from the CVBH as specified on WEC design drawings; and
- Proper rebar size and lap splice as specified on design drawings were achieved for layers 9b and 9d circumferential rebar

b. Findings

No findings were identified.

1A06 (Unit 3) ITAAC Number 874

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 874 (E.2.5.04.05.05.01):

Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
Backfill material under Seismic Category 1 structures is installed to meet a minimum of 95 percent modified Proctor compaction.	Required testing will be performed during placement of the backfill materials.	A report exists that documents that the backfill material under Seismic Category 1 structures meets the minimum 95 percent modified Proctor compaction.

The inspectors reviewed the Unit 3 ITAAC 874 backfill report to determine whether the information presented in the report was consistent with NRC inspections of the ITAAC. This ITAAC requires testing be performed during placement of backfill material under Seismic Category 1 structures to ensure it was installed to meet a minimum of 95 percent modified Proctor compaction.

b. Findings

No findings were identified.

1P01 Quality Assurance Implementation, Appendix 4, Inspection of Criterion IV – Procurement Document Control (IP35007, A4.04.02)

a. Inspection Scope

The inspectors reviewed the purchase document / contract between Shaw and Mistras (subcontract No. 1321752004-1466), “Non Destructive Examination with Mistras Group, Inc, dated August 30, 2011; and the referenced procurement specification SV0-G1-T1-001, “Nondestructive Examination,” Rev 2; to verify the following:

- procurement documents were prepared in accordance with Shaw's implementing documents;
- Mistras was listed on Shaw's QRL;
- procurement documents contained requirements for Mistras to provide appropriate documentation of quality, including component traceability; and
- procurement document were maintained in Shaw's document control program.

The inspectors also reviewed these purchase documents to verify that Shaw had properly passed down the requirements of 10 CFR Part 21 and 10 CFR 50.55(e) to Mistras. Furthermore, the inspectors verified that these purchase documents properly passed down the quality requirements of 10 CFR Part 50, Appendix B and ASME NQA-1-1994 to Mistras.

b. Findings

No findings were identified.

1P02 Quality Assurance Implementation, Appendix 4, Inspection of Criterion IV – Procurement Document Control (IP35007, A4.04.01, and A4.04.02)

a. Inspection Scope

The inspectors reviewed Shaw purchase order J132175-C601.02 Revisions 0 through 11 for shop fabricated ASME Section III piping procured by Shaw from their supplier, BF Shaw. Specifically, the inspectors reviewed this purchase order, and revisions to determine whether the following attributes were met:

- procurement documents were prepared in accordance with Shaw's implementing documents;
- BF Shaw was on the Shaw QRL at the time that the piping was procured;
- the purchase order contained requirements for the contractor to provide appropriate documentation of quality, including component traceability;
- the purchase order was maintained in Shaw's document control program; and

- specifications differing from the original design documents were reviewed and approved by qualified technical personnel.

Additionally, the inspectors reviewed this purchase to determine whether 10 CFR Part 50, Appendix B and 10 CFR Part 21 were properly passed down to BF Shaw.

b. Findings

No findings were identified.

1P03 Quality Assurance Implementation, Appendix 7, Inspection of Criterion VII – Control of Purchased Material, Equipment, and Services (IP35007, A7.04.02)

a. Inspection Scope

The inspectors reviewed the Shaw Quality Rating List (QRL) to determine whether Shaw's contractor, Mistras Services (Shaw vendor number 11-029), was approved to perform safety-related NDE services in accordance with the Shaw quality assurance program. The inspectors reviewed the Shaw QRL and the referenced Shaw qualification audit reports to determine whether Shaw had performed these qualification activities in accordance with Shaw Nuclear QAD 7.17, "Supplier and Contractor QA Program Manual Reviews and Qualification Audits," Revision L. Specifically, the inspectors reviewed the following audit reports to determine whether: 1) these audits adequately supported Mistras' inclusion on the Shaw QRL, 2) the audits were conducted on schedule, and 3) any identified deficiencies relating to Mistras' implementation of their quality assurance program were appropriately included in the Shaw or Mistras corrective action program:

- Audit V2012-05, March 19-23, 2012 at VC Summer and Vogtle Sites;
- Audit V2011-14, June 7-10, 2011 at Mistras facility; and
- Audit V2012-12, February 28-March 1, 2012 at Mistras Services in Atlanta, GA.

