



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

October 28, 2015

Michael Yox
Regulatory Affairs Director
Southern Nuclear Operating Company
7835 River Road, Bldg. 140, Vogtle 3&4
Waynesboro, GA 30830

**SUBJECT: VOGTLE ELECTRIC GENERATING PLANT UNITS 3 AND 4 – NRC
INTEGRATED INSPECTION REPORTS 05200025/2015003, and
05200026/2015003**

Dear Mr. Yox:

On September 30, 2015, 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 on October 6, 2015, with Mr. Rauckhorst, Vogtle 3&4 Construction Vice President, along with other members of your staff and consortium staff members.

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.

No findings were identified during this inspection.

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 any) will be made 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).

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.

Should you have any questions concerning this letter, please contact us.

Sincerely,

/RA/

Michael Ernstes, Chief
Division of Construction Projects

Docket Nos.: 5200025, 5200026

License Nos: NPF-91, NPF-92

Enclosure: Inspection Report 05200025/2015003
and 05200026/2015003
W/attachment: Supplemental Information

cc w/encl: (See next page)

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Sincerely,

/RA/

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

Docket Nos.: 5200025, 5200026

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| DATE | 10/ /2015 | 10/ /2015 | 10/20/2015 | 10/20/2015 | 10/20/2015 | 10/19/2015 | 10/21/2015 |
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Letter to M. Yox from Michael E. Ernstes dated October 28, 2015

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT UNITS 3 AND 4 – NRC
INTEGRATED INSPECTION REPORTS 05200025/2015003, and
05200026/2015003

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U.S. NUCLEAR REGULATORY COMMISSION
Region II

Docket Numbers: 5200025
5200026

License Numbers: NPF-91
NPF-92

Report Numbers: 05200025/2015003
05200026/2015003

Licensee: Southern Nuclear Operating Company, Inc.

Facility: Vogtle Unit 3 Combined License
Vogtle Unit 4 Combined License

Location: Waynesboro, GA

Inspection Dates: July 1, 2015 through September 30, 2015

Inspectors: C. Abbott, Resident Inspector, DCP
I. Anchondo, Reactor Inspector, DRS
P. Braxton, Resident Inspector, DCP
J. Fuller, Senior Resident Inspector, DCP
D. Harmon, Construction Inspector, DCI
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Approved by: Michael Ernstes,
Branch Chief
Construction Projects Branch 4
Division of Construction Projects

Enclosure

SUMMARY OF FINDINGS

Inspection Report (IR) 05200025/2015003, 05200026/2015003; 07/01/2015 through 09/30/2015; Vogtle Electric Generating Plant (VEGP) Unit 3, VEGP Unit 4, routine integrated inspection report.

This report covers a three-month period of inspection by resident inspectors and announced Inspections, Tests, Analysis, and Acceptance Criteria (ITAAC) inspections by both regional and resident inspectors. 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 and Self Revealed Findings

No findings were identified.

B. Licensee-Identified Violations

No findings were identified.

REPORT DETAILS

Summary of Plant Construction Status

For Unit 3, construction continued on the auxiliary building walls and floors from elevations 66'6" to 100'0". Concrete pours inside and outside of the containment vessel (CV). Assembly of modules CA02, CA03, and of the CV middle and upper rings. Installation of module CA01 and of the first shield building panels.

For Unit 4, construction continued on the auxiliary building walls and floors from elevations 66'6" to 100'0". Concrete pours inside and outside of the containment vessel. Assembly of the CV lower ring, and of modules CA20 and CA05.

1. CONSTRUCTION REACTOR SAFETY

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

IMC 2503, Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) - Related Work Inspections

1A01 (Unit 3) ITAAC Number 2.2.01.03a (93) / Family 06B

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.2.01.03a (93). The inspectors used the following NRC Inspection Procedures (IPs)/sections to perform this inspection:

- 65001.06-02.02 - Component Welding
- 65001.11-02.03 - Installation and Welding
- 65001.11-02.05 - Nondestructive Examination
- 65001.B-02.03 - Welder Qualification
- 65001.B-02.04 - Production Controls
- 65001.B-02.05 - Inspection
- 65001.B-02.06 - Records
- 65001.F-02.02 - Fabrication Records Review

The inspectors selected two pressure boundary welds comprising the upper ring of the containment vessel and reviewed a selection of records to verify that they were welded in accordance with the applicable quality and American Society of Mechanical Engineers (ASME) Code requirements. The welds selected were: B3-D35 to B3-D36 and B3-C37 to B3-C38, and for each weld the inspectors:

- viewed the radiographic film to verify that the weld was free of rejectable defects;

- reviewed the associated radiography reports to verify that they had been radiographed, reviewed and signed in accordance with the applicable quality and ASME Code requirements;
- reviewed the associated magnetic particle nondestructive examination (NDE) reports to determine if the weld had been examined in accordance with the ASME Code;
- reviewed the welders' qualification records to verify that the welds had been made by welders qualified in accordance with the ASME Code requirements; and
- reviewed the traveler to verify that the welding process had been planned, controlled, performed, and signed as required by their quality assurance procedures.

b. Findings

No findings were identified.

1A02 (Unit 3) ITAAC Number 3.3.00.02a.i.a (760) / Family 01F

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 3.3.00.02a.i.a (760). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.01-02.05 - Steel Structures
- 65001.A.02.01 - Observation of in-Process Installation Activities
- 65001.A.02.04 - Review As-built Deviations/Nonconformance
- 65001.B-02.02 - Welding Procedure Qualification
- 65001.B-02.03 - Welder Qualification
- 65001.B-02.04 - Production Controls
- 65001.B-02.05 - Inspection
- 65001.B-02.06 - Records

The inspectors observed in-process welding of the Vogtle Unit 3 In-Containment Refueling Water Storage Tank Steel Wall module (CA03), to determine whether the welding was performed within the ranges allowed by welding procedure specification (WPS) numbers WPS5-10H.10HM70, revision 11. The inspectors also compared the in-process welding to the requirements of American Welding Society (AWS) D1.6:1999, "Structural Welding Code - Stainless Steel." Specifically, the inspectors observed the in-process welding of weld number CV3282-10 joining submodule CA03-09 to CA03-10 and weld number CV3282-11 joining submodule CA03-10 to CA03-11.

The inspectors observed the in-process welding of submodule CA03-09 to CA03-10 and CA03-10 to CA03-11 to determine whether the following activities were in accordance with American Institute of Steel Construction N690-1994, AWS D1.6:1999, welding procedure specifications, and related design drawings. The inspectors verified that:

- the identification of welds and welders was maintained for each weld;

- the welding procedures and welders were qualified in accordance with the AWS D1.6:1999 Code;
- the welding material and weld processes were properly controlled; and
- nondestructive examination activities were performed according to the inspection procedures, AWS D1.6:1999 Code, and other design documents.

The inspectors verified that the filler material was controlled in the field according to Chicago Bridge and Iron (CB&I) procedure FMC-1, "Filler Metal Control," revision 5.

The inspectors performed an independent inspection of the tack welds and temporary attachment welds to evaluate the weld quality. Specifically, the inspectors reviewed the condition of the welds to determine if they met the requirements from industry standards and design specifications with regard to size, length, and location of welds. The inspectors also completed a visual inspection of these welds to determine if any of the following conditions were present:

- cracks;
- lack of fusion;
- weld undercut;
- porosity; or
- insufficient weld size.

As discussed above, the inspectors observed the in-process assembly of the CA03 module to determine whether the licensee had established adequate controls to ensure that the module was constructed in accordance with the Vogtle Updated Final Safety Analysis Report (UFSAR). Specifically, during the inspector's observations of the in-process fit-up, welding, and inspection activities, the inspectors verified the following attributes:

- the identity of the submodules were in accordance with the latest approved-for-construction drawings, equipment lists, specifications, and established procedures;
- the latest approved-for-construction procedures, drawings, manuals, and other work instructions were available at the installation area;
- the applicable revisions of approved procedures, drawings, and instructions were being followed;
- processes, materials, tools, and other equipment used were qualified and approved in accordance with site procedures;
- personnel conducting work and quality assurance roles were qualified in accordance with site procedures;
- the installation, inspection, and testing sequences were maintained according to the work package;
- design changes or field modifications relevant to the work observed were properly controlled and processed in accordance with quality and technical requirements;
- inspection and test reports were current, accurate, and complete; and
- the item(s) were located, installed, assembled, or connected in accordance with the latest approved-for-construction drawings, manufacturer's instructions, and procedures.

The inspectors observed the installation acceptance tests related to the assembly of CA03. Specifically, fit-up inspection of CA03-09 to CA03-10 and CA03-10 to CA03-11.

The inspectors reviewed a sample of documents used to identify differences between the as designed and as-built assembly of CA03 module. Specifically, the inspectors reviewed nonconforming conditions associated with the welding of submodules CA03-07 to CA03-08, CA03-08 to CA03-09, CA03-09 to CA03-10, and CA03-10 to CA03-11. For those nonconforming conditions that were not corrected, the inspectors verified that they complied with as-design conditions, were properly documented, and were incorporated in the final as-built drawings. Finally, the inspectors confirmed that any differences between documents used for construction and the corresponding document used for a design analysis were appropriately reconciled with the design report by the person or organization responsible for the design.

The inspectors reviewed the applicable portions of the CB&I AWS welding program to determine the following attributes:

- CB&I had approved procedures describing the administrative controls and work processes; and
- work control and inspection requirements prescribed adequate methods to ensure that the as-built condition of the module met the relevant design documents, codes and standards, and current licensing basis.

The inspectors reviewed a sample of welding procedure specifications associated with the tack welding (fit-up) of CA03-10 to CA03-11. The inspectors reviewed these welding procedures and associated procedure qualification records (PQRs), if applicable, to determine whether:

- the welding procedures (qualified by testing and pre-qualified) were in accordance with the AWS D1.6:1999 Code, and the specific ranges of welding variables were appropriately qualified;
- the welding procedures specified all the applicable essential, nonessential, and supplementary essential (if applicable) variables;
- welding procedures were up to date, accurate, contained within the work package, and available to the welder during production welding activities;
- welding positions qualified for each WPS were supported by relevant PQRs; and
- the type and number of qualification tests required to qualify a WPS for a given thickness were specified and in conformance with the AWS D1.6:1999 Code.

The inspectors reviewed a sample of welder qualification records related to the assembly of CA03-09 to CA03-10 and CA03-10 to CA03-11 submodules to determine whether these welders were qualified in accordance with the AWS D1.6:1999 code requirements and CB&I procedure WQ-1, "Qualification of Welders and Welding Operators," revision 4. Specifically, the inspectors reviewed welder qualification records to verify:

- welders were qualified to weld to the applicable WPS;
- welders demonstrated their skill by performing specific performance qualification tests prescribed by the applicable Code;

- performance qualification tests were fully documented;
- welder qualification tests were traceable to the welder; and
- welders used the welding process within the last six months to maintain their qualification.

The inspectors observed in-process welding for weld number CV3282-10 joining submodule CA03-09 to CA03-10 and CV3282-11 joining submodule CA03-10 to CA-03-11. During this inspection, the inspectors verified that a sample of welding variables were within the ranges allowed by the WPS and AWS D1.6:1999 Code, such as: filler metal size and classification, voltage, amperage, travel speed, wire feed speed, shielding gas composition, and shielding gas flow rate. Furthermore, during the in-process welding, the inspectors verified the following attributes:

- the work was conducted in accordance with a traveler (weld data sheet) that provided for the proper sequencing of the work and that this weld data sheet properly referenced the applicable procedures, drawings, specifications;
- the weld data sheet established adequate hold points as required by the quality inspection plan;
- the weld joint was sufficiently protected from inclement conditions such as high wind;
- 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;
- the weld joint geometry, including root opening and fit-up tolerances, was in accordance with the applicable WPS;
- 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;
- other welding variables specified in the WPS were routinely verified by quality control; and
- the weld was traceable to the welder.

The inspectors reviewed the Certified Material Test Report (CMTR) for the welding material used to fabricate weld CV3282-11 to determine that the material met the applicable quality and technical requirements established by the following:

- AWS D1.6:1999 Code;
- AWS A5.01, "Procurement Guidelines for Consumables - Welding and Allied Processes - Flux and Gas Shielded Electrical Welding Processes";
- AWS A5.9, "Specification for Bare Stainless Steel Welding Electrodes and Rods";
- CB&I weld filler material specification TR-5.9-309L, "ER309L Stainless Steel Bare Wire/Rods or Electrodes," revision 0.

Specifically, the inspectors reviewed the CMTR for Heat 1090X for conformance to the aforementioned technical requirements. The inspectors also verified that this safety-related welding material was supplied under the requirements of 10 CFR Part 21.

The inspectors observed quality control personnel perform the fit-up inspection on weld number CV3282-11 joining submodule CA03-10 to CA-03-11, to determine whether the visual inspection was performed according to inspection procedure F-S561-004, "Structural Weld Inspection-Modules, AWS D1.1/D1.6 and Fabrication, Submodule Assembly, and Module In Plant Installation Tolerances," Revision 15. The inspectors also reviewed the quality control (QC) inspector's qualification and certification records to verify that the inspector was qualified in accordance with the CB&I procedure QAD-2.15, "Qualification and Certification of Inspection and Test Personnel," revision 3.A. Furthermore, the inspectors verified that:

- the quality control inspector was properly qualified;
- the work package contained the appropriate hold points for quality-related inspection activities;
- the inspection procedure required the quality control inspector to verify the size, length, weld profile tolerances, and location of welds conformed to the design requirements; and
- the acceptance criteria for completed welds were in accordance with the AWS D1.6:1999 Code.

The inspectors reviewed the in-process and completed weld records for submodule seam weld CV3282-08, CV3282-10 and CV3282-11; which was contained in work package number SV3-CA03-S4W-CV2253, "CA03 Submodule Wall Assembly (07, 08, 09, 10, 11)," to determine whether:

- the welding activities were properly documented in the work traveler;
- records provided adequate traceability to all aspects of the welding activity, including traceability to the welder who performed the work;
- records adequately documented the following attributes: reference to procedure and welder qualifications, inspector qualifications, weld material certifications and receipt inspection reports, weld data or process records (travelers), weld maps, weld inspection records, and NDE records;
- records were appropriately retained and stored in accordance with Quality Assurance (QA) program requirements;
- required inspections were identified in the traveler with hold points, as appropriate; and
- accepted, rejected, and repaired items were documented in written reports.

b. Findings

No findings were identified.

1A03 (Unit 3) ITAAC Number 3.3.00.02a.i.a (760) / Family 01F

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 3.3.00.02a.i.a (760). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.01-02.05 - Steel Structures
- 65001.A.02.03 - Independent Assessment/Measurement Inspection
- 65001.A.02.04 - Review As-built Deviations/Nonconformance
- 65001.B-02.05 - Inspection
- 65001.B-02.06 - Records
- 65001.F-02.02 - Fabrication Records Review

The inspectors performed a field inspection associated with receipt activities of submodule CA03-04 (In Containment Refueling Water Storage Tank Steel Wall) for Vogtle Unit 3. The inspectors reviewed receipt inspection package (132175-D100.CA006-404-012-00015) to verify that appropriate materials were used in the fabrication of the submodule, that the required welding processes were adhere to, physical dimensions match design requirements, adherence to required design codes, and design changes were properly addressed. The inspectors also reviewed documents and interviewed licensee personnel to assess the implementation of the portion of the QA program specific to design and fabrication activities. Various documents, such as design drawings, non-conformance and deviation reports, specifications, certified material tests reports, and receipt inspection documents were reviewed by the inspectors to verify:

- design and fabrication was completed in accordance with applicable specifications, drawings, and approved procedures;
- key building critical dimensions and materials satisfied design specifications and requirements;
- the licensee confirmed that components inspected conformed to design drawings and that deviations were being addressed in accordance with procedure requirements;
- the shape, size, dimensions, type, and grade of material conformed to the approved specifications and design drawings;
- design documents adequately defined the design and arrangement of the submodule fabrication;
- fit-up tolerances for length, depth, and straightness of structural members were as specified; and
- critical attributes of as-built Structure, System, and Component (SSC) conform to the design.

