



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

March 12, 2013

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

**SUBJECT: SOUTHERN NUCLEAR OPERATING COMPANY VOGTLE ELECTRIC  
GENERATING PLANT UNITS 3 AND 4 - NRC INSPECTION OF CORRECTIVE  
ACTION PROGRAM, REPORTS 05200025/2013-007, 05200026/2013-007 AND  
NOTICE OF VIOLATION**

Dear Mr. Ivey:

On February 1, 2013, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Vogtle Electric Generating Plant Units 3 and 4. The enclosed inspection report documents the inspection results, which were discussed on February 1, 2013, with Mr. David Jones, Vice President Technical and Compliance, and other members of your staff.

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

Based on the results of this inspection, the NRC has determined that a Severity Level IV violation of NRC requirements occurred. The violation was evaluated in accordance with the NRC Enforcement Policy, Section 2.3 and the temporary enforcement guidance outlined in enforcement guidance memorandum number EGM-11-006. The current Enforcement Policy is included on the NRC's Web site at <http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>.

The violation is cited in the enclosed Notice of Violation (Notice) and the circumstances surrounding it are described in detail in the subject inspection report. As described in Section 2.3, "Disposition of Violations," of the NRC Enforcement Policy, the violations are cited in the Notice, because for reactor facilities under construction in accordance with 10 CFR Part 52, the site corrective action program must have been demonstrated to be adequate prior to the issuance of non-cited violations for NRC identified violations. As of this inspection, the NRC had not yet made this determination for Vogtle Electric Generating Plant Units 3 and 4.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. If you have additional information that you believe the NRC should consider, you may provide it in your response to the Notice. The NRC review of your response to the Notice will also determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.”

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure(s), and your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy or proprietary, information so that it can be made available to the Public without redaction.

Sincerely,

**/RA by George Khouri For/**

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

Docket Nos. 05200025, 05200026  
License No. NPF-91 (Unit 3), NPF-92 (Unit 4)

Enclosures:

1. Notice of Violation
2. Inspection Report 05200025/2013007 and  
05200026/2013007 w/Attachment:  
Supplemental Information

cc w/encl: (See next page)

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Sincerely,

**/RA by George Khouri For/**

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

Docket Nos. 05200025, 05200026  
 License No. NPF-91 (Unit 3), NPF-92 (Unit 4)

Enclosures:

1. Notice of Violation
2. Inspection Report 05200025/2013007 and 05200026/2013007 w/Attachment: Supplemental Information

cc w/encl: (See next page)

PUBLICLY AVAILABLE     
  NON-PUBLICLY AVAILABLE     
  SENSITIVE     
  NON-SENSITIVE  
 ADAMS:  Yes     
 ACCESSION NUMBER: ML13072A805     
  SUNSI REVIEW COMPLETE  FORM 665 ATTACHED

OFFICE	RII: DCP	RII: DCP	RII: DCP	RII: DCP	RII: DCP	RII: DCP	RII: DCP
SIGNATURE	CTJ1 for JBB1	CTJ1 for BJD4	CTJ1 for CKH1	CTJ1 for MM	CTJ1 for DWP2	CTJ1	GJK3
NAME	Joe Brady	Bradley Davis	Chad Huffman	Mike Magee	D. Piccirillo	Carl Jones	George Khouri
DATE	3/ /2013	3/ /2013	3/ /2013	3/ /2013	3/ /2013	3/ /2013	3/ /2013
E-MAIL COPY?	YES	YES	YES	YES	YES	YES	YES

OFFICIAL RECORD COPY DOCUMENT NAME: G:\CCI\DCP\CPB4\PROJECT VOGTLE\INSPECTION REPORTS\INTEGRATED INSPECTION REPORTS\2013(1) IR 2013-007 COVER LETTER (VOGTLE CAP) (2).DOCX

## NOTICE OF VIOLATION

Southern Nuclear Operating Company  
Vogtle Electric Generating Plant Units 3 and 4

Docket Nos: 052-00025, 052-00026  
License Nos: NPF-91, NPF-92

During an NRC inspection conducted on January 28 through February 1, 2013, one violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

Regulations under 10 CFR 50.55(e)(3) require, in part, the licensee to adopt appropriate procedures to evaluate deviations and failures to comply and to identify:

(iii)(C) ... any significant breakdown in any portion of the quality assurance program conducted under the requirements of Appendix B to 10 CFR Part 50 which could have produced a defect in a basic component. These breakdowns