The inspectors reviewed the auditor qualification records for two Shaw auditors involved with the above audit activities to determine whether they were qualified in accordance with Shaw QAD 2.13, "Qualification and Certification of Personnel Performing Quality Assurance Audits," Revision F.

b. Findings

No findings were identified.

1P04 Quality Assurance Implementation, Appendix 7, Inspection of Criterion VII – Control of Purchased Material, Equipment, and Services (IP35007, A7.04.02)

a. Inspection Scope

The inspectors reviewed a sample of licensee assessments and inspections to determine whether they had adequately implemented the requirements of 10 CFR Part 50, Appendix B, Criterion VII, "Control of Purchased Material, Equipment, and Services," and Section 7, "Control of Purchased Material, Equipment, and Services," of the SNC Nuclear Development Quality Assurance Manual. Specifically, the inspectors reviewed the following to determine conformance with the above quality requirements:

- The inspectors reviewed Nuclear Development Quality Assurance Assessment Report Number NDQA-2012-S19, "Observation of Shaw Nuclear Services Audit of BF Shaw," performed April 9-13, 2012. This assessment was performed by the licensee to confirm whether Shaw's external audit of B.F. Shaw's activities conformed to their quality assurance program, 10 CFR Part 50, Appendix B, and NQA-1-1994 requirements;
- NDQA-2012-S21, "Batch Plant Surveillance/Batch Plant #2," performed April 3-16, 2012. This assessment was performed by the licensee to confirm whether Shaw conformed to safety-related constituents, batching and concrete testing requirements at batch plant #2; and
- NDQA-2012-S40, "Mechanical Splices for Rebar (Cadwelds) - Testing," performed June 7-22, 2012. This assessment was performed by the licensee to determine whether testing/verification of laboratory activities related to mechanical splices for Unit 3 Nuclear Island rebar were adequate.

The inspectors reviewed the above assessment results to determine whether the licensee had appropriately assessed the effectiveness of the control of quality by Shaw and their subcontractors at intervals consistent with the importance, complexity, and quantity of the product or services. The inspectors also reviewed these reports to determine whether (1) the report was an adequate record of an activity affecting quality, (2) the report was completed in accordance with the licensee's quality assurance program implementing procedures, and (3) any issues identified by the licensee were appropriately identified (documented) and corrected in accordance with the project quality requirements.

b. Findings

No findings were identified.

1P05 Quality Assurance Implementation, Appendix 7, Inspection of Criterion VII – Control of Purchased Material, Equipment, and Services (IP35007, A7.04.01 and A7.04.02)

a. Inspection Scope

The inspectors reviewed the Shaw Nuclear QRL entry for their supplier BF Shaw to verify that they were on the QRL during the time that they manufactured and supplied Quality Assurance (QA) Category I, ASME Section III pipe spools and fitting to the Vogtle Units 3 and 4 site.

The inspectors reviewed the following Shaw source inspection reports that documented Shaw Nuclear source inspections of BF Shaw associated with the procurement of ASME components to determine whether Shaw performed adequate source inspections of the subject ASME Section III piping, and that any substantive deficiencies related to BF Shaw's implementation of their QAP were properly included in the corrective action program:

- Source Inspection Report Number J132175-C601.02-405-004-01, September 22, 2011;
- Source Inspection Report Number J132175-C601.02-405-004-02, May 2 – May 11, 2012;
- Source Inspection Report Number J132175-C601.02-405-004-03, May 18 – May 30, 2012;
- Source Inspection Report Number J132175-C601.02-405-004-04, June 14 – June 20, 2012;
- Source Inspection Report Number J132175-C601.02-405-004-05, June 14 – June 20, 2012; and
- Source Inspection Report Number J132175-C601.02-405-004-06, June 28 – July 4, 2012.