The inspectors reviewed the welding records and nondestructive examination results of welds 15A, 15B, and 15C of submodule CA03-04 to verify that the welding procedures used were qualified in accordance with AWS D1.6:1999 Code, and that the inspection of these welds did not exhibit fabrication defects representative of a bad weldment. The inspectors also reviewed the associated Certified Material Test Report (Heat Number 537747) to determine if the appropriate materials were used to fabricate the submodule. Additionally, the inspectors completed a visual inspection of a sample of submodule welds looking for cracks, lack of fusion, weld undercut, porosity or insufficient weld size.

Finally, the inspectors reviewed a sample of nonconformance and deviation reports to determine if the licensee had dispositioned the nonconforming conditions per applicable procedures and that each disposition conformed with applicable codes and design requirements.

b. Findings

No findings were identified.

1A04 (Unit 3) ITAAC Number 3.3.00.02a.i.a (760) / Family 01F

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 3.3.00.02a.i.a (760). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.01-02.05 - Steel Structures
- 65001.A-02.04 - Review As-built Deviations/Nonconformance
- 65001.B-02.01 - Program and Procedures Review
- 65001.B-02.02 - Welding Procedure Qualification
- 65001.B-02.03 - Welder Qualification
- 65001.B-02.04 - Production Controls
- 65001.B-02.05 - Inspection
- 65001.B-02.06 - Records

The inspectors observed in-process welding of penetration 11504-ML-P03 (Refueling Cavity Drain/Fill), to determine whether the welding was performed within the ranges allowed by WPS number WPS1-8.8T01, Revision 5. The inspectors compared the in-process welding to the requirements of ASME, Section IX, "Welding and Brazing Qualifications." Specifically, the inspectors observed the in-process welding of weld numbers SV3-11504-ML-P03-173 and SV3-11504-ML-P03-174-C1.

The inspectors reviewed a sample of documents used to identify differences between the as designed and as-built assembly of penetration 11504-ML-P03 (Refueling Cavity Drain/Fill). Specifically, the inspectors reviewed nonconforming conditions associated with the fabrication and weldability issues of the piping assembly.

For those nonconforming conditions that were not corrected, the inspectors verified that they complied with as-design conditions, were properly documented, and were incorporated in the final as-built drawings. Finally, the inspectors confirmed that any differences between documents used for construction and the corresponding document used for design analyses were appropriately reconciled with the design report by the person or organization responsible for the design.

The inspectors reviewed the applicable portions of the CB&I welding program to determine if CB&I had approved procedures describing the administrative controls and work processes. They also verified that work control and inspection requirements prescribed adequate methods to ensure that the as-built condition of the module met the relevant design documents, codes and standards, and current licensing basis.

The inspectors reviewed a sample of WPSs associated with the welding of penetration 11504-ML-P03 (Refueling Cavity Drain/Fill). The inspectors reviewed the welding procedure and associated PQRs to determine whether:

- the welding procedures (qualified by testing and prequalified) were in accordance with ASME, Section IX, "Welding and Brazing Qualifications," and the specific ranges of welding variables were appropriately qualified;
- the welding procedures specified all the applicable essential, nonessential, and supplementary essential (if applicable) variables; and
- welding procedures were up to date, accurate, contained within the work package, and available to the welder during production welding activities.

The inspectors reviewed a sample of welder qualification records related to the welding of penetration 11504-ML-P03 to determine whether these welders were qualified in accordance with ASME, Section IX, "Welding and Brazing Qualifications" requirements. Specifically, the inspectors reviewed welder qualification records to verify:

- welders were qualified to weld to the applicable WPS;
- welders demonstrated their skill by performing specific performance qualification tests prescribed by the applicable Code;
- performance qualification tests were fully documented;
- welder qualification tests were traceable to the welder; and
- welders used the welding process within the last six months to maintain their qualification.

The inspectors observed in-process welding for weld number SV3-11504-ML-P03-173 and SV3-11504-ML-P03-174-C1. During this inspection, the inspectors verified that a sample of welding variables were within the ranges allowed by the WPS, such as: filler metal size and classification, voltage, amperage, travel speed, wire feed speed, shielding gas composition, and shielding gas flow rate. Furthermore, during the in-process welding, the inspectors verified the following attributes:

- the work was conducted in accordance with a traveler (weld data sheet) that provided for the proper sequencing of the work and that this weld data sheet properly referenced the applicable procedures, drawings, specifications;
- the weld data sheet established adequate hold points as required by the quality inspection plan;
- the weld joint was sufficiently protected from inclement conditions such as high wind;
- 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;
- the weld joint geometry, including root opening and fit-up tolerances, was in accordance with the applicable WPS;
- the temperature of the base material at the joint prior to welding met the minimum preheat requirements specified in the welding procedure;
- other welding variables specified in the WPS were routinely verified by quality control; and
- the weld was traceable to the welder.

The inspectors also observed the nondestructive activities associated with the following welds;

- CV4299-T1;
- CV6479-049-1 thru 4;
- CV7783-2; and
- CV7153-16-4 & 7.

The inspectors reviewed the in-process weld records for welds SV3-11504-ML-P03-173 and SV3-11504-ML-P03-174-C1 which were contained in work package number SV3-ML05-MLW-ME4822 to determine whether:

- the welding activities were properly documented in the work traveler;
- records provided adequate traceability to all aspects of the welding activity, including traceability to the welder who performed the work;
- records adequately documented the following attributes: reference to procedure and welder qualifications, inspector qualifications, weld material certifications and receipt inspection reports, weld data or process records (travelers), weld maps, weld inspection records, and records;
- required inspections were identified in the traveler with hold points, as appropriate; and
- accepted, rejected, and repaired items were documented in written reports.

b. Findings

No findings were identified.

1A05 (Unit 3) ITAAC Number 3.3.00.02a.i.a (760) / Family 01F

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 3.3.00.02a.i.a (760). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.01-02.05 - Steel Structures
- 65001.A.02.01 - Observation of in-Process Installation Activities
- 65001.A.02.03 - Independent Assessment/Measurement Inspection
- 65001.A.02.04 - Review As-built Deviations/Nonconformance
- 65001.B-02.04 - Production Controls
- 65001.B-02.05 - Inspection
- 65001.B-02.06 - Records

The inspectors observed in-process welding of the CA01 module to basemat embed plates along the east wall of the reactor vessel cavity and the east wall of the refueling cavity to determine whether welding was performed within the ranges allowed by WPS numbers WPS2-1.1S02 and WPS5-10H.10HT70. The inspectors also compared the in-process welding to the requirements of AWS D1.6:1999, "Structural Welding Code – Stainless Steel." Specifically, the inspectors observed the in-process welding of the following weld numbers:

CV9119-P-69, CV9119-P-7, and CV9119-P-64 on September 2, 2015, and weld CV8124-B-068 on September 22, 2015. For these welds, the inspectors verified the following:

- the identification of welds and welders was maintained for each weld;
- the welding procedures and welders were qualified in accordance with the AWS D1.6:1999 Code;
- the welding material and weld processes were properly controlled; and
- nondestructive examination activities were performed according to the inspection procedures, AWS Code, and other design documents.

The inspectors performed an independent inspection of the welds to evaluate the weld quality. Specifically, the inspectors reviewed the condition of the welds to determine if they met the requirements from the industry standards and design specifications with regard to size, length, and location of welds. The inspectors also completed this visual inspection to determine if any of the following conditions were present:

- cracks;
- lack of fusion;
- undercut;
- porosity; or
- insufficient weld size.

As discussed above, the inspectors observed the attachment of the CA01 module to steel embed plated in the containment internal structures basemat to determine whether the licensee had established adequate controls to ensure that the plates were installed in accordance with the Vogtle UFSAR. Specifically, during the inspector's observations of the in-process fit-up, welding, and inspection activities, the inspectors verified the following attributes:

- the identity of the submodules and embed plates were in accordance with the latest approved-for-construction drawings, equipment lists, specifications, and established procedures;
- the latest approved-for-construction procedures, drawings, manuals, and other work instructions were available at the installation area;
- the submodule and embed plates were not damaged prior to assembly and that nonconformances associated with the submodules had been resolved or were properly being tracked in accordance with the quality assurance program requirements;
- the applicable revisions of approved procedures, drawings, and instructions were being followed;
- processes, materials, tools, and other equipment used were qualified and approved in accordance with site procedures;
- the installation, inspection, and testing sequences were maintained according to the work package;
- nonconforming items were clearly identified, segregated, and dispositioned;
- design changes or field modifications relevant to the work observed

were properly controlled and processed in accordance with quality and technical requirements;

- inspection and test reports were current, accurate, and complete; and
- the item(s) were located, installed, assembled, or connected in accordance with the latest approved-for-construction drawings, manufacturer's instructions, and procedures;

For the above welds the inspectors verified that a sample of welding variables were within the ranges allowed by the WPS and AWS D1.6 Code, such as: filler metal size and classification, voltage, amperage, travel speed, wire feed speed, shielding gas composition, and shielding gas flow rate. Furthermore, during the in-process welding, the inspectors verified the following attributes:

- the work was conducted in accordance with a traveler (weld data sheet) that provided for the proper sequencing of the work and that this weld data sheet properly referenced the applicable procedures, drawings, specifications;
- the weld data sheet established adequate hold points as required by the quality inspection plan;
- the weld joint was sufficiently protected from inclement conditions such as high wind;
- 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;
- the weld joint geometry, including root opening and fit-up tolerances, was in accordance with the applicable WPS;
- 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;
- other welding variables specified in the WPS were routinely verified by quality control;
- the weld was traceable to the welder;
- the filler metal used in the joint was traceable and was qualified in accordance with the AWS Code; and
- tack welds between the embed plates and base material were fabricated by qualified welders using qualified welding procedure specifications.

The inspectors observed quality control personnel perform the fit-up inspection of weld number CV9119-P-69 to determine whether the visual inspection was performed according to the related QC inspection plan. Furthermore, the inspectors verified the following:

- the work package contained the appropriate hold points for quality-related inspection activities;
- the inspection procedure required the quality control inspector to verify the size, length, weld profile tolerances, and location of welds conformed to the design requirements; and

- the acceptance criteria for completed welds were in accordance with the AWS D1.6:1999 Code.

The inspectors reviewed the in-process weld records for the welds listed above, which were contained in work package number SV3-CA01-S8W-CV4043, "U3 Containment Installation of CA01 Module at Elevation 83'-0", to determine whether:

- the welding activity was properly documented in the work traveler;
- records provided adequate traceability to all aspects of the welding activity, including traceability to the welder who performed the work;
- records adequately documented the following attributes: reference to procedure and welder qualifications, inspector qualifications, weld material certifications and receipt inspection reports, weld data or process records (travelers), weld maps, weld inspection records, and NDE records;
- records were appropriately retained and stored in accordance with QA program requirement;
- required inspections were identified in the traveler with hold points, as appropriate; and
- accepted, rejected, and repaired items were documented in written reports.

The inspectors reviewed nonconformance and disposition (N&D) report number SV3-CE01-GNR-000110, "CA01 Embedment Plates Out of Tolerance," revision 0 to determine whether the nonconforming condition was appropriately documented and evaluated according to the contractors quality assurance program requirements.

b. Findings

No findings were identified.

1A06 (Unit 3) ITAAC Number 3.3.00.02a.i.a (760) / Family 01F

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 3.3.00.02a.i.a (760). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.01-02.05 - Steel Structures
- 65001.A.02.01 - Observation of in-Process Installation Activities
- 65001.B-02.04 - Production Controls
- 65001.B-02.05 - Inspection
- 65001.B-02.06 - Records

The inspectors observed in-process welding of embed plates to the Vogtle Unit3 CA05 structural module (between 83' and 100') to determine whether welding was

performed within the ranges allowed by WPS number WPS2-1.1M02 revision 4. The inspectors also compared the in-process welding to the requirements of AWS D1.1:2000, "Structural Welding Code - Steel." Specifically, the inspectors observed the in-process welding of the following weld numbers:

- CV6117-18;
- CV6117-27; and
- CV6117-28.

For the above welds, the inspectors verified the following:

- the identification of welds and welders was maintained for each weld;
- the welding procedures and welders were qualified in accordance with the AWS D1.6:1999 Code;
- the welding material and weld processes were properly controlled; and
- nondestructive examination activities were performed according to the inspection procedures, AWS D1.1:2000 Code, and other design documents.

The inspectors verified that the filler material was controlled in the field according to CB&I procedure FMC-1, "Filler Metal Control," revision 5.

The inspectors performed an independent inspection of the welds to evaluate the weld quality. Specifically, the inspectors reviewed the condition of the welds to determine if they met the requirements from the industry standards and design specifications with regard to size, length, and location of welds. The inspectors completed a visual inspection looking for cracks, lack of fusion, undercut, porosity, or insufficient weld size.

As discussed above, the inspectors observed the in-process assembly of the embed plates to determine whether the licensee had established adequate controls to ensure that the plates were installed in accordance with the Vogtle UFSAR. Specifically, during the inspectors' observations of the in-process fit-up, welding, and inspection activities, they verified the following attributes:

- the identity of the submodules and embed plates were in accordance with the latest approved-for-construction drawings, equipment lists, specifications, and established procedures;
- the latest approved-for-construction procedures, drawings, manuals, and other work instructions were available at the installation area;
- the submodule and embed plates were not damaged prior to assembly and that nonconformances associated with the submodules had been resolved or were properly being tracked in accordance with the quality assurance program requirements;
- the applicable revisions of approved procedures, drawings, and instructions were being followed;
- processes, materials, tools, and other equipment used were qualified and approved in accordance with site procedures;
- the installation, inspection, and testing sequences were maintained according to the work package;
- nonconforming items were clearly identified, segregated, and dispositioned;

- design changes or field modifications relevant to the work observed were properly controlled and processed in accordance with quality and technical requirements;
- inspection and test reports were current, accurate, and complete; and
- the item(s) were located, installed, assembled, or connected in accordance with the latest approved-for-construction drawings, manufacturer's instructions, and procedures.

For the above welds the inspectors verified that a sample of welding variables were within the ranges allowed by the WPS and AWS D1.1 Code, such as: filler metal size and classification, voltage, amperage, travel speed, wire feed speed, shielding gas composition, and shielding gas flow rate. Furthermore, during the in-process welding, the inspectors verified the following attributes:

- the work was conducted in accordance with a traveler (weld data sheet) that provided for the proper sequencing of the work and that this weld data sheet properly referenced the applicable procedures, drawings, specifications;
- the weld data sheet established adequate hold points as required by the quality inspection plan;
- the weld joint was sufficiently protected from inclement conditions such as high wind;
- 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;
- the weld joint geometry, including root opening and fit-up tolerances, was in accordance with the applicable WPS;
- 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;
- other welding variables specified in the WPS were routinely verified by quality control;
- the weld was traceable to the welder;
- the filler metal used in the joint was traceable and was qualified in accordance with the AWS D1.1 Code; and
- tack welds between the embed plates and base material were fabricated by qualified welders using qualified welding procedure specifications.

The inspectors observed quality control personnel perform the final inspection on weld numbers CV6117-27 and CV6117-28 to determine whether the visual inspections were performed according to the related QC inspection plan. Furthermore, the inspectors verified the following:

- the quality control inspector was properly qualified;
- the work package contained the appropriate hold points for quality-related inspection activities;
- the inspection procedure required the quality control inspector to verify the size, length, weld profile tolerances, and location of welds conformed to the design requirements;

- the acceptance criteria for completed welds were in accordance with the AWS D1.1:2000 Code.

The inspectors reviewed the in-process and completed weld records for the welds listed above, which were contained in work package number SV3-CA05-S8W-CV2680, "Final Installation of CA05 Module," to determine whether:

- the welding activity was properly documented in the work traveler;
- records provided adequate traceability to all aspects of the welding activity, including traceability to the welder who performed the work;
- records adequately documented the following attributes: reference to procedure and welder qualifications, inspector qualifications, weld material certifications and receipt inspection reports, weld data or process records (travelers), weld maps, weld inspection records, and NDE records;
- records were appropriately retained and stored in accordance with QA program requirement;
- required inspections were identified in the traveler with hold points, as appropriate; and
- accepted, rejected, and repaired items were documented in written reports.

b. Findings

No findings were identified.

1A07 (Unit 3) ITAAC Number 3.3.00.02a.i.b (761) / Family 01F

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 3.3.00.02a.i.b (761). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.02-02.01 - Inspection of Concrete Placement
- 65001.A - As-Built Attributes for SSCs associated with ITAAC
- 65001.A.02.01 - Observation of in-Process Installation Activities
- 65001.A.02.03 - Independent Assessment/Measurement Inspection
- 65001.A.02.04 - Review As-built Deviations/Nonconformance
- 65001.B-02.06 - Records
- 65001.F - Inspection of the ITAAC-Related Design and Fabrication Requirements
- 65001.F-02.01 - Design Document Review

The inspectors reviewed engineering and design coordination report (E&DCR) APP-1208-GEF-246, "Shield Building Steel Concrete Composite (SC) Panels Weld Electrode Specification Change," Revision 0, dated July 2, 2015 to verify the change was controlled in accordance with the quality assurance program procedures. This E&DCR superseded E&DCR No. APP-1208-GEF-250. The inspectors reviewed the documented evaluation and engineering justification and the affected drawing changes and verified these changes were implemented in work packages and procurement specifications. The

inspectors reviewed CB&I Corrective Action Report (CAR) No. 2015-2497, which was initiated to address the E&DCR changes. This E&DCR is associated with the resolution of a structural deviation.

b. Findings

No findings were identified.

1A08 (Unit 3) ITAAC Number 3.3.00.02a.i.b (761) / Family 01F

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 3.3.00.02a.i.b (761). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.01 - Inspection of ITAAC-Related Foundations & Buildings
- 65001.01-02.01 - Procedures
- 65001.02-02.01 - Inspection of Concrete Placement
- 65001.02-02.03 - Special Considerations
- 65001.A - As-Built Attributes for SSCs associated with ITAAC
- 65001.A.02.03 - Independent Assessment/Measurement Inspection

The inspectors reviewed quality records and performed direct inspection of construction activities associated with the Shield Building Annulus between elevation 82'-6" and 90'-6" for Vogtle Unit 3.

The inspectors reviewed a sample of approved implementing procedures and specifications to determine whether the documents:

- met the requirements specified in the QA program and the UFSAR, including the reconciliation of construction deviations in critical dimensions and tolerances;
- correctly translated requirements from applicable codes and standards;
- described work controls, approved work processes, and inspection requirements;
- included appropriate quantitative and/or qualitative acceptance criteria for determining that the prescribed activities were accomplished satisfactorily;
- clearly prescribed acceptable methods of quality control inspection to ensure that the as-built condition met specified design requirements, drawings and material specifications;
- required measuring and test equipment to be calibrated and maintained in accordance with approved calibration procedures and vendor requirements; and
- provided qualification requirements for craft and quality control inspection personnel performing installation and testing activities.

The inspectors observed concrete pre-placement activities to determine whether pre-placement planning and training had been completed, including appropriate considerations for mass concrete and pumping contingencies, and the pre-placement inspection was performed by QC before any concrete was placed. Prior to concrete placement, the inspectors independently evaluated whether the reinforcing steel met drawings and specifications included in the work packages, all deviations were

adequately captured and addressed, and preparation and cleanliness of the formwork had been completed. The inspectors observed concrete placement activities on September 11, and 22, 2015 to determine whether:

- accepted procedures and specifications were followed throughout the concrete placement;
- the equipment used was suitable and sized for the work;
- each batch ticket was reviewed for verification of proper mix, transport time, placement location, and amount of temper water being added at the truck delivery point;
- mixing time and rotations were adequate, including after any additions were made;
- placement drop distances did not exceed specification requirements and did not result in segregation;
- concrete was placed in lifts in accordance with the concrete placement plan;
- inspection during placement was performed as required; and
- records were produced, reviewed, and indicate mix, location, time placed, water additions, temperature of the concrete mix, and ambient conditions.

During the placement, the inspectors observed in-process concrete testing to determine whether:

- concrete temperature, slump, air content, and unit weight were determined at the proper location and frequency as required by procedures, specifications, and American Society for Testing and Materials (ASTM) standards;
- sample collection and testing techniques conformed to the procedures, specifications, and ASTM standards;
- concrete strength test sample cylinders were made at the required location and frequency and were cured in accordance with specified requirements; and
- personnel performing sampling and testing were trained and qualified.

The inspectors reviewed test results to determine whether:

- records were complete, accurate, and approved as required;
- test results were reviewed and evaluated against appropriate acceptance criteria;
- the records were retrievable; and
- any adverse trends or problems were identified at an appropriate threshold and documented in accordance with the corrective action program.

The inspectors observed curing activities and reviewed curing records to determine whether curing was in accordance with specifications and procedures with regard to the method, materials, duration, temperature, inspections, and records. After form removal, the inspectors reviewed the final inspection and test results, and other information related to the placement to determine whether the placement was subjected to an integrated review before acceptance. Thus ensured the as-built documentation was complete, and that these activities were controlled and accomplished in accordance with the quality assurance program. The inspectors performed independent inspection and measurements of the as-built concrete, including finishes, locations of embedments, and dimensions, to determine whether the as-built configuration met the design specifications.

The inspectors interviewed licensee and contractor personnel to determine whether:

- contractors performing safety-related work followed approved implementing procedures that describe administrative and procedural controls, approved work processes, and inspection requirements;
- design processes were performed in compliance with applicable instructions and procedures;
- personnel conducting work and quality assurance roles were qualified and knowledgeable; and
- effective oversight in accordance with specifications and program requirements was implemented for the installation activities observed.

b. Findings

No findings were identified.

1A09 (Unit 3) ITAAC Number 3.3.00.02a.i.b (761) / Family 01F

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 3.3.00.02a.i.b (761). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.02-02.01 - Inspection of Concrete Placement
- 65001.02-02.03 - Special Considerations
- 65001.02-02.06 - Record Review
- 65001.A - As-Built Attributes for SSCs associated with ITAAC
- 65001.F - Inspection of the ITAAC-Related Design and Fabrication Requirements

The inspectors performed direct inspection of construction activities associated with the Shield Building for Vogtle Unit 3. Specifically, the inspectors observed construction activities associated with the west side section (from azimuth 177 to 335) between elevation 87'6" and 94'-0".

For the concrete pour along the west side of the shield building, between elevation 87'6" and 94'-0", the inspectors observed concrete pre-placement activities to determine whether pre-placement planning and training had been completed, including appropriate considerations for hot weather and mass concrete, and if the pre-placement inspection was performed by QC before any concrete was placed. Prior to concrete placement, the inspectors independently evaluated whether the reinforcing steel met drawings and specifications included in the work packages, all deviations were adequately captured and addressed, and preparation and cleanliness of the formwork had been completed. The inspectors observed concrete placement activities to determine whether:

- accepted procedures and specifications were followed throughout the concrete placement;

- the equipment used was suitable and sized for the work;
- each batch ticket was reviewed for verification of proper mix, transport time, placement location, and amount of temper water being added at the truck delivery point;
- mixing time and rotations were adequate, including after any additions were made;
- placement drop distances did not exceed specification requirements and did not result in segregation;
- vibrators were approved and calibrated;
- vibrators were handled and operated to ensure adequate consolidation and avoid voiding or honeycombing, including vertical operation and penetration through the new concrete into the previously placed layer;
- concrete was placed in lifts in accordance with the concrete placement plan;
- inspection during placement was performed as required; and
- records were produced, reviewed, and indicate mix, location, time placed, water additions, temperature of the concrete mix, and ambient conditions.

During the placement, the inspectors observed in-process concrete testing to determine whether:

- concrete temperature, slump, and air content were determined at the proper location and frequency as required by procedures, specifications, and ASTM standards;
- sample collection and testing techniques conformed to the procedures, specifications, and ASTM standards;
- concrete strength test sample cylinders were made at the required location and frequency and were cured in accordance with specified requirements; and
- personnel performing sampling and testing were trained and qualified.

The inspectors reviewed a sample of completed work packages and installation records to determine whether:

- the records were reviewed and approved by the responsible organization;
- the recorded information was complete, accurate, and met the licensing basis and ITAAC requirements, and conformed to applicable specifications; and
- records were correctly stored and maintained in such a manner as to demonstrate conformance with design and procedure requirements.

b. Findings

No findings were identified.

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 3.3.00.02a.i.b (761). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.01-02.05 - Steel Structures
- 65001.01-02.06 - Records
- 65001.A.02.01 - Observation of in-Process Installation Activities
- 65001.F-02.02 - Fabrication Records Review

The inspectors observed the in-process installation of the mechanical connections between the shield building reinforced concrete walls and the steel concrete composite wall panels along the west side of the Vogtle Unit 3 shield building at 100'. The inspectors observed the installation of the Lenton mechanical rebar couplers that spliced the vertical shield building rebar with the #14 bar that was installed through the shield building module support plate. The inspectors viewed these activities to determine whether the activities were performed according to approved procedures and the approved design.

The inspectors reviewed the calibration records for torque wrench numbers V-ND-0096 and V-N-0098 to verify that these tools were calibrated within the ranges required for installation of the couplers.

The inspectors reviewed the mechanical rebar coupler control records, thread inspection control record, and rebar splice test checklist for the couplers installed along the west wall from August 27-28, 2015. The inspectors verified that these records were completed according to Construction Site Instruction (CSI)-3-44-9, "Mechanical Splicing of Reinforcing Steel." The inspector also reviewed the training and qualification records for the personnel who installed the couplers.

The inspectors observed the installation of these couplers to verify that the couplers were installed in accordance with the approved drawings, manufacturer's instructions, and quality program procedures. The inspectors also reviewed the in-process work package to verify that the proper installation and testing sequences were followed and that inspection and test records were current, accurate, and properly completed.

The inspectors also observed the tensile testing of the sister splice numbers 009-SV3-P8-L4-1709-S and 015-SV3-P8-L4-1715-S to verify that the testing was performed according to Section 8.4 of SV3-CR01-Z0-010, "Specification for Supply and Installation of Mechanical Splices for Reinforcing Steel."

The inspectors reviewed the results of the manufacturer's performance qualification tests to determine whether the taper threaded splice system conformed to sections 5 and 6 of specification SV3-CR01-Z0-010. The inspectors reviewed test records for the static and cyclic tensile tests. The inspectors also reviewed the certificate of Compliance for Erico lot numbers L7576, L7660, and L7776 to verify that coupler material met the requirements of section 7 of this specification. Moreover, the inspectors confirmed that the supplier's certificate stated that the material conformed to American Concrete Institute (ACI) 349-01, 10 CFR Part 50 Appendix B, and NQA-1-1994.

b. Findings

No findings were identified.

1A11 (Unit 3) ITAAC Number 3.3.00.02a.i.b (761) / Family 01F

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 3.3.00.02a.i.b (761). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.01-02.06 - Records
- 65001.02-02.06 - Record Review
- 65001.A.02.02 - Installation Records Review
- 65001.B-02.02 - Welding Procedure Qualification
- 65001.B-02.03 - Welder Qualification
- 65001.B-02.04 - Production Controls
- 65001.B-02.05 - Inspection
- 65001.B-02.06 - Records
- 65001.F-02.02 - Fabrication Records Review

The inspectors inspected six vertical welds that were completed in the final location in the nuclear island of the horizontal transition modules of the west side of the shield building at elevation 100'-0". The six welds were: CV7190-23-I, CV7190-23-O, CV7190-15-I, CV7190-15-O, CV7190-4-I, and CV7190-4-O. For all six welds the inspectors performed a record review, and for the three welds that were accessible (CV7190-23-O, CV7190-15-O, and CV7190-4-O) the inspectors performed a visual examination to determine if the welds had been made and inspected in accordance with the AWS Structural Steel Welding Code. For each of the six welds the inspectors reviewed:

- the weld data sheet to determine if all required steps had been completed and signed;
- the associated radiography report to determine if it had been examined in accordance with the AWS Code;
- the associated magnetic particle examination reports to determine if the weld had been examined in accordance with the AWS Code;
- the radiography film to determine if the weld was free from rejectable defects;
- the welding procedure and associated qualification records to determine if the welding procedure was written and qualified in accordance with the AWS Code, and
- the welders' qualification records to determine if the welders were qualified in accordance with the AWS Code to make the specified welds.

The inspectors also reviewed nonconformance and disposition report numbers SV3-1208-GNR-000033 and SV3-1208-GNR-000006, to determine whether the conditions were adequately reviewed and accepted, rejected, repaired, or reworked in accordance with the QA program implementing documents for the control of nonconforming material, parts, and components.

b. Findings

No findings were identified.

1A12 (Unit 3) ITAAC Number 3.3.00.02a.i.c (762) / Family 01F

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 3.3.00.02a.i.c (762). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.01 - Inspection of ITAAC-Related Foundations & Buildings
- 65001.01-02.01 - Procedures
- 65001.01-02.03 - Key Site Parameters
- 65001.01-02.04 - Key Dimensions and Volumes
- 65001.01-02.06 - Records
- 65001.A.02.03 - Independent Assessment/Measurement Inspection
- 65001.A.02.04 - Review As-built Deviations/Nonconformance
- 65001.F - Inspection of the ITAAC-Related Design and Fabrication Requirements
- 65001.F-02.01 - Design Document Review
- 65001.F-02.02 - Fabrication Records Review

The inspectors reviewed quality records and performed direct inspection of construction activities associated with the non-radiologically controlled area of the Auxiliary Building for Vogtle Unit 3. Specifically, the inspectors observed construction activities associated with the following wall sections between elevation 82'-6" and 100'-0":

- wall section along column line 11 between column lines I and J;
- wall section along column line 11 between column lines J and K;
- wall section along column line 11 between column lines K and L; and
- wall section along column line 7.3 between column lines I to the shield building.

For the wall sections listed above, the inspectors reviewed a sample of drawings included in the work packages as well as specifications to determine whether:

- design outputs were translated into drawings;
- the documents adequately defined the final design and arrangement of these SSCs; and
- the documents were consistent with the design commitments and requirements of the technical specifications, the UFSAR, and code commitments.