The inspectors verified that Shaw properly documented their determination that BF Shaw's inclusion on the QRL remained acceptable. The inspectors performed an independent visual inspection of flange SV3-RNS-PLW-17B-A to determine whether it was properly tagged as acceptable for use. The inspectors noted that flange SV3-RNS-PLW-17B-A was associated with RNS line number RNS-PL-L030B (3" line, DBC classification). The inspectors also reviewed the Shaw source inspection plan (Source Inspection Plan Number P-132175-C601-02-001, "AP1000 ASME III Shop Fabricated Piping, Revision 1) associated with these inspections of BF Shaw to determine whether the plan established adequate measures to assure that the flange conformed to the procurement documents. The inspectors verified that the source inspection reports referenced above were consistent with this source inspection plan.

The inspectors reviewed Shaw site quality control receipt inspection report number Q445-12-1480, which was associated with their acceptance of RNS flange SV3-RNS-

PLW-17B-A, to determine whether Shaw QC performed an adequate receipt inspection in accordance with Shaw QC inspection number F-Q445-08 Revision 3. The inspectors noted that flange SV3-RNS-PLW-17B-A was associated with RNS line number RNS-PL-L030B (3" line, DBC classification).

The inspectors verified that the flange was the proper material, schedule, and rating for piping classification DBC as specified by Westinghouse document APP-PL02-Z0-001, "Piping Class Sheets and Standard Details," Revision 7.

The inspectors performed an independent visual inspection of flange SV3-RNS-PLW-17B-A to determine whether the flange conformed to the requirements established by the relevant codes and standards, specification, drawings, and the purchase order. The inspectors verified that the flange had the required markings.

The inspectors reviewed the documentation package for this flange to determine whether the manufacturing records provided adequate documentary evidence that the flange conformed to the requirements established by the procurement documents. The inspectors verified that these records were sufficient to identify the as-built flange met the specific fabrication requirements, such as the codes, standards, and specifications invoked by the purchase order.

The inspectors reviewed the certified material test report for flange SV3-RNS-PLW-17B-A (Heat # E111304) to determine whether the item's material properties conformed to ASME SA-182/SA-182M, "Specification for forged or rolled alloy-steel pipe flanges, forged fittings, and valves and parts for high-temperature service." Specifically, the inspectors verified that the chemical composition and mechanical properties (tensile and yield strength, percent elongation, and reduction in area) conformed to the ranges specified by SA-182. The inspectors also reviewed the manufacturing and inspection records associated with this flange to determine whether it was fabricated in accordance with ASME Boiler and Pressure Vessel Code, Section III, "Rules for Construction of Nuclear Power Plant Components," Subsection ND, "Class 3 Components, 1998 Edition with 2000 Addenda. The inspectors also verified conformance with the ASME B16.5 Code, "Pipe Flanges and Flanged Fittings." The inspectors noted that flange SV3-RNS-PLW-17B-A was associated with RNS line number RNS-PL-L030B (3" line, DBC classification).

b. Findings

No findings were identified.

1P06 Quality Assurance Implementation, Appendix 8, Inspection of Criterion VIII – Identification and Control of Materials, Parts and Components (IP35007, A8.04.01, and A8.04.02)

a. Inspection Scope

Inspectors reviewed a sample of safety-related auxiliary building (CA20) submodules stored on site. The inspectors specifically reviewed submodules CA20-11 and CA20-73. The inspectors examined associated records to determine whether submodules and their constituent components were properly identified. The inspectors reviewed implementing documents and inspected CA20 submodules to determine whether items were properly identified and controlled in accordance with implementing documents. The inspectors reviewed identifying markings and associated documentation to determine whether traceability of the CA20 submodules was consistent and accurate from identification of the item through the resultant documentation and use of the item. Specifically the inspectors reviewed markings and identification on CA20-11 and CA20-73 submodules and their components including rebar, Nelson studs, steel face plates, and channel steel.

The inspectors observed the CA20 submodules to determine whether the use of physical markings for identification was employed to the maximum extent possible.