The inspectors observed installation activities for the wall sections listed above associated with steel reinforcement, including horizontal and vertical reinforcing steel bars, shear reinforcement, and bar splices, to determine whether:

- the installation activities met applicable quality and technical requirements established by approved procedures, specifications, and drawings included in the work packages;

- reinforcing steel was located properly in the structure, and was sized as specified in drawings; and
- reinforcing steel was secured and free of concrete or excessive rust.

b. Findings

No findings were identified.

1A13 (Unit 3) ITAAC Number 3.3.00.02a.i.d (763) / Family 01F

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 3.3.00.02a.i.d (763). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.01-02.06 - Records
- 65001.01-02.07 - Identification and Resolution of Problem
- 65001.02-02.01 - Inspection of Concrete Placement
- 65001.02-02.06 - Record Review
- 65001.02-02.07 - Problem Identification and Resolution
- 65001.A- As-Built Attributes for SSCs associated with ITAAC
- 65001.A.02.01 - Observation of in-Process Installation Activities
- 65001.A.02.03 - Independent Assessment/Measurement Inspection
- 65001.A.02.04 - Review As-built Deviations/Nonconformance

The inspectors performed direct inspection of construction activities associated with the radiologically controlled area of the Auxiliary Building for Vogtle Unit 3. Specifically, the inspectors observed construction activities associated with wall sections along column line 1 between column lines I and J-2, including adjoining wall connections, between elevation 82'-6" and 100'-0".

The inspectors observed installation activities associated with formwork, embedments, and steel reinforcement, including horizontal and vertical reinforcing steel bars (rebar), shear reinforcement, wall dowel bars extending above 100'-0", rebar extending into adjoining walls, and bar splices, to determine whether:

- the installation activities met applicable quality and technical requirements established by approved procedures, specifications, and drawings included in the work packages;
- piping, penetrations, reinforcing steel, and embedments were located properly in the structure, were sized as specified in drawings and calculations, and had proper clearances;
- reinforcing steel and embedments were secured and free of concrete or excessive rust; and
- forms were secure, leak tight, and free from debris or excess water.

The inspectors observed concrete pre-placement activities to determine whether pre-placement planning and training had been completed and the pre-placement inspection was performed by QC before any concrete was placed. Prior to concrete placement, the

inspectors independently evaluated whether the steel reinforcement, embedments, and formwork conformed to the design specifications and drawings included in the work packages, all deviations were adequately captured and addressed, and preparation and cleanliness of the formwork had been completed.

The inspectors reviewed a sample of in-process construction documentation for reinforcing steel, formwork, and concrete placement to determine whether:

- the latest approved procedures, drawings, and other work instructions were available at the installation area;
- the installation, inspection, and testing sequences were maintained;
- the licensee had verified that the items to be installed met specified requirements;
- the items being installed were not damaged prior to installation;
- materials, tools, and other equipment being used were qualified and approved in accordance with site procedures;
- nonconforming items were clearly identified, segregated if possible, and dispositioned;
- inspection and test reports were current, accurate, and complete; and
- design changes, field modifications, and nonconformances associated with the work observed were properly controlled and processed in accordance with the approved QA program.

The inspectors interviewed licensee and contractor personnel to determine whether:

- contractors performing safety-related work followed approved implementing procedures that describe administrative and procedural controls, approved work processes, and inspection requirements;
- design processes were performed in compliance with applicable instructions and procedures;
- personnel conducting work and quality assurance roles were qualified and knowledgeable; and
- effective oversight in accordance with specifications and program requirements was implemented for the installation activities observed.

The inspectors reviewed a sample of nonconformances to verify:

- the licensee was identifying problems at an appropriate threshold and entering them into the corrective action program;
- any differences between the as-built and as-designed SSCs were documented and dispositioned in accordance with approved modification or change procedures; and
- the nonconformances were resolved and their dispositions had adequate technical bases.

The inspectors reviewed a sample of completed work packages and installation records to determine whether:

- the records were reviewed and approved by the responsible organization;
- the recorded information was complete, accurate, and met the licensing basis

- and ITAAC requirements, and conformed to applicable specifications; and
- were correctly stored and maintained in such a manner as to demonstrate conformance with design and procedure requirements.

b. Findings

No findings were identified.

1A14 (Unit 3) ITAAC Number 3.3.00.02a.i.d (763) / Family 01F

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 3.3.00.02a.i.d (763). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.A.02.03 - Independent Assessment/Measurement Inspection
- 65001.A.02.04 - Review As-built Deviations/Nonconformance

The inspectors reviewed in-process corrective actions related to NRC identified non-cited violation (NCV 05200025/2015002-01) to determine whether nonconforming welds were properly evaluated or corrected. Specifically, on August 6, 2015, the inspectors observed QC personnel perform measurements of fillet welds of weldable connectors associated with the Vogtle Unit 3 Auxiliary Building, Areas 5 and 6 (CA20 module) that were identified to be in noncompliance as described in the aforementioned NCV. As a result of the finding, some as-built fillet and partial joint penetration welds were classified as potentially nonconforming; therefore, QC personnel were required to re-inspect the impacted welds in order to identify the welds that were required to be repaired. The inspectors observed a sample of these inspection activities to determine whether the inspection was performed in accordance with AWS D1.1: 2000. The inspectors verified that the fillet welds associated with the Unit 3 CA20 module, which did not meet the new weld size, were captured in CB&I QC Inspection Report (IR) S561-004-15-1444. Additionally, the inspectors performed independent visual inspections of a sample of fillet welds to verify they were of sufficient size to meet the design requirements.

b. Findings

No findings were identified.

1A15 (Unit 3) ITAAC Number 3.3.00.02a.ii.c (766) / Family 01A

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 3.3.00.02a.ii.c (766). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.01-02.04 - Key Dimensions and Volumes
- 65001.A.02.01 - Observation of in-Process Installation Activities
- 65001.A.02.03 - Independent Assessment/Measurement Inspection

The inspectors performed a concrete thickness inspection of the non-radiologically controlled portion of the auxiliary building. The inspectors sampled the following wall segments from elevation 82'-6" to 100'-0":

- wall section along column line 11 from column line I to J; and
- wall section along column line I from column line 7.3 to 11.

During this inspection, the inspectors independently measured the wall segments to determine whether the pre-placement concrete thickness was as specified by Westinghouse concrete drawings and Vogtle Unit 3 COL, Appendix C, Table 3.3-1, "Definition of Wall Thicknesses for Nuclear Island Buildings, Turbine Building, and Annex Building." The inspectors also performed independent surveillance of the poured segments of the walls to determine whether:

- clear cover dimensions were in accordance with the applicable Westinghouse Electric Company (WEC) concrete drawings;
- width of the wall segments were in place to provide the wall thickness as specified on WEC concrete drawings; and
- the construction joint was intentionally roughened in accordance with ACI 349-01.

b. Findings

No findings were identified.

1A16 (Unit 3) ITAAC Number 3.3.00.02a.ii.d (767) / Family 01A

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 3.3.00.02a.ii.d (767). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.01-02.04 - Key Dimensions and Volumes
- 65001.A.02.01 - Observation of in-Process Installation Activities
- 65001.A.02.03 - Independent Assessment/Measurement Inspection

Prior to concrete being placed, the inspectors performed an independent inspection, including a walk-down and measurement, to determine whether the concrete wall thickness of column line J-1 between column lines 1 and 2 at elevation 82'-6" to 100'-0" was in accordance with Westinghouse issued for construction design drawings. During this inspection, the inspectors performed a concrete pre-placement inspection to verify the following:

- clear cover dimensions were in accordance with the applicable WEC concrete drawings;
- width of the structural reinforcement was correctly in place to provide the wall thickness specified on WEC concrete drawings;
- the construction joint was intentionally roughened in accordance with ACI 349-

- 01; and
- the construction joint surface was clean and free of laitance.

b. Findings

No findings were identified.

1A17 (Unit 3) ITAAC Number 3.3.00.03a (777) / Family 01A

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 3.3.00.03a (777). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.01-02.01 - Procedures
- 65001.01-02.04 - Key Dimensions and Volumes
- 65001.A.02.01 - Observation of in-Process Installation Activities

The inspectors performed a field inspection of construction activities associated with the E-W wall parallel with column line 7 up to elevation 83'-0". During this inspection, the inspectors measured the width of the shield wall between the reactor vessel cavity and the reactor coolant drain tank room to determine whether the wall thickness complied with the requirements stated in Appendix C Table 3.3-1 of the Vogtle Unit 3 Combined License. The inspectors also verified adequate concrete density results by reviewing concrete mix design calculations, fresh concrete testing reports taken at the time of placement, compressive strength testing reports, and hardened concrete testing reports.

b. Findings

No findings were identified.

1A18 (Unit 4) ITAAC Number 2.2.03.08c.vi.01 (189) / Family 06A

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.2.03.08c.vi.01 (189). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.06-02.04 - Testing and Verification
- 65001.A.02.04 - Review As-built Deviations/Nonconformance
- 65001.F-02.01 - Design Document Review
- 65001.F-02.02 - Fabrication Records Review

The inspectors performed an inspection of vendor documentation, reviewed calculations, reviewed deviation notices, and reviewed acceptance information associated with the core makeup tanks (CMTs) for Vogtle Unit 4 to determine whether the volume of both CMTs met the minimum volume established in the Vogtle Unit 4 UFSAR, Section 5.4.13 "Core Makeup Tank" and the Vogtle Unit 4 COL, Appendix C, Table 2.2.3-4, "Inspections, Tests, Analyses, and Acceptance Criteria."

The inspectors reviewed documentation related to the volume verification to determine whether:

- critical attributes of the CMT were identified and measured;
- the method and controls used by the licensee to verify that the as-built dimensions conformed to the licensing basis was adequate;
- the as-built tank volume and dimensions were in accordance with the final design, the ITAAC, and UFSAR;
- equipment used for measurement was properly maintained and calibrated;
- equipment accuracy was within procedural specifications;
- any differences between the as-built and as-designed SSCs were documented and dispositioned in accordance with approved modification or change procedures; and
- the nonconformances were resolved and their dispositions had adequate technical bases.

In addition, the inspectors performed an independent calculation of the volume using the as-built dimensions of the CMTs.

b. Findings

No findings were identified.

1A19 (Unit 4) ITAAC Number 2.2.03.08c.xi (196) / Family 06A

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.2.03.08c.xi (196). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.06-02.04 - Testing and Verification
- 65001.F-02.01 - Design Document Review
- 65001.F-02.02 - Fabrication Records Review

The inspectors performed a review of vendor documentation, calculations, and acceptance information associated with the CMTs for Vogtle Unit 4 to determine whether the flow area of the inlet diffusers for both CMTs met the minimum flow area of 165 in² established in the Vogtle Unit 4 COL, Appendix C, Table 2.2.3-4, "Inspections, Tests, Analyses, and Acceptance Criteria."

The inspectors reviewed measurement data taken at the CMT vendor before the inlet diffusers were installed in the tanks to determine whether:

- the method and controls used by the licensee to verify that the as-built dimensions conformed to the licensing basis were adequate;
- the as-built flow area was in accordance with the ITAAC;
- equipment used for measurement was properly maintained and calibrated; and
- any differences between the as-built and as-designed SSCs were documented

and dispositioned in accordance with approved modification or change procedures.

In addition, the inspectors performed an independent calculation of the flow area using the as-built dimensions of the CMT inlet diffusers.

b. Findings

No findings were identified.

1A20 (Unit 4) ITAAC Number 3.3.00.02a.i.a (760) / Family 01F

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 3.3.00.02a.i.a (760). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.A.02.04 - Review As-built Deviations/Nonconformance

The inspectors reviewed a sample of CB&I nonconformance and disposition reports associated with the as-built Vogtle Unit 4 Reactor Vessel Cavity walls (CA04 module) to determine whether the conditions were adequately reviewed and accepted, rejected, repaired, or reworked in accordance with the QA program implementing documents for the control of nonconforming material, parts, and components. The inspectors compared these N&D reports to Section 15, "Nonconforming Materials, Parts, or Components," of the CB&I quality assurance program (CMS-720-03-PL-00020-A) and CB&I procedure QS 15.01, "Nonconformance & Disposition Report." The inspectors reviewed these N&Ds to determine whether:

- the reports correctly and clearly identified the nonconformances;
- the N&Ds were adequately initiated, processed, reviewed, dispositioned, and closed in accordance with the quality assurance program implementing documents for the control of nonconforming material, parts, and components;
- reportability screening and evaluations under 10 CFR Part 21 and 10 CFR 50.55(e) were performed;
- applicability to project documents, records, and ITAAC was properly identified and documented;
- the dispositions were properly identified and documented;
- adequate technical justification for the acceptability of a nonconforming item, dispositioned as repair, or use-as-is was appropriately documented;
- nonconformances to design requirements dispositioned as use-as-is or repair were subjected to design control measures commensurate with those applied to the original design;
- the as-built records properly reflected the accepted deviation, if applicable;
- controls were implemented to preclude the inadvertent use of nonconforming items and that nonconforming items were marked or tagged and segregated; and
- repaired or reworked items were reexamined in accordance with applicable procedures and with the original acceptance criteria unless the disposition had established alternate acceptance criteria.

The inspectors reviewed CB&I Power N&D report number SV4-CA04-GNR-000006, "CA04-05 fit-up issues," revision 0. The inspectors reviewed this N&D, which documented a structural deviation, to determine whether the difference was properly documented, and evaluated. The inspectors verified that this condition was properly evaluated against the current licensing basis.

The inspectors reviewed CB&I Power N&D report number SV4-CA04-GNR-000005, "CA04 Stiffness OOT," revision 0. The inspectors reviewed the N&D, which documented a structural deviation, to determine whether the engineering justification was adequate for the acceptability of the nonconforming item. The inspectors verified that this condition was properly evaluated against the licensing basis.

b. Findings

No findings were identified.

1A21 (Unit 4) ITAAC Number 3.3.00.02a.i.a (760) / Family 01F

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 3.3.00.02a.i.a (760). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.A - As-Built Attributes for SSCs associated with ITAAC
- 65001.F - Inspection of the ITAAC-Related Design and Fabrication Requirements

The inspectors performed a field inspection of construction activities associated with containment internal structures sub-modules at the Modular Assembly Building (MAB) for the Vogtle Unit 4 site. The inspectors conducted field measurements, and reviewed documents to assess the implementation of the portion of the QA program specific to design and fabrication activities. The inspectors' objectives were to determine if:

- design and fabrication was completed in accordance with applicable specifications, drawings, and approved procedures;
- key building critical dimensions, materials, and separation satisfied design specifications, requirements, and relevant ITAAC;
- the licensee confirmed that components inspected conformed to design drawings and that deviations were being addressed in accordance with procedure requirements; and
- nonconforming conditions identified by the licensee were being appropriately resolved.

The inspectors observed, reviewed, and assessed as-built SSCs to determine if the as-built configuration is in accordance with the final design of the facility and meet the associated ITAAC.

The inspectors performed independent measurements on the structural sub-modules for the proposed Unit 4 containment internal structures for the north-south wall east of the

Chemical and Volume Control System (CVS) room (CA05-07, CA05-08). Specifically, the inspectors measured headed stud spacing and dimensions, module plate thickness, angle and channel used to construct module trusses, and truss spacing. The inspectors also observed reinforcing steel placement, general module assembly, and stud welds. The inspectors reviewed various documents, such as sub-module design drawings and specifications, to verify:

- the shape, size, dimensions, type, and grade of material conformed to the approved specifications and design drawings;
- design documents associated with ITAAC adequately defined the design and arrangement of the sub-module fabrication.
- applicable construction specifications, installation specifications, shop and field drawings, and construction procedures correctly identified and documented sub-modules for review and approval by responsible engineering personnel.
- fit-up tolerances for length, depth, and straightness of structural members were as specified; and
- critical attributes of as-built SSC conform to the design.

b. Findings

No findings were identified.

1A22 (Unit 4) ITAAC Number 3.3.00.02a.i.b (761) / Family 01F

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 3.3.00.02a.i.b (761). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.01 - Inspection of ITAAC-Related Foundations & Buildings
- 65001.01-02.01 - Procedures
- 65001.01-02.07 - Identification and Resolution of Problem
- 65001.02-02.01 - Inspection of Concrete Placement
- 65001.02-02.03 - Special Considerations
- 65001.02-02.07 - Problem Identification and Resolution
- 65001.A - As-Built Attributes for SSCs associated with ITAAC
- 65001.A.02.04 - Review As-built Deviations/Nonconformance
- 65001.F-02.01 - Design Document Review

The inspectors reviewed quality records and performed direct inspection of construction activities associated with the shield building basemat between elevation 72'-6" and 82'-6" for Vogtle Unit 4.

The inspectors reviewed a sample of design calculations, specifications, and drawings included in work package SV4-1220-CCW-CV2318, "Unit 4 Concrete Placement Outside CVBH up to Elevation 82'-6"," to determine whether:

- design activities were completed in accordance with applicable specifications, drawings, and approved procedures;

- design inputs were correctly identified and documented, and that their selection was reviewed and approved by the responsible engineering group;
- design outputs were translated into drawings;
- design documentation demonstrated adequacy of design by reference to analyses, calculations, bounding condition checks, functional assessments, and/or engineering evaluations;
- the documents adequately defined the final design and arrangement of these SSCs;
- critical attributes associated with the ITAAC were correctly identified and documented for review and approval by responsible engineering personnel; and
- the documents were consistent with the design commitments and requirements of the technical specifications, the UFSAR, and code commitments.

The inspectors reviewed a sample of approved implementing procedures and specifications to determine whether the documents:

- met the requirements specified in the QA program and the UFSAR, including the reconciliation of construction deviations in critical dimensions and tolerances;
- correctly translated requirements from applicable codes and standards;
- described work controls, approved work processes, and inspection requirements;
- included appropriate quantitative and/or qualitative acceptance criteria for determining that the prescribed activities were accomplished satisfactorily;
- clearly prescribed acceptable methods of quality control inspection to ensure that the as-built condition met specified design requirements, drawings and material specifications;
- required measuring and test equipment to be calibrated and maintained in accordance with approved calibration procedures and vendor requirements; and
- provided qualification requirements for craft and quality control inspection personnel performing installation and testing activities.

The inspectors observed concrete pre-placement activities to determine whether pre-placement planning and training had been completed, including appropriate considerations for hot weather, mass concrete, pumping, contingency preparations, and the pre-placement inspection was performed by QC before any concrete was placed. Prior to concrete placement, the inspectors independently evaluated whether the reinforcing steel met drawings and specifications included in the work packages, all deviations were adequately captured and addressed, and preparation and cleanliness of the formwork had been completed. The inspectors observed concrete placement activities on September 16 and 17, 2015 to determine whether:

- accepted procedures and specifications were followed throughout the concrete placement;
- the equipment used was suitable and sized for the work;
- each batch ticket was reviewed for verification of proper mix, transport time, placement location, and amount of temper water being added at the truck delivery point;
- mixing time and rotations were adequate, including after any additions were made;
- placement drop distances did not exceed specification requirements and did not result in segregation;

- vibrators were approved and calibrated;
- vibrators were handled and operated in accordance with procedures and specifications;
- concrete was placed in lifts in accordance with the concrete placement plan;
- inspections during the placement were performed as required; and
- records were produced, reviewed, and indicate mix, location, time placed, water additions, temperature of the concrete mix, and ambient conditions.

During the placement, the inspectors observed in-process concrete testing to determine whether:

- concrete temperature, slump flow, air content, and unit weight were determined at the proper location and frequency as required by procedures, specifications, and ASTM standards;
- sample collection and testing techniques conformed to the procedures, specifications, and ASTM standards;
- concrete strength test sample cylinders were made at the required location and frequency and were cured in accordance with specified requirements; and
- personnel performing sampling and testing were trained and qualified.

The inspectors observed curing activities to determine whether curing was in accordance with specifications and procedures with regard to the method, materials, duration, temperature, inspections, and records. The inspectors reviewed test results and other information related to the placement to determine whether the placement activities were controlled and accomplished in accordance with the quality assurance program. The inspectors performed independent inspection and measurements of the as-built concrete to determine whether the as-built configuration met the design specifications.

The inspectors interviewed licensee and contractor personnel to determine whether:

- contractors performing safety-related work followed approved implementing procedures that describe administrative and procedural controls, approved work processes, and inspection requirements;
- design processes were performed in compliance with applicable instructions and procedures;
- personnel conducting work and quality assurance roles were qualified and knowledgeable; and
- effective oversight in accordance with specifications and program requirements was implemented for the installation activities observed.

The inspectors reviewed a sample of nonconformances to verify:

- the licensee was identifying problems at an appropriate threshold and entering them into the corrective action program;
- any differences between the as-built and as-designed SSCs were documented and dispositioned in accordance with approved modification or change procedures; and
- the nonconformances were resolved and their dispositions had adequate technical bases.

c. Findings

No findings were identified.

1A23 (Unit 4) ITAAC Number 3.3.00.02a.i.d (763) / Family 01F

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 3.3.00.02a.i.d (763). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.01 - Inspection of ITAAC-Related Foundations & Buildings
- 65001.02-02.01 - Inspection of Concrete Placement
- 65001.A.02.01 - Observation of in-Process Installation Activities
- 65001.A.02.03 - Independent Assessment/Measurement Inspection
- 65001.B-02.05 - Inspection

The inspectors reviewed quality records and performed direct inspection of construction activities associated with the radiologically controlled area of the Auxiliary Building for Vogtle Unit 4. Specifically, the inspectors observed construction activities associated with the following wall sections between elevation 82'-6" and 100'-0":

- wall section along column line "I" between column lines 1 and 2;
- wall section along column line "I" between column lines 2 and 3; and
- wall section along column line "I" between column lines 3 and 4.

For the wall sections listed above, the inspectors reviewed a sample of drawings included in the work packages as well as specifications to determine whether:

- design outputs were translated into drawings;
- the documents adequately defined the final design and arrangement of these SSCs; and
- the documents were consistent with the design commitments and requirements of the technical specifications, the UFSAR, and code commitments.

The inspectors observed installation activities for the wall sections listed above associated with steel reinforcement, including horizontal and vertical reinforcing steel bars, shear reinforcement, and bar splices, to determine whether:

- the installation activities met applicable quality and technical requirements established by approved procedures, specifications, and drawings included in the work packages;
- reinforcing steel were located properly in the structure, and were sized as specified in drawings; and
- reinforcing steel were secured and free of concrete or excessive rust.

On August 26, 2015, the inspectors observed the 82'-6 to 100'-0" concrete placement activities to determine whether:

- accepted procedures and specifications were followed throughout the concrete placement;
- the equipment used was suitable and sized for the work;
- placement drop distances did not exceed specification requirements and;
- inspection during placement was performed as required.

The inspectors also observed in-process concrete testing activities to determine whether:

- concrete temperature, slump, air content, and unit weight were determined at the proper locations and frequency as required by procedures, specifications, and ASTM standards;
- sample collection and testing techniques conformed to the procedures, specifications, and ASTM standards and;
- concrete strength test sample cylinders were made at the required locations and frequency.

b. Findings

No findings were identified.

1A24 (Unit 4) ITAAC Number 3.3.00.02a.ii.d (767) / Family 01A

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 3.3.00.02a.ii.d (767). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.01-02.04 - Key Dimensions and Volumes
- 65001.A.02.01 - Observation of in-Process Installation Activities
- 65001.A.02.03 - Independent Assessment/Measurement Inspection

The inspectors performed a concrete thickness inspection of the radiologically control portion of the auxiliary building. The inspectors sampled the following wall segments from elevation 82'-6" to 100'-0":

- wall section along column line I from column line 2 to 4; and
- wall section along column line 4 from column line I to J-1.

During this inspection, the inspectors independently measured the wall segments to determine whether the pre-placement concrete thickness was as specified by Westinghouse concrete drawings and Vogtle Unit 4 COL, Appendix C, Table 3.3-1, "Definition of Wall Thicknesses for Nuclear Island Buildings, Turbine Building, and Annex Building." The inspectors also performed an independent surveillance of the already poured segments of the walls and portions of the concrete formwork prior to the concrete placement to determine whether:

- clear cover dimensions were in accordance with the applicable WEC concrete

- drawings;
- formwork was clean and secure;
 - embed plates were flush to the face of formwork and;
 - width of the formwork along wall segments were in place to provide the wall thickness as specified on WEC concrete drawings.

Prior to concrete being placed, the inspectors also inspected the construction joint to determine whether the surface of the concrete joint was intentionally roughened in accordance with ACI 349-01, and whether the surface was clean and free of laitance.

b. Findings

No findings were identified.

IMC 2504, Construction Inspection Program – Inspection of Construction and Operational Programs

1P01 Quality Assurance Implementation, Appendix 13, Inspection of Criterion XIII – Handling, Storage and Shipping (35007)

a. Inspection Scope

On July 14, 2015, the inspectors performed an inspection of the Vogtle off-site warehouse storage facility to determine whether CB&I had controlled the storage of safety-related equipment to prevent damage or deterioration. Specifically, the inspectors observed the storage areas to determine whether CB&I was adequately implementing Section 13, "Handling, Storage, and Shipping," of CMS-720-03-PL-00020-A, "CB&I Nuclear quality Assurance Program Description, and QS 13.11, "Material/Equipment Storage".

The inspectors observed storage areas to ensure the following storage requirements were properly implemented:

- storage areas were properly designated;
- materials were properly segregated to avoid deleterious effects;
- materials were properly supported;
- storage Level B & C items were properly environmentally monitored using calibrated temperature/humidity controllers;
- environmental monitoring logs were appropriately reviewed and approved, and;
- storage facilities cleanliness and good housekeeping practice were properly maintained.

b. Findings

No findings were identified.

1P02 Quality Assurance Implementation, Appendix 15, Inspection of Criterion XV – Nonconforming Materials, Parts, or Components (35007)

a. Inspection Scope

Inspection of QA Program Implementation

The inspectors reviewed a sample of N&D reports to determine whether the conditions were adequately reviewed and accepted, rejected, repaired, or reworked in accordance with the QA program implementing documents for the control of nonconforming material, parts, and components. The inspectors compared these N&D reports to Section 15, "Nonconforming Materials, Parts, or Components," of the CB&I quality assurance program (CMS-720-03-PL-00020-A) and CB&I procedure QS 15.01, "Nonconformance & Disposition Report." The nonconformance reports reviewed during this period are listed in the documents reviewed attachment of this report.

The inspectors toured several of the on-site Level A, B, C, and D storage areas to

confirm that the licensee had established areas for segregating and controlling non-conforming items. The inspectors selected a sample of nonconforming items in storage to determine if the items were segregated or marked to preclude inadvertent use, further processing, delivery, or installation.

The inspectors selected a sample of nonconforming items that the licensee either rejected, repaired, reworked, or accepted through evaluation. Additionally, the inspectors reviewed the N&D reports to determine whether:

- the nonconforming item was properly identified;
- the procedures for initiating, processing, and closing nonconformances were adhered to;
- reportability screening and evaluations under 10 CFR Part 21 and 10 CFR 50.55(e) were performed;
- the disposition, such as use-as-is, reject, repair, or rework of nonconforming items were properly identified and documented;
- adequate technical justification for the acceptability of a nonconforming item, dispositioned repair, or use-as-is was appropriately documented;
- nonconformances to design requirements dispositioned use-as-is or repair were subjected to design control measures commensurate with those applied to the original design;
- the as-built records properly reflected the accepted deviation, if applicable;
- controls were implemented to preclude the inadvertent use of nonconforming items and that nonconforming items were marked or tagged and segregated; and
- repaired or reworked items were reexamined in accordance with applicable procedures and with the original acceptance criteria unless the disposition had established alternate acceptance criteria.

b. Findings

No findings were identified.

1P03 Quality Assurance Implementation, Appendix 16, Inspection of Criterion XVI – Corrective Action (35007)

a. Inspection Scope

Daily Corrective Action Program Review

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. The inspectors verified that adequate attention was being given to timely corrective actions and any adverse trends were identified and addressed. The inspectors reviewed corrective action program procedures and evaluated implementation of these procedures to determine whether the procedures contained guidance for the following attributes:

- classification, prioritization, and evaluation for reportability (i.e., 10 CFR 50.55(e)) of conditions adverse to quality;

- complete and accurate identification of the problem in a timely manner commensurate with its significance and ease of discovery;
- screening of items entered into the CAP to determine the proper level of evaluation;
- identification and correction of procurement document errors, deviations from procurement document requirements, defective items, poor workmanship, incorrect vendor instructions, significant recurring deficiencies at both vendor shops and on site, and generic procurement related deficiencies;
- identification and correction of design deficiencies;
- consideration of extent of condition, generic implications, common cause, and previous occurrences;
- classification and prioritization of the resolution of the problem commensurate with its safety significance;
- identification of corrective actions that are appropriately focused to correct the problem;
- identification of root and contributing causes, as well as actions to preclude recurrence for significant conditions adverse to quality;
- completion of corrective actions in a timely manner commensurate with the safety significance of the issue;
- provisions for escalating to higher management those corrective actions that are not adequate or not timely; and
- conditions adverse to quality were trended to proactively identify potential adverse trends and potential common cause problems, and the trending results were reported to management.

Routine Review of Items Entered into the Corrective Action Program

On a routine basis, the inspectors screened a sample of issues entered into the licensee and the Engineering, Procurement, and Construction (EPC) consortium's corrective action programs. The inspectors attended several weekly management review committee meetings at the site and held discussions with licensee and EPC consortium personnel responsible for the screening and correction of the issues to determine if:

- the licensee and the EPC consortium were identifying equipment, human performance, and program issues at an appropriate threshold and were entering the issues into their respective corrective action programs;
- the licensee and the EPC consortium appropriately classified the issues and took appropriate short-term corrective actions;
- conditions adverse to quality were controlled in accordance with each company's quality assurance program; and
- potential adverse trends were appropriately identified and corrected by the licensee or their contractors.

Selected Issues for Follow-Up Inspection

Based on the inspectors' routine screening of corrective action records, the inspectors selected a sample of issues entered in the corrective action programs to determine if the handling of these issues was consistent with the applicable quality assurance program requirements and 10 CFR Part 50, Appendix B. Specifically, the inspectors reviewed the corrective action records listed in the documents reviewed section of this report. The

inspectors reviewed these corrective action documents to determine if:

- 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, the cause was determined, corrective actions were taken to prevent recurrence, and the cause and corrective actions taken were documented and reported to appropriate levels of management;
- conditions were appropriately screened;
- the licensee and their contractors properly evaluated and reported the condition in accordance with 10 CFR 50.55(e) and 10 CFR 21;
- the identification and correction of design deficiencies were being adequately addressed;
- extent of condition was being adequately addressed; and
- appropriate corrective actions were developed and implemented.

b. Findings

No findings were identified.