The inspectors examined Unit 3 safety-related reinforcing steel (rebar) and embed plates, to determine whether the licensee had effectively implemented its process for identification and control of items. During this inspection, the inspectors determined whether the items procured, installed, and used were traceable. Specifically, the inspectors reviewed associated procurement and technical documents and inspected the items physical markings. The inspectors reviewed material test reports and records to determine whether the items had undergone their required inspection and testing before installation. The inspectors performed independent walk-downs of Unit 3 Nuclear Island designated storage areas, to determine whether accepted items were controlled adequately to ensure that they were not used if a nonconformance or corrective action was identified. The inspectors verified whether the nonconforming items had the required nonconforming tags, and whether the associated documentation and records were in agreement with the indicated item.

b. Findings

No findings were identified.

1P07 Quality Assurance Implementation, Appendix 8, Inspection of Criterion VIII – Identification and Control of Materials, Parts and Components (IP35007, A8.04.01, and A8.04.02)

a. Inspection Scope

The inspectors performed an independent visual inspection of flange SV3-RNS-PLW-17B-A to determine whether it was identified and controlled in accordance with the Shaw quality assurance program. The inspectors noted that flange SV3-RNS-PLW-17B-A was associated with normal residual heat removal system (RNS) line number RNS-PL-L030B (3" line, DBC classification).

The inspectors verified the traceability of the item was maintained throughout fabrication and storage at the Vogtle construction warehouse. The inspectors verified that the markings on the flange included the required information as specified by ASME B16.5 Code, "Pipe Flanges and Flanged Fittings," and to ASME SA-182/SA-182M, "Specification for forged or rolled alloy-steel pipe flanges, forged fittings, and valves and parts for high-temperature service." The inspectors verified that these markings were also traceable to the related fabrication and testing records provided by the supplier. The inspectors noted that the flange had not been installed, but had been receipt inspected by the onsite Shaw QC organization and that QC had applied a tag to indicate that it had been accepted and was released for construction.

b. Findings

No findings were identified.

1P08 Quality Assurance Implementation, Appendix 15, Inspection of Criterion XV – Nonconforming Materials, Parts, or Components (IP35007, A15.04.02)

a. Inspection Scope

The inspectors reviewed a sample of nonconformance and disposition (N&D) reports to determine whether the conditions were adequately reviewed and accepted, rejected, repaired, or reworked in accordance with documented procedures. The inspectors compared these N&D reports to Section 15, "Nonconforming Materials, Parts, or Components," of the Shaw quality assurance program (SWSQAP 1-74A, Rev. B) and Shaw procedure QS 15.1, "Nonconformance & Disposition Report," Rev. G and Rev. 001. The inspectors reviewed N&D reports associated with both Units 3 and 4.

The inspectors reviewed a sample of unsatisfactory inspection reports (IRs) to determine whether they conformed, when appropriate, with the requirements of Shaw procedure QS 15.1 as follows:

- initiating site N&Ds for nonconformances identified by QC;
- applying reject tags; and
- assuring nonconforming materials, parts or components are not issued.

Specifically, the inspectors reviewed the following N&D reports and IRs:

- V-ND-12-0355;
- V-ND-12-0162;
- V-ND-12-0183;
- V-ND-12-0384;
- V-ND-12-0464;
- V-ND-12-0511;
- V-ND-12-0491;
- V-ND-12-0355;
- V-ND-11-0402;
- V-ND-12-0361;
- V-ND-12-0507;
- V-ND-12-0535;
- IR C112-02-12-0053;
- IR C112-02-12-0117;
- IR C112-02-12-0122;
- IR C112-02-12-0127;
- IR C112-02-12-0129;
- IR S511-01-12-0079; and
- IR S511-01-12-0083.

The inspectors toured several of the on-site storage areas to determine whether the licensee had established adequate areas for segregating and controlling nonconforming items. For a sample of nonconforming, safety-related reinforcing steel, embed plates, and ASME Section III pipe spools, the inspectors observed that these nonconforming items in storage were properly segregated and marked in accordance with the applicable quality requirements. For the N&D reports listed above, the inspectors reviewed the associated documentation to verify that it contained a technically adequate description of the problems with the item. Additionally, the inspectors reviewed the nonconformance evaluations for the N&D reports listed above to determine whether they contained technically adequate explanations for the resulting dispositions of the nonconforming items. Finally, the inspectors reviewed the above N&D reports and associated evaluations to determine whether Shaw had performed an adequate 10 CFR Part 21 and 10 CFR 50.55(e) evaluation, if applicable.

b. Findings

No findings were identified.