1P04 Quality Assurance Implementation, Appendix 3, Inspection of Criterion III – Design Control (35007)

a. Inspection Scope

The inspectors reviewed a sample of E&DCRs to determine whether these changes were performed in accordance with procedure APP-GW-GAP-420, "Engineering and Design Coordination Report." The inspectors evaluated these design changes for conformance to 10 CFR Part 50, Appendix B, Criterion III, "Design Control," and Supplement 3S-1, "Supplementary Requirements for Design Control," of ASME NQA-1-1994. The inspectors also reviewed the licensing impact determination screening associated with each of these design changes to determine whether each change was properly evaluated against the current licensing basis as described in the Vogtle Unit 3 and Unit 4 UFSAR and was performed in accordance with procedure APP-GW-GAP-147, "AP1000 Current Licensing Basis Review." Furthermore, the inspectors reviewed these E&DCRs to determine whether each change received the proper level of engineering review and was incorporated into all affected documents.

b. Findings

No findings were identified.

4. OTHER INSPECTION RESULTS

4OA6 Meetings, Including Exit

.1 Exit Meeting.

On October 6, 2015, the inspectors presented the inspection results to Mark Rauckhorst, Vogtle 3&4 Construction Vice President, along with other licensee and consortium staff

members. The inspectors stated that no proprietary information would be included in the inspection report.

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licenses and Contractor Personnel

P. Albuquerque, SNC ITAAC Manager
K. Clough, SNC Engineering
L. Collins, SNC Engineering
W. Crisler, Consortium QA Director
E. Dumas, CB&I QC manager
D. Fujiyoshi, CB&I Licensing
R. Henderson, SNC Licensing
B. Henley, VEGP 3&4 Vendor Oversight
A. Pugh, VEGP 3&4 Licensing Manager
P. Shaw, WEC Licensing Engineer
A. Simpson, CB&I QC
J. Speer, WEC Engineering
J. Watkins, WEC Licensing Manager
F. Willis, SNC Licensing Supervisor
M. Yox, SNC Regulatory Affairs Director

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

| <u>Item Number</u> | <u>Type</u> | <u>Status</u> | <u>Description</u> |
|---------------------|-------------|---------------|---|
| 05200025/2015002-01 | NCV | Discussed | Weld Allowable Stress Calculation Not in Compliance with Current Licensing Basis (Section 1A14) |

LIST OF DOCUMENTS REVIEWED

[2503 Documents]

Section 1A01

CB&I welder qualification records for welder IDs: 940, 7096, 106, 160, 0462, 3016, 293, and 221

Travelers: U3-S11-D35/D36, U3-S10-C37/C38

Magnetic Particle Reports: U3-762, U3-686

Radiography reports: U3-244, U3-260

Radiograph films for welds: B3-D35 to B3-D36 and B3-C37 to B3-C38

Section 1A02

CMTRs:

HT # 1090X (Customer PO – 132175-FPR12-01836-4)

HT # L13570 (Customer PO – D65-39440)

Welding Records:

In-process work package number SV3-CA03-S4W-CV2253, "CA03 Submodule Wall Assembly (07, 08, 09, 10, 11),"

Procedures:

CB&I procedure WQ-1, "Qualification of Welders and Welding Operators," Revision 4
 FMC-1, "Filler Metal Control," Revision 5
 SV3-VW20-Z0-023, "Welding Specification for ASTM A240 UNS S32101 Duplex Stainless Steel Plate," revision 3
 WPS5-10H.10HM70, Revision 4, 5, 10, and 11

Miscellaneous:

APP-CA03-SSC-001, "AP1000 CA03 Structural Module (IRWST) Internal Connection Qualification," Revision 2

Procedures:

F-S561-004, "Structural Weld Inspection-Modules, AWS D1.1/D1.6 and Fabrication, Submodule Assembly, and Module in Plant Installation Tolerances," Revision 15
 100-UT-312, "Ultrasonic Phased Array Examination of Structural Welds In Accordance with AWS D1.1 and AWS D1.6," Revision 2

NDE Reports:

V-15-PT-304-1113
 V-15-PT-304-1125
 V-15-UT-312-842
 V-15-PT-304-1312
 V-15-PT-304-1348

Drawings:

SV3-CA03-S4K-CV3282, "Wall Submodule Assembly (07, 08, 09, 10, 11)," Revision 3

N&Ds:

SV3-CA03-GNR-000020, "CA03 submodule 08 & 07 Bottom Edge Misalignment," Revision 0
 SV3-CA03-GNR-000012, "CA03 Submodule 08 & 09 Bottom Edge Misalignment," Revision 0
 SV3-CA03-GNR-000005, "CA03-08 and CA03-09 Root Gap Correction," Revision 0
 SV3-CA03-GNR-000021, "CA03-07 and CA03-08 Root Gap Correction," Revision 0
 SV3-CA03-GNR-000024, "CA03-10 & CA03-09 Root GAP," Revision 0
 SV3-CA03-GNR-000025, "CA03-10 & CA03-11 Root Gap," Revision 0

Section 1A03CMTR:

HT # 537747 (Customer PO – 34616)

Welding Records Procedures:

MCI-WPSP-1037, "Welding Procedure Specification D1.6:1999 WPS 1037," Revision 0

Procedures:

APP-CA00-SUC-003, "Fillet Weld Change to C3J Weldable Coupler and Option to APP-CA00-SUC-003," Revision 0
 APP-CA00-SUC-002, "Calculation of Truss Welds for CA Modules," Revision 2
 APP-CA03-SSC-001, "AP1000:CA03 Module Wall Welding Details Calculations," Revision 1

F-Q445-004, "Receipt Inspection - Module Structural," Revision 3
 QAD 07.14, "Receiving Inspection," Revision 3
 QS 07.01, "Receiving Process," Revision 1
 APP-1100-S2C-008, "AP1000 CA03 Structural Module (IRWST) Steel Wall Qualification,"
 Revision 4

N&Ds

APP-CA03-GNR-850145, "SMCI CA03 Weld Termination - SV3 and VS2," Revision 0
 APP-CA03-GEF-011, "CA03 Dimensional Clarifications," Revision 0
 APP-CA03-GEF-008, "CA03 Horizontal Stiffeners - Track Welding," Revision 0
 APP-CA00-GEF-074, "Shear Stud Material Unavailability," Revision 0
 APP-CA00-GEF-066, "Shear Stud Material Unavailability," Revision 0 and 1

Drawings:

SV3-CA03-S4-003, "Containment Building Areas 1 & 2 Module 03 Structural Outline - Plan
 View," Revision 3
 SV3-CA03-S4-004, "Containment Building Areas 1 & 2 Module 03 Structural Outline -Vertical
 View Looking East," Revision 0
 SV3-CA03-S4-005, "Containment Building Areas 1 & 2 Module 03 Structural Outline -Vertical
 View Looking West," Revision 0
 SV3-CA03-S4-006, "Containment Building Areas 1 & 2 Module 03 Structural Outline -Vertical
 View Looking North," Revision 0
 SV3-CA03-S4-011, "Containment Building Areas 1 & 2 Module 03 Structural Outline - Specific
 Details I," Revision 1
 SV3-CA03-S4-012, "Containment Building Areas 1 & 2 Module 03 Structural Outline - Specific
 Details II," Revision 1
 SV3-CA03-S5-04001, "Containment Building Module CA03 - Submodule CA04_04 Isometric
 Views," Revision 0
 SV3-CA03-S5-04002, "Containment Building Module CA03 - Submodule CA04_04 Break-
 down," Revision 0
 SV3-CA03-S5-04003, "Containment Building Module CA03 - Submodule CA04_04 Structural
 Outline Vertical Sections/Views," Revision 0
 SV3-CA03-S5-04005, "Containment Building Module CA03 - Submodule CA04_04 Specific
 Details I," Revision 0
 SV3-CA03-S5-04006, "Containment Building Module CA03 - Submodule CA04_04 Specific
 Details II," Revision 0

Section 1A04

Welding Records:

SV3-ML05-MLW-ME4822, Revision 0
 SV3-CA01-S4W-CV2551, Revision 0

Welding Procedures:

WPS1-8.8T01, Revision 5
 WPS2-1.1S03, Revision 1, 2

Miscellaneous:

APP-PL02-Z0-001, AP1000 Standard Piping Specification Class JBB/JBC," Revision 7
 APP-SFS-M6X-004, "SFS Pipe Line Designation Table," Revision 1

Procedures:

F-S562-005, "Pipe Welding/Braze ASME Section III Pipe Weld Inspection," Revision 0
 100-UT-311, "Ultrasonic Examination of Welds in Accordance with AWS the Structural Welding Code D1.6," Revision 1
 100-PT-304, "Liquid Penetrant Examination in Accordance with AWS Structural Welding Code," Revision 6

NDE Reports:

V-15-UT-310-915
 V-15-UT-310-921
 V-15-UT-310-902
 V-15-UT-310-927
 V-15-UT-311-874
 V-15-PT-304-1359

Drawings:

APP-CA01-S5-08001, "Containment Building Area 3 Module CA01 Submodule CA01_08 Isometric Views," Revision 7
 SV3-CA01-S4K-CV7153, "CA01-08 Welded Attachment Weld Map," Revision 7
 APP-CE01-CE-004, "Standard Direct Weld Spreader Plates For CA01, CA02, CA05, and CA20," Revision 0
 SV3-CA01-S4K-CV3987, "CA01-05 Permanent Welded Attachment Weld Map," Revision 2
 APP-ML05-V2-451, "AP1000 Duplex Penetration Embedded Pipe W/Anchor Details," Revision 6
 APP-CA01-S4-04302, "Containment Building Area 4 Module CA01 Subassembly 04 Structural Outline Elevation Views (Outfitted) – I," Revision 3
 SV3-SFS-PLK-ME8470, "Penetration 11504-ML-P03," Revision 0
 SV3-CA01-S4K-CV6889, "CA01 Corner Transition Process Map," Revision 1

N&Ds:

SV3-SFS-GNR-000021, "SV3-11504-ML-P03 – excessive necking," Revision 0
 SV3-CA01-GNR-000472, "CA01-04 Penetration Interference," Revision 0
 SV3-ML05-GNR-000019, "11504-ML-P03 length discrepancy," Revision 0

E&DCRs

APP-CA01-GEF-491, "CA01-08 OLP Additions," Revision 0
 APP-CA01-GEF-513, "CA01-05 OLD Additions," Revision 0
 APP-CA01-GEF850028, "CA01 Leak Chase Plate Weld," Revision 0
 APP-GW-GEF-1212, "E&DCR to Clarify Weld Jurisdictions on ML05 Drawings," Revision 0

Section 1A05

N&D report number SV3-CE01-GNR-000110, "CA01 Embedment Plates Out of Tolerance," revision 0
 In-process weld records for: CV9119-P-69, CV9119-P-7, CV9119-P-64, CV8124-B-068
 Work package number SV3-CA01-S8W-CV4043, "U3 Containment Installation of CA01 Module at Elevation 83'-0"
 Welding Procedure Specifications: WPS2-1.1S02 and WPS5-10H.10HT70
 SV3-CA01-S8K-CV9119, "Containment Building U3 Module CA01 Post-Lift Plates Weld Map," revision 0
 SV3-CA01-S8-307, "Containment Building Module CA01 Basemat Connections Plan View Subassembly 01 and 03," revision 0

SV3-CA01-S8-311, "Containment Building Module CA01 Post - Lift Landing Plates Weld Details," revision 0
 SV3-CA01-S8K-CV8124, "Containment Building Areas 1-4 Module CA01 Basemat Connection Details Weld Maps," revision 2
 SV3-CA01-S8-309, "Containment Building Module CA01 Basemat Connections Plan View Subassembly 04 & 05," revision 0

Section 1A06

Welding Records:

Work Package SV3-CA05-S8W-CV2680, "Final Installation of CA05 Module"
 Weld Records for CV6117-18, CV6117-27, and CV6117-28

Procedures:

CB&I procedure WQ-1, "Qualification of Welders and Welding Operators," revision 4;
 FMC-1, "Filler Metal Control," revision 5
 WPS2-1.1M02 revision 4

Inspection Procedures:

F-S561-004, "Structural Weld Inspection-Modules, AWS D1.1/D1.6 and Fabrication, Submodule Assembly, and Module In Plant Installation Tolerances," revision 11.1

Drawings:

SV3-CA05-S4Y-401, "Containment Building Areas 2 & 3 Module CA05 Embed and Attachment Vertical View Looking South," revision 0
 SV3-CA05-S4Y-402, "Containment Building Areas 2 & 3 Module CA05 Embed and Attachment Vertical View Looking West," revision 0
 SV3-CA05-S4Y-432, "Containment Building Areas 2 & 3 Module CA05 Structural Outline Specific Details," revision 0
 SV3-CA05-S8K-CV6117, "Weld Map CA05 Module to B-Plates Elevation 83' and Above," revision 2

Other Records:

Material Receiving Report (MRR) 14-07045
 Inspection Report Q445-011-14-0692
 E&DCR No. APP-CA05-GEF-135, "E&DCR for CA05 Basemat Connection Modifications," revision 0

Section 1A07

CB&I CAR No. 2015-2497;
 E&DCR APP-1208-GEF-246, "Shield Building SC Panels Weld Electrode Specification Change," Revision 0
 TR-5.20-E71T-1M Shield Building Specification for Carbon Steel Electrodes for Flux Cored Arc Welding for Shield Building Use," Revision 0, dated November 13, 2014, (supersedes DMD-M-NS-520-71TM_Shieldbuilding_FCAW-01)
 welding procedure specification No. WPS2-1.1F20-SB(FCAW), Revision 4, dated March 25, 2015
 procedure qualification record 13405W, "2G Position FCAW of ASTM A572 Grades 50 and 60 material with Lincoln Electric Outershield 71M Electrode;
 PQR 13407W, Rev. 5, dated January 16, 2015; PQR 1349W, "AWS D1.1 Welding Procedure Qualification PJP Weld Size Verification Record," Revision 1, dated December 6, 2014;

PQR 13496W, Revision 1, dated December 6, 2014; PQR 13497W, Revision 01, dated December 6, 2014; and
 Lincoln Electric certificate of compliance dated March 26, 2014, for 50,000 lbs of 0.045" Outershield 71M 25SP, ASME Section II, Part C, SFA 5.20 Type E71T-1M/-9M, Lot No. 1186B to CB&I purchase order No. 132175-FPR12-01836-4
 specification DMD-M-NS-520-71TM_Shieldbuilding_FCAW-00.