1P09 Quality Assurance Implementation, Appendix 16, Inspection of Criterion XVI – Corrective Actions (IP35007)

.1 Routine Review of Items Entered into the Corrective Action Program

a. Inspection Scope

As part of the various inspection procedures discussed in previous sections of this report, the inspectors routinely reviewed issues during inspection activities and plant status reviews to verify they were being entered into the licensee's corrective action program at an appropriate threshold, adequate attention was being given to timely corrective actions, and adverse trends were identified and addressed. Attributes reviewed included: identification of the problem was complete and accurate; timeliness was commensurate with the safety significance; evaluation and disposition of performance issues, generic implications, common causes, contributing factors, root causes, extent-of-condition reviews, and previous occurrences reviews were proper and adequate; and the classification, prioritization, focus, and timeliness of corrective actions were commensurate with safety and sufficient to prevent recurrence of the issue.

b. Findings

No findings were identified.

.2 Daily Corrective Action Program Reviews

a. Inspection Scope

On a routine basis, the inspectors screened a sample of issues entered into the Southern Nuclear Operating Company (SNC), Shaw, and WEC corrective action programs to determine whether conditions adverse to quality were controlled in accordance with each company's quality assurance program (QAP) and whether potential adverse trends were appropriately identified and corrected by SNC or their contractors. The inspectors screened corrective action records associated with both Units 3 and 4.

Specifically, the inspectors:

- attended weekly issue review committee meetings at the site;
- reviewed a sample of SNC, Shaw, and WEC corrective action documents; and
- held discussions with SNC, Shaw, and WEC personnel responsible for the screening and correction of the issues.

b. Findings

No findings were identified.

.3 Selected Issues for Follow-Up Inspection

a. Inspection Scope

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 condition reports (CRs) and Shaw corrective action records (CARs):

- SNC CR 553201;
- SNC CR 550992;
- SNC CR 553201;
- SNC CR 550901;
- SNC CR 548423;
- SNC CR 547617;
- SNC CR 549165;
- SNC CR 549209;
- SNC CR 548259;
- SNC CR 527040;
- Shaw CAR 2012-1301;
- Shaw CAR 2012-1280; and
- Shaw CAR 2012-1272.

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; and
- the organizations properly evaluated and reported the condition (e.g., 10 CFR 50.55(e), 10 CFR Part 21).

b. Findings

No findings were identified.

1P10 Quality Assurance Implementation, Appendix 18, Inspection of Criterion XVIII – Audits (IP35007, A18.04.02)

a. Inspection Scope

The inspectors reviewed a sample of recently completed Shaw audit reports to determine whether these audits were performed in accordance with Shaw Quality Assurance Directive (QAD) 18.1, "Quality Assurance Audits," Revision S, SWSQAP 1-74A, 10 CFR Part 50, Appendix B, and ASME NQA-1-1994. Specifically, the inspectors reviewed the following Shaw audit reports of Mistras, a Shaw subcontractor; that performed safety-related nondestructive testing services for Shaw at the Vogtle Units 3 & 4 site:

- Audit V2012-05, March 19-23, 2012 at VC Summer and Vogtle Sites;
- Audit V2011-14, June 7-10, 2011 at Mistras facility; and
- Audit V2012-12, February 28-March 1, 2012 at Mistras Services in Atlanta, GA.

The inspectors reviewed the above reports to verify the following attributes:

- the audit was included in the audit schedule;
- the audit was performed within the scheduled time frame;
- the audit plan was prepared and issued;
- the audit report included a determination of effectiveness of implementation and compliance with the QAP;
- the audit report was reviewed by management responsible for audited area;
- the audit report was distributed to designated organizations;
- the audit report included summary of identified deficiencies and nonconformances, and a response due date; and
- that the audit findings corrected during audit were documented and verified during audit process.