Section 1A08

Concrete Data:

CB&I Concrete/Grout Delivery Ticket # 39027, Pour # 2157, 09/11/2015
 CB&I Concrete/Grout Delivery Ticket # 39029, Pour # 2157, 09/11/2015
 CB&I Concrete/Grout Delivery Ticket # 39032, Pour # 2157, 09/11/2015
 CB&I Concrete/Grout Delivery Ticket # 39034, Pour # 2157, 09/11/2015
 CB&I Concrete/Grout Delivery Ticket # 39035, Pour # 2157, 09/11/2015
 CB&I Concrete/Grout Delivery Ticket # 39054, Pour # 2157, 09/11/2015
 CB&I Concrete/Grout Delivery Ticket # 39060, Pour # 2157, 09/11/2015
 CB&I Concrete/Grout Delivery Ticket # 39079, Pour # 2157, 09/11/2015
 CB&I Concrete/Grout Delivery Ticket # 67795, Pour # 2175, 09/22/2015
 CB&I Concrete/Grout Delivery Ticket # 67793, Pour # 2175, 09/22/2015
 CB&I Concrete/Grout Delivery Ticket # 67794, Pour # 2175, 09/22/2015

Miscellaneous

Work Package SV3-1020-CCW-CV2699, "Concrete in Area Below Containment Vessel From El. 82'-6" to 98'-0"," Rev. 0

Procedures

CSI 3-31, "Concrete Batch Plant Operations," Rev. 4
 NCSP 03-30, "Concrete Mixing and Delivery," Rev. 1
 NCSP 03-31, "Concrete Placement," Rev. 2
 NCSP 03-31, "Concrete Placement," Rev. 2
 NCSP 03-36, "Concrete Removal," Rev. 0
 SV4-CC01-Z0-026, "Safety Related Mixing and Delivering Concrete," Rev. 6
 SV4-CC01-Z0-027, "Safety Related Concrete Testing Services," Rev. 4
 SV4-CC01-Z0-031, "Safety Related Placing Concrete and Reinforcing Steel," Rev. 7

Section 1A09

Drawings:

APP-1000-CR-903, "Nuclear Island Basemat Reinforcement Section," Rev. 11
 APP-1238-CR-903, "Reinforcement Locations Interface Drawing Basemat and Shield Building Elevation 100'-0" Sections & Details," Rev. 3
 Engineering & Design Coordination Reports:
 SV0-CR01-GEF-00518, "S.B. W Constructability # 11 Bars," Rev. 0

Procedures:

NCSP 03-31, "Concrete Placement," Rev. 2

Specifications:

SV3-CC01-Z0-031, "Safety Related Placing Concrete and Reinforcing Steel," Rev. 6
 SV3-G1-AX-001, "Field Coating and Lining for Concrete and Metal Surfaces," Rev. 6
 Quality Assurance Inspection Reports:
 C112-15-10140, "Pre-placement: Concrete," Rev. 0

SV3-1238-CR-903, Rev. 0
 SV3-1000-CR-905, Rev. 4
 SV3-1020-CR-901, Rev. 3

Condition Reports:
 CR 10072800

Work Packages:
 SV3-1000-CRW-CV1465
 SV3-1020-CCW-CV2699, "NI#3 10.2 Concrete Placement Plan Elevation 87'6" to 94'-0"," Rev.
 0

Section 1A10

Tensile Test Data Record (Mechanical Splices) Report Numbers SS-15-0465 and SS-15-0466

Stork Herron Testing Laboratories Test Report Numbers: TJ6415, TJ6416, TJ6417, TJ6418, TJ6419, TJ6420, TJ6421, TJ6422, TJ6423, TJ6424, TJ6425, TJ6624, TJ6626, TJ6625, TJ6627, TJ6628, TJ6629, TJ6391, TJ6392, TJ6406, TJ6407, TJ6408, TJ6409, TJ6410, TJ6411, TJ6412, TJ6413, TJ6414

Calibration Checklists V-N-0096-6 and V-N-0098-7

Tensile Test Data Records (Mechanical Splices) QS-15-0003 and QS-15-0004

Certificate of Compliance for Erico Shipment L72249 00 002 and 006 PO#J132175-J400A-00 Revision 90

Certificate of Compliance for Erico Shipment L72249 00 005 (4th partial) PO#J132175-J400A-00 Revision 90

Erico Report Number ERICO-ACI-0015-A, "Splice System Qualification Test Program For LENTON P8 & Transition P8 coupler styles, rebar #11 and #14," dated April 9th, 2014.

Procedures:

CSI-3-44-9, "Mechanical Splicing of Reinforcing Steel," dated 4/15/2015 QC inspection plan number F-S511-001, "Mechanical Rebar Splices: Threaded Lenton Coupler Splices / Weldable Couplers," revision 10; Work Package SV3-1000-CRW-CV1465, "Installation of Rebar for Unit 3 Shield Building Cylindrical Wall from El 66'6" to 100'," revision 1;

Specification:

SV3-CR01-Z0-010, "Specification for Supply and Installation of Mechanical Splices for Reinforcing Steel," revision 6;

Section 1A11

CB&I Weld Data Sheets for welds CV7190-23-I, CV7190-23-O, CV7190-15-I, CV7190-15-O, CV7190-4-I, and CV7190-4-O

CB&I Qualification records for welder IDs: CLN8229, MEW6934, AFH8956, WJG5264, JRS3034

CB&I Welding Procedure WPS2-1.1F20-SB(FCAW), Rev. 4

CB&I Welding Procedure Qualification Records 13405W & 13495W

Mistras NDE Reports: V-15-RT-313-638, V-15-RT-313-637, V-15-RT-313-636, V-15-MT-302-3452, V-15-MT-302-3453, V-15-MT-302-3458, V-15-MT-302-3460, V-15-MT-302-3476, V-15-MT-302-3481

Radiograph films for welds: CV7190-23-I, CV7190-23-O, CV7190-15-I, CV7190-15-O, CV7190-4-I, and CV7190-4-O

N&D SV3-1208-GNR-000033, "Course 1 NDE Shield Building," Rev. 0;

N&D SV3-1208-GNR-000006, "Shield Building Out of Tolerance Root Gap," Rev. 0;

Section 1A12

SV3-1200-CR-910, "Auxiliary Building Areas 1 & 2 Concrete Reinforcement Wall 11 Elevation," Rev. 6SV3-1220-CR-910, "Auxiliary Building Areas 1 & 2 Concrete Reinforcement Wall 11 Sections and Details EL 82'-6"," Rev. 4SV3-1200-CR-931, "Auxiliary Building Areas 3 & 4 Concrete Reinforcement Wall 7.3 Elevation," Rev. 7

Section 1A13

Drawings:

SV3-1200-CR-950, "Auxiliary Building Areas 5 & 6 Concrete Reinforcement Wall 1 Elevation," Rev. 13

SV3-1220-CC-562, "Auxiliary Building Concrete Floor Elevation 82'-6" Areas 5 & 6," Rev. 7

SV3-1220-CC-950, "Auxiliary Building Concrete Outline Areas 5 & 6 El. 82'-6" Section A," Rev. 1

SV3-1220-CR-950, "Auxiliary Building Areas 5 & 6 Concrete Reinforcement Wall 1 Sections and Details El. 82'-6"," Rev. 7

SV3-1230-CR-563, "Auxiliary Building Areas 5 & 6 Concrete Reinforcement Floor El. 100'-0" Plan View," Rev. 4

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SV3-1220-CRW-CV1586

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APP-1200-GEF-192, "Concrete Placement Hold on Aux Bldg WALL 1 Documents due to Calculation Reconciliation," Rev. 1

APP-1200-GEF-236, "Concrete Placement Hold on Aux Bldg WALL 1 Documents from 82'6" and above due to Calculation Reconciliation," Rev.1

APP-1200-GEF-304, "E&DCR to put Aux Bldg Wall 1 above 100' Documents on Targeted Installation Hold due to CR Extent of Condition," Rev. 1

APP-1200-GEF-792, "Correcting Shear Reinforcement Information on Wall I, 11 and 1," Rev. 0

SV0-XB01-GEF-000018, "MSE WALL REDESIGN," Rev. 0SV0-XB01-GEF-000024, "HDPE Liner Repair Procedure" Rev. 0

SV3-CR01-GEF-000195, "vert bar/pen' conflict near 1-line," Rev. 0

Nonconformance and Disposition Reports:

SV3-CC01-GNR-000222, "1-line wall, West Side, thickness and cover deviations," Rev. 0SV3-CC01-GNR-000231, "C.L. 1 Wall Thickness," Rev. 0SV3-CR01-GNR-000314, "1-line wall, East Side, cover and thickness deviations," Rev. 0

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F-S561-004, "Structural Weld Inspection-Modules, AWS D1.1/D1.6 and "Fabrication", "Submodule Assembly", and "Module in Plant" Installation Tolerances," Revision 16

WEC Corrective Action, Prevention and Learnings (CAPALs)

CAPAL 100224197, "SNC ICAP CR10060139, NRCI IOC 15-016, Violation of Design Requirements for Weldable Connectors," dated April 24, 2015

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APP-CA00-GEF-178, "Fillet Weld Size Change to C3J Weldable Coupler and Option to APP-CA00-SUC-003," Revision 0

Miscellaneous

S561-004-15-1444, "Structural Weld Inspection-Modules, AWS D1.1/D1.6 and "Fabrication", Submodule Assembly", and "Module In Plant" Install Toler," August 8, 2015

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Vogtle Unit 3 COL, Appendix C, Table 3.3-1, "Definition of Wall Thicknesses for Nuclear Island Buildings, Turbine Building, and Annex Building"

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Vogtle Unit 3 COL, Appendix C, Table 3.3-1, "Definition of Wall Thicknesses for Nuclear Island Buildings, Turbine Building, and Annex Building"

SV3-1220-CC-562, "Auxiliary Building Concrete Floor EI 82'-6" Areas 5&6," Rev. 1

SV3-1225-CC-502, "Auxiliary Building Concrete Floor EI 82'-6" Areas 5," Rev. 1

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Vogtle Unit 3 COL, Appendix C, Table 3.3-1, "Definition of Wall Thicknesses for Nuclear Island Buildings, Turbine Building, and Annex Building"

Concrete Field and Lab Test Data, RCN: VSC23200, 04/23/2015

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SV4-MT01-Z0R-201, Rev. 0

Deviation Notices

SV4-MT01-GNR-017, Rev. 0

SV4-MT01-GNR-018, Rev. 1

SV4-MT01-GNR-008, Rev. 0

SV4-MT01-GNR-009, Rev. 0

SV4-MT01-GNR-016, Rev. 0

SV4-MT01-GNR-011, Rev. 1

Non conformity reports

NCR-2992, Rev. 00

NCR-3001, Rev. 00

Dimensional test reports

N021-DT-W3-PCF-00-11-031R-A58.1, Rev. 00

N021-DT-ITAAC-2.2.03.08c.vi.01-03, Rev. 00

N021-DT-W3-PCF-00-12-031R-A64.1, Rev. 02

N021-DT-ITAAC-2.2.03.08c.vi.01-04, Rev. 00

M&TE

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Depth Caliper 122C

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SV4-MT01-Z0R-201, Rev. 0

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SV4-MT01-GNR-017, Rev. 0

SV4-MT01-GNR-018, Rev. 1

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N021-DT-W3-PCF-00-11-031R-A58.1, Rev. 00

N021-DT-W3-PCF-00-12-031R-A64.1, Rev. 02

M&TE

Laser Tracker AT901, 2LAS

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SV4-CA04-GNR-000006, Rev. 0

SV4-CA04-GNR-000005, Rev. 0

SV4-CA04-GNR-000004, Rev. 0

SV4-CA04-GNR-000003, Rev. 0

SV4-CA04-GNR-000002, Rev. 0

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CMS-720-03-PL-00020-A, "CB&I Nuclear Quality Assurance Program Description," Rev. 0

QS 15.01, "Nonconformance & Disposition Report," Rev. 05.02

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APP-CA05-GEF-083, Modification of Shear Reinforcement, Rev. 0

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SV4-CA05-GNR-000003, CA05-08 Coupler Location Violation, Rev. 0

APP-CA05-GNR-850049, SV4-CA05-07 (NCR 15-391) Holes Drilled Through Fillet Weld, Rev. 0

DrawingsSV4-CA05-S5-07003, Containment Building Area 3 Module CA05 Submodule CA05_07
Structural Outline – Vertical Sections/ Views, Rev. 0SV4-CA05-S5-07004, Containment Building Area 3 Module CA05 Submodule CA05_07
Structural Outline – Horizontal Sections Views, Rev. 0SV4-CA05-S5-08003, Containment Building Area 3 Module CA05 Submodule CA05_08
Structural Outline – Vertical Sections/ Views I, Rev. 0SV4-CA05-S5-08004, Containment Building Area 3 Module CA05 Submodule CA05_08
Structural Outline – Horizontal Sections Views, Rev. 0SV4-CA05-S5-08006, Containment Building Area 3 Module CA05 Submodule CA05_08
Structural Outline – Vertical Sections/ Views II, Rev. 0

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Calculation APP-1010-CCC-013, "Structural Acceptance of Basemat Construction Joints under Shield Building for Concrete Placement above EL. 66'-6" to 82'-6"," Rev. 1

Work Package SV4-1220-CCW-CV2318, "Unit 4 Concrete Placement Outside CVBH up to Elevation 82'-6"," Rev. 0

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SV4-CC01-GEF-000014, "FEA for CR10/CVBH Conc. Placement," Rev. 0

SV4-CC01-GNR-000043, "Un Planned Construction Joint, Rev. 0

SV4-CC01-GNR-000056, "U4 No Visible Coarse Aggregate in SCC Placement at L-Line Elev. 72'6", Rev. 0

SV4-CC01-GNR-000071, "U4 No Visible Coarse Aggregate in SCC Placement under CVBH at Elev. 72'6", Rev. 0

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NCSP 03-36, "Concrete Removal," Rev. 0

NCSP 03-31, "Concrete Placement," Rev. 2

SV4-CC01-Z0-026, "Safety Related Mixing and Delivering Concrete," Rev. 6

SV4-CC01-Z0-027, "Safety Related Concrete Testing Services," Rev. 4

SV4-CC01-Z0-031, "Safety Related Placing Concrete and Reinforcing Steel," Rev. 7

NCSP 03-30, "Concrete Mixing and Delivery," Rev. 1

NCSP 03-31, "Concrete Placement," Rev. 2

CSI 3-31, "Concrete Batch Plant Operations," Rev. 4

Concrete Data:

CB&I Concrete/Grout Delivery Ticket # 39127, Pour # 2142, 09/16/2015

CB&I Concrete/Grout Delivery Ticket # 39131, Pour # 2142, 09/16/2015

CB&I Concrete/Grout Delivery Ticket # 39132, Pour # 2142, 09/16/2015

CB&I Concrete/Grout Delivery Ticket # 39139, Pour # 2142, 09/16/2015

CB&I Concrete/Grout Delivery Ticket # 39151, Pour # 2142, 09/16/2015

CB&I Concrete/Grout Delivery Ticket # 39198, Pour # 2142, 09/16/2015

CB&I Concrete/Grout Delivery Ticket # 39210, Pour # 2142, 09/16/2015

CB&I Concrete/Grout Delivery Ticket # 67551, Pour # 2142, 09/16/2015

CB&I Concrete/Grout Delivery Ticket # 67666, Pour # 2142, 09/16/2015

CB&I Concrete/Grout Delivery Ticket # 67715, Pour # 2142, 09/17/2015

CB&I Concrete/Grout Delivery Ticket # 67733, Pour # 2142, 09/17/2015

CB&I Concrete/Grout Delivery Ticket # 67746, Pour # 2142, 09/17/2015

CB&I Concrete/Grout Delivery Ticket # 67748, Pour # 2142, 09/17/2015

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C-112-15-10048, Pre-placement: Concrete

C-112-15-10144, Pre-placement: Concrete

C-112-15-10222, Pre-placement: Concrete

C-112-15-10256, Pre-placement: Concrete

C-112-15-10261, Pre-placement: Concrete

C-112-15-10307, Pre-placement: Concrete

SV4-1220-CR-954, "Auxiliary Building Area 5 Concrete Reinforcement Wall I Sections & Details EL 82'-6"," Rev. 4