The inspectors reviewed the auditor qualification records for two Shaw auditors involved with the above audit activities to determine whether they were qualified in accordance with Shaw QAD 2.13, "Qualification and Certification of Personnel Performing Quality Assurance Audits," Revision F.

b. Findings

No findings were identified.

4. OTHER INSPECTION RESULTS

4OA6 Meetings, Including Exit

.1 Exit Meeting.

On December 20, 2012, and January 17, 2013, the inspectors presented the inspection results to Mr. David H. Jones, Vogtle 3&4 Regulatory Affairs Vice President, Mr. Howard Mahan, Southern Nuclear Operating Company Licensing Manager, along with other licensee and consortium staff members. The inspectors stated that no proprietary information would be included in the inspection report.

4OA7 Licensee-Identified Violations

.1 Construction Quality Assurance

The following violation of very low safety significance (Green) was identified by the licensee and is a violation of NRC requirements, which met the criteria of the NRC Enforcement Policy, for being dispositioned as a NCV.

10 CFR 50.9, Completeness and Accuracy of Information, states that “(a) Information provided to the Commission by a licensee or information required by statute or by the Commission’s regulations, orders, or license conditions to be maintained by the licensee shall be complete and accurate in all material respects.”

Criterion XVII, “Quality Assurance Records,” of 10 CFR Part 50, Appendix B, requires in part, that sufficient records shall be maintained to furnish evidence of activities affecting quality. Inspection and test records shall, as a minimum, identify the inspector or data recorder, the type of observation, the results, the acceptability, and the action taken in connection with any deficiencies noted.

Contrary to the above, on or about May 10, 2012, the licensee failed to assure records needed to furnish evidence of activities affecting quality with respect to the qualification of safety-related concrete were complete and accurate, in that, the “Concrete Lab Shift Check” (QA record) failed to identify that the temperature recorder used to monitor water tanks in the testing laboratory was inoperable from May 2 to May 10, 2012. An engineer employed by a Shaw contractor (AMEC) listed the temperature recorder for safety-related concrete testing as operable and in range despite knowing the recorder was inoperable. This resulted in the QA record being inaccurate.

The inspectors noted Shaw initiated CAR number 2012-0630 to identify and correct this issue. AMEC issued CR-SV-111 to document the technical justification for use as-is based on temperature recorders in separate tanks which were adjacent to the tanks with

the failed recorder. The licensee added this issue to their corrective action program as CR 465820.

The inspectors determined the finding was not greater than green in accordance with IMC 2519P because adjacent tanks with operable recorders sharing the same climate controlled atmosphere indicated acceptable temperature readings during the time in question. Furthermore, the experimental safety-related concrete mix design in question was never used.

KEY POINTS OF CONTACT

Licensees and Contractor Personnel

O. D. Fernando, SNC Senior QA Engineer
S. Hand, CB&I QA Manager
B. Harrison, SNC QA Engineer
N. Jackiw, SNC Licensing
D. Jones, Regulatory Affairs Vice President
H. Mahan, SNC Licensing Manager
A. Reynolds, Shaw Project Quality Manager
J. Wright, CB&I QC

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

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

LIST OF DOCUMENTS REVIEWED

Procedures, Specifications and Drawings

CB&I welding procedure number E91TG-H4, Rev. 4
 CB&I Drawing 13 Sheet 1 Rev. 6
 CB&I welding procedure specification ENi4 / OK 10.72, Rev. 5
 Westinghouse Design Specification APP-MV50-Z0-001, "Containment Vessel," Rev. 7
 Westinghouse Design Specification APP-MV50-Z0-037, "AP1000 Containment Vessel: SA-738 Grade B Plates," Rev. 2
 SA-738 Grade B, "Specification for the Pressure Vessel Plates, Heat-Treated, Carbon-Manganese-Silicon Steel, for Moderate and Lower Temperature Service"
 CMS-830-15-PR-45158, "Visual Inspection - Welds ASME Section III, Division 1 - Subsection NE," Rev. 0
 Shaw Standard Nuclear Quality Assurance Program (SWSQAP 1-74A), Rev. B
 Shaw procedure QS 15.1, "Nonconformance & Disposition Report," Rev. G and Rev. 001
 Shaw Quality Assurance Directive 18.1, "Quality Assurance Audits," Rev. S
 Shaw QAD 2.13, "Qualification and Certification of Personnel Performing Quality Assurance Audits," Rev. F
 Excerpt from Shaw QRL for Mistras Group, Inc (dated May 14, 2012)
 Shaw Nuclear Quality Assurance Directive 7.17, "Supplier and Contractor QA Program Manual Reviews and Qualification Audits," Rev. L
 Shaw Procurement Specification, SV0-G1-T1-001, "Nondestructive Examination," Rev 2
 Westinghouse Design Specification APP-1000-CR-001, "Nuclear Island Basemat Bottom Reinforcement," Rev. 6
 Westinghouse Design Specification APP-1000-CR-901, "Nuclear Island Basemat Reinforcement Sections," Rev. 9
 Westinghouse Design Specification APP-1210-CR-901, "Auxiliary Building Basemat Reinforcement Sections NS and Details EL 66'-6"," Rev. 4
 Westinghouse Design Specification APP-1210-CR-902, "Auxiliary Building Basemat Reinforcement Sections EW and Details EL 66'-6"," Rev. 4
 Westinghouse Design Specification APP-1010-CR-104, "Nuclear Island Basemat Reinforcement Area Below Containment Vessel Stud Pattern and Details" Rev. 4
 Westinghouse Design Specification APP-1010-CR-191, "Nuclear Island Basemat Reinforcement Area Below Containment Vessel Layer 9 Reinf Plan," Rev. 3
 Westinghouse Design Specification APP-1010-CR-192, "Nuclear Island Basemat Reinforcement Area Below Containment Vessel Layer 9 Reinf Details," Rev. 3
 Westinghouse Design Specification APP-1010-CR-201, "Nuclear Island Basemat Reinforcement Area Below Containment Vessel Layer 10a, b, c, & d Key Plan," Rev. 3
 Westinghouse Design Specification APP-PL02-Z0-001, "Piping Class Sheets and Standard Details," Rev. 7

Inspection and Material Test Reports

Receiving Inspection Report numbers U4-076 and RIR U4-079

IR C112-02-12-0053

IR C112-02-12-0117

IR C112-02-12-0122

IR C112-02-12-0127

IR C112-02-12-0129

IR S511-01-12-0079

IR S511-01-12-0083

IR Q445-12-1480

IR-12-002080

IR-12-002078

Shaw Modular Solutions Inspection Report SMS-IR-12-202/0

Source Inspection Report Number J132175-C601.02-405-004-01, September 22, 2011

Source Inspection Report Number J132175-C601.02-405-004-02, May 2 – May 11, 2012

Source Inspection Report Number J132175-C601.02-405-004-03, May 18 – May 30, 2012

Source Inspection Report Number J132175-C601.02-405-004-04, June 14 – June 20, 2012

Source Inspection Report Number J132175-C601.02-405-004-05, June 14 – June 20, 2012

Source Inspection Report Number J132175-C601.02-405-004-06, June 28 – July 4, 2012

Source Inspection Plan Number P-132175-C601-02-001, "AP1000 ASME III Shop Fabricated Piping, Rev. 1

Certified material test report for flange SV3-RNS-PLW-17B-A (Heat # E111304)

ASME Data Report Form N-2 dated 4/13/2012 with National Board No. 2714 for nuclear part IN-4851

ASME Data Report Form N-2 dated 4/13/2012 with National Board No. 2717 for nuclear part IN-4854

SV3-XE01-ITR-800000, ITAAC Engineering Report, Unit 3 Seismic Category 1 Backfill

SV0-XE01-Z0-002, Nuclear Island Excavation and Backfill

Corrective Action and Nonconformance Documents

SNC CR 553201

SNC CR 550992

SNC CR 553201

SNC CR 550901

SNC CR 548423

SNC CR 547617

SNC CR 549165

SNC CR 549209

SNC CR 548259

SNC CR 527040

SNC CR 465820

Shaw CAR 2012-0630

Shaw CAR 2012-1301

Shaw CAR 2012-1280

Shaw CAR 2012-1272

AMEC CR-SV-111
 V-ND-12-0355
 V-ND-12-0162
 V-ND-12-0183
 V-ND-12-0384
 V-ND-12-0464
 V-ND-12-0511
 V-ND-12-0491
 V-ND-12-0355
 V-ND-11-0402
 V-ND-12-0361
 V-ND-12-0507
 V-ND-12-0535