SV4-1200-CR-954, "Auxiliary Building Area 5 Concrete Reinforcement Wall 1 Elevation," Rev. 6
 SV4-1200-CR-951, "Auxiliary Building Area 5 & 6 Concrete Reinforcement Wall 2 Elevation,"
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 SV4-1220-CR-951, "Auxiliary Building Area 5 Concrete Reinforcement Wall 2 Sections and
 Details EL 82'-6"," Rev. 4
 SV4-1200-CR-953, "Auxiliary Building Area 5 & 6 Concrete Reinforcement Wall 4 Elevation,"
 Rev. 5
 SV4-1220-CR-953, "Auxiliary Building Area 5 & 6 Concrete Reinforcement Wall 4 Sections and
 Details EL 82'-6"," Rev. 4,

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Vogtle Unit 4 COL, Appendix C, Table 3.3-1, "Definition of Wall Thicknesses for Nuclear Island
 Buildings, Turbine Building, and Annex Building"
 SV4-1220-CC-562, "Auxiliary Building Concrete Floor El 82'-6" Areas 5&6," Rev. 1
 SV4-1225-CC-502, "Auxiliary Building Concrete Floor El 82'-6" Areas 5," Rev. 1

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CMS-720-03-PL-00020-A, "CB&I Nuclear quality Assurance Program Description," revision 0;

QS 13.11, "Material, Equipment Storage," Revision 02.01, dated July 1, 2015

QS-14.02, "Inspection Report System," Revision 03.02, dated April 8, 2015

SNC's NDS-CA-VNP-013, "Nuclear Development Compliance Monitoring Program Surveillance
 and General Observation Program," Version 8.0, dated February 17, 2015

Inspection Plan No. F-Q445-010, "Material/Equipment Storage Inspection," Revision 2, Change
 1, dated October 2, 2014

Inspection Report and Surveillance Report:

IR No. Q445-010-15-0006, "Material /Equipment Storage Inspection," of storage location Q445,
 dated April 18, 2015, that indicates verification of temperature attribute

IR No. Q445-010-15-0003, "Material /Equipment Storage Inspection," of storage location Q445,
 dated February 25, 2015 indicates verification of temperature attribute

SNC Surveillance Report No. 457, "1st Quarter 2015 Storage of Equipment and Materials
 Classified as Requiring "A" level Storage per NQA-1, " dated March 2, 2015

SNC Surveillance Report No. 705, "2nd Quarter 2015 Storage of Equipment and Materials
 Classified as Requiring "B" level Storage per NQA-1, " dated March 31, 2015

SNC Surveillance Report No. 741, 2nd Quarter 2015 Storage of Equipment and Materials
 Classified as Requiring "A" level Storage per NQA-1," dated June 30, 2015

N&D

CB&I N&D Report No. SV0-CWS-GNR-000004 Rev. 0, for "Valves Leaking Fluids," for 3 78"
 SV4-CWS-PL-V001A, SV4-CWS-PL-V001B, and SV3-CWS-PL-V001C Flowserve butterfly
 valves were dispositioned as rework by vendor and use-as-is on 120" Valve SV4-CWS-PL-
 V002A on October 7, 2014, and closed on January 21, 2015

Calibration Certificate and Monitoring Log

Excelon PowerLabs Certificate of Calibration No. 0010852672 dated November 10, 2014 for CB&I temperature/ humidity recorder Serial No. V-U-0178-2 calibrated on November 10, 2014 due November 10, 2015 to PO No. 750661, reviewed by CB&I on Calibration Checklist No. V-U-0178-2 dated November 24, 2014;

Excelon PowerLabs Certificate of Calibration No. 0010852663 dated November 12, 2014 for CB&I temperature/ humidity data logger Serial No. V-U-0186, calibrated on November 10, 2014 due November 10, 2015 to PO No. 750661, reviewed by CB&I on Calibration Checklist No. V-U-0186, dated November 24, 2014;

EPCR Logs (Temperature/Humidity Monitoring Logs) V-U-0042, 0046, 0047, 0097, 0099, 0114, 0119, 0120, 0140, 0180, and V-U-0186 for the weeks of May24 through June 30.

CAR/Condition Report:

CAR 2015-1530, "Stainless Steel Flange stored in Contact with Carbon Steel," dated April 21, 2015

Condition Report No. 10102862, "High Humidity indication on Digital Equipment," dated July 30, 2015

Section 1P02Nonconformance & Disposition Reports

SV0-ER02-GNR-000003, "Nonconforming couplings," Rev. 0
 SV3-CA01-GNR-000003, "CA01-02 (NCR 14-277) QC Dimensional Assessment," Rev. 0
 SV3-CA01-GNR-000020, "CA03 Submodule 08 & 07 Bottom Edge Misalignment," Rev. 0
 SV3-CA01-GNR-000129, "CA01-10, Corner Joint Welded with 1/2" CJP," Rev. 0
 SV3-CA01-GNR-000211, "CA01-06 Unspecified Weld," Rev. 0
 SV3-CA01-GNR-000221, "CA01-06 Weld Length," Rev. 0
 SV3-CA01-GNR-000391, "CA01-04 Penetration Interference," Rev. 0
 SV3-CA01-GNR-000412, "CA01-04 and CA01-05 Seam Fit Up," Rev. 0
 SV3-CA01-GNR-000472, "CA01-04 Penetration Interference," Rev. 0
 SV3-CA01-GNR-000623, "SV3-CA01-38 Ledger Angle Welds," Rev. 0
 SV3-CA01-GNR-000628, "CA01-29 IR S540-001-14-0026 Disposition," Rev. 0
 SV3-CA01-GNR-000636, "CA01-14 IR S561-14-0453 Items V, W, X of of Tolerance," Rev. 0
 SV3-CA01-GNR-000638, CA01 Post Weld Survey in MAB," Rev. 0
 SV3-CA02-GNR-000002, "CA02 Slot Weld SWD-10A," Rev. 0
 SV3-CA02-GNR-000008, "CA02-01 Unsat. Structural IR," Rev. 0
 SV3-CA02-GNR-850009, "SV3-CA02-03 (NCR14-91) E&DCR was not completed," Rev. 0
 SV3-CA03-GNR-000012, "CA03 Submodule 08 & 09 Bottom Edge Misalignment," Rev. 0
 SV3-CA03-GNR-000019, "CA03-10 Deviation from Flatness," Rev. 0
 SV3-CA03-GNR-000036, "Unqualified Welds Performed on CA03 Floor Leak Chase," Rev. 0
 SV3-CC01-GNR-000164, "Wall 11 EL. A2 out of Plumb," Rev. 0
 SV3-CC01-GNR-000190, "Annex Mat Concrete Placed During Hold," Rev. 0
 SV3-CC01-GNR-000191, "Annex Area 1 & 2 Mat Concrete Test Failures," Rev. 0
 SV3-CC01-GNR-000192, "Abandoned Vibrator Head in Containment Concrete Placement," Rev. 0
 SV3-CC01-GNR-000193, "U3 CVBH 83'-0" Moving Concrete with Vibrator," Rev. 0
 SV3-CC01-GNR-000194, "Battery Room walls placement 18A do not meet ACI Tolerances," Rev. 0
 SV3-CC01-GNR-000195, "Battery Room Walls placement 11A do not meet ACI tolerances," Rev. 0
 SV3-CC01-GNR-000199, "Unit 3 NI Slab RM12205 El. 82'-6" Violating ACI Tolerance," Rev. 0

SV3-CC01-GNR-000241, "Curing Period Violation," Rev. 0
 SV3-CR01-GNR-000322, "Concrete Beam El. 82'-6" Area 2," Rev. 0
 SV3-ML05-GNR-000019, "11504-ML-P03 length discrepancy," Rev. 0
 SV3-ML05-GNR-000028, "11205-ML-P03 Weld Issues," Rev. 0
 SV3-PMS-GNR-000002, "Suspect counterfeit conduit and couplers," Rev. 0
 SV3-SFS-GNR-000021, "SV3-11504-ML-P03 - excessive necking," Rev. 0
 SV4-CA04-GNR-000002, "Alt Detail for CA04 Stiffeners," Rev. 0
 SV4-CA04-GNR-000003, "CA04 Detector Bolting Material," Rev. 0
 SV4-CA04-GNR-000004, "Unit 4 CA04 Pre-Weld Survey Data," Rev. 0
 SV4-CA04-GNR-000005, "CA04 Stiffeners OOT," Rev. 0
 SV4-CA04-GNR-000006, "CA04 -05 Fit up Issues," Rev. 0
 SV4-PMS-GNR-000002, "Suspect counterfeit conduit and couplers," Rev. 0
 VSG-ER01-GNR-000001, "Conduit Couplings," Rev. 0

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CMS-720-03-PL-00020-A, "CB&I Nuclear Quality Assurance Program Description," Rev. 0
 QS 15.01, "Nonconformance & Disposition Report," Rev. 05.02
 QS 15.03, "Risk Release of UNSAT/Nonconforming Material/Equipment," Rev. 2

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QS 16.05, "Corrective Action Program," Rev. 07.00
 QS 16.06, "Causal Analysis," Rev. 02.00

Specification

APP-1208-Z0-001, "Specification for the Fabrication and Field Erection of the SC Panels for the AP1000 Sheild Building," Revision1, dated June 31, 2014

Miscellaneous

Surveillance CMP-NI-2015-5-10789, "Unit 3 Nuclear Island - Concrete placement civil activities for floor slab placements # SP 5 A," 06/30/2015
 CB&I Quality Assurance Type "A" Inspection Report Number C114-001-15-0051, Vogtle / Unit SV3 / Location Auxiliary Building, 07/02/2015

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 2015-1530
 2015-1668
 2015-1744
 2015-2354
 2015-2497

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 10060070
 10060147
 10061732
 10061778
 10062337
 10066605
 10071326

10072800
10077522

WEC Corrective Action, Prevention and Learnings

100224197

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APP-1100-GEF-209, "Assessment of the Voids in Structural Module Walls Inside Containment due to Piping Penetrations," Revision 0

APP-1208-GEF-240, "Shield Building, SC Panels Fillet Weld Size Change to C3J Weldable Coupler," Revision 0

APP-1208-GEF-246, "Shield Building, Weld Electrode Specification Change," Revision 0

APP-1208-GEF-250, "Shield Building, Weld Electrode Specification Change," Revision 0

APP-1208-GEF-251, "Shield Building, SC Panels Fillet Weld Size Change EL. 100'-0" to EL. 113'-6," Revision 0

APP-CA01-GEF-491, "CA01-08 OLP Additions," Revision 0

APP-CA01-GEF-513, "CA01-05 OLP Additions," Revision 0

APP-CA01-GEF-850011, "CA01-06 OLP/Channel Weld Mod," Revision 0

APP-CA01-GEF-850028, "CA01 Leak Chase Plate Weld," Revision 0

APP-CA05-GEF-135, "E&DCR for CA05 Basemat Connection Modifications," Revision 0

APP-CA20-GEF-689, "CA20 Standard Weld Detail 45 Modification," Revision 0

APP-GW-GEF-1212, "E&DCR to Clarify Weld Jurisdictions on ML05 Drawing," Revision 0

APP-GW-GEF-1325, "Module Stud Bending Clarification," Revision 0

APP-VW01-GEF-007, "Inspection of Headed Anchor Surface Damage," Revision 0

SV0-CC01-GEF-000273, "Upper slump range for Mix C2," Revision 0

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APP-GW-GAP-147, "AP1000 Current Licensing Basis Review," Rev. 2

APP-GW-GAP-420, "Engineering and Design Coordination Report," Rev. 8

ITAAC INSPECTED

| No. | ITAAC No. | Design Commitment | Inspections, Tests, Analysis | Acceptance Criteria |
|-----|------------------|---|---|---|
| 93 | 2.2.01.03a | 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. |
| 189 | 2.2.03.08c.vi.01 | 8.c) The PXS provides RCS makeup, boration, and safety injection during design basis events. | vi) Inspections of each of the following tanks will be conducted: 1. CMTs | vi) The calculated volume of each of the following tanks is as follows: 1. CMTs ≥ 2487 ft ³ |
| 196 | 2.2.03.08c.xi | 8.c) The PXS provides RCS makeup, boration, and safety injection during design basis events. | xi) Inspection of the as-built CMT inlet diffuser will be conducted. | xi) The CMT inlet diffuser has a flow area ≥ 165 in ² . |
| 760 | 3.3.00.02a.i.a | 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.a) A report exists which reconciles deviations during construction and concludes that the as-built containment internal 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. |

| No. | ITAAC No. | Design Commitment | Inspections, Tests, Analysis | Acceptance Criteria |
|-----|----------------|---|---|--|
| 761 | 3.3.00.02a.i.b | 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. |
| 762 | 3.3.00.02a.i.c | 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.c) A report exists which reconciles deviations during construction and concludes that the as-built structures in the non-radiologically controlled area of the auxiliary building, 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. |
| 763 | 3.3.00.02a.i.d | 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.d) A report exists which reconciles deviations during construction and concludes that the as-built structures in the radiologically controlled area of the auxiliary building, 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. |

| No. | ITAAC No. | Design Commitment | Inspections, Tests, Analysis | Acceptance Criteria |
|-----|-----------------|---|--|--|
| 766 | 3.3.00.02a.ii.c | 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. | ii) An inspection of the as-built concrete thickness will be performed. | ii.c) A report exists that concludes that as-built concrete thicknesses of the non-radiologically controlled area of the auxiliary building sections conform to the building sections defined in Table 3.3-1. |
| 767 | 3.3.00.02a.ii.d | 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. | ii) An inspection of the as-built concrete thickness will be performed. | ii.d) A report exists that concludes that the as-built concrete thicknesses of the radiologically controlled area of the auxiliary building sections conform to the building sections defined in Table 3.3-1. |
| 777 | 3.3.00.03a | 3. Walls and floors of the nuclear island structures as defined on Table 3.3-1 except for designed openings or penetrations provide shielding during normal operations. | Inspection of the as-built nuclear island structures wall and floor thicknesses will be performed. | a) A report exists and concludes that the shield walls and floors of the containment internal structures as defined in Table 3.3-1, except for designed openings or penetrations, are consistent with the concrete wall thicknesses provided in Table 3.3-1. |

LIST OF ACRONYMS

| | |
|-------|---|
| ACI | American Concrete Institute |
| ADAMS | Agencywide Documents Access & Management System |
| ASME | American Society of Mechanical Engineers |
| ASTM | American Society for Testing and Materials |
| CAR | Corrective Action Report |
| CB&I | Chicago Bridge and Iron |
| CFR | Code of Federal Regulations |
| CMT | Core Makeup Tanks |
| CMTR | Certified Material Test Report |
| CSI | Construction Site Instruction |
| CVBH | Containment Vessel Bottom Head |
| CVS | Chemical and Volume Control System |
| E&DCR | Engineering and Design Coordination Report |
| EPC | Engineering, Procurement, and Construction |
| IP | Inspection Procedures |
| IR | Inspection Report |
| ITAAC | Inspections, Tests, Analysis, and Acceptance Criteria |
| MAB | Modular Assembly Building |
| N&D | Nonconformance and Disposition Report |
| NCV | Non-Cited Violation NDE |
| NDE | Nondestructive Examination |
| NI | Nuclear Island |
| NRC | Nuclear Regulatory Commission |
| PARS | Publicly Available Records |
| PQR | Procedure Qualification Record |
| QA | Quality Assurance |
| QAD | Quality Assurance Directive |
| QC | Quality Control |
| QS | Quality Standard |
| SC | Steel Concrete Composite |
| SCC | Self-Consolidating Concrete |
| SNC | Southern Nuclear Operating Company |
| SSC | Structures, Systems, and Components |
| UFSAR | Updated Final Safety Analysis Report |
| VEGP | Vogtle Electric Generating Plant |
| WEC | Westinghouse Electric Company |