Audits and Observations

Audit V2012-05, March 19-23, 2012 at VC Summer and Vogtle Sites
 Audit V2011-14, June 7-10, 2011 at Mistras facility
 Audit V2012-12, February 28-March 1, 2012 at Mistras Services in Atlanta, GA
 NDQA-2012-S21, "Batch Plant Surveillance/Batch Plant #2," performed April 3-16, 2012
 NDQA-2012-S40, "Mechanical Splices for Rebar (Cadwelds) - Testing," performed June 7-22, 2012
 NDQA-2012-S19, "Observation of Shaw Nuclear Services Audit of BF Shaw," performed April 9-13, 2012

Travelers

Shaw Modular Solutions Traveler CA20-73
 Shaw Modular Solutions Traveler CA20-11
 CA20-73 Welder Sign-Off Sheet Work Order # 1907607
 Intermediate Shop Traveler - Spliced Stainless Steel Plate CA20-11
 CB&I Traveler Number U4-BH2-B15/B16, "BH2 Long Seam - Assembly E to Assembly F"
 CB&I Traveler Number U4-BH3-C36, "Insert Assembly A4-C36 (Nozzle P22 Assembly)"
 CB&I Traveler Number U4-BH3-C33, "Insert Assembly A4-C33 (Nozzle P11 Assembly)"

Procurement

Shaw subcontract No. 1321752004-1466, "Nondestructive Examination with Mistras Group, Inc.," dated August 30, 2011
 Shaw purchase order J132175-C601.02 Revisions 0 through 11
 Shaw Quality Rating List dated 11-28-12, entry for BF Shaw, Inc. (Vendor Number 10-010)
 BF Shaw document package for Purchase Order: J132175-C601.02, dated 7/6/2012

LIST OF ACRONYMS

10CFR	Title 10 of the Code of Federal Regulations
ASME	American Society of Mechanical Engineers
ACI	American Concrete Institute
CAR	Corrective Action Record
CB&I	Chicago Bridge and Iron
CMTR	Certified Material Test Reports
CR	Condition Report
CVBH	Containment Vessel Bottom Head
IP	Inspection Procedure
IR	Inspection Report
ITAAC	Inspection, Test, Analysis, and Inspection Criteria
M&TE	Measuring and Test Equipment
N&D	Nonconformance and Disposition Report
NCV	Non-Cited Violation
NDE	Nondestructive Examination
NQA	Nuclear Quality Assurance
NRC	Nuclear Regulatory Commission
QA	Quality Assurance
QAD	Nuclear Quality Assurance Directive
QAP	Quality Assurance Program
QC	Quality Control
QRL	Quality Rating List
QS	Quality Standard
Rev	Revision
RIR	Receiving Inspection Reports
RNS	Normal Residual Heat Removal System
SNC	Southern Nuclear Operating Company
SWSQAP	Shaw Standard Nuclear Quality Assurance Program
WEC	Westinghouse Electric Company
WPS	Welding Procedure Specification

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SYNOPSIS

This investigation was initiated by the U.S. Nuclear Regulatory Commission (NRC), Office of Investigations (OI), Region II (RII), on June 21, 2012, to determine if a subcontracted employee falsified a concrete laboratory shift check form and failed to identify to management or correct equipment adverse to quality at the Southern Nuclear Company (SNC) operated Vogtle Nuclear Plant (VNP) Units 3 & 4 construction project.

Based on the evidence developed during this investigation, OI:RII did substantiate that the subcontracted employee deliberately falsified a concrete laboratory shift check form and failed to identify to management or correct equipment adverse to quality at the SNC operated VNP Units 3 & 4 construction project.

Approved for release, 1/14/13 - SES

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Case No. 2-2012-032

Enclosure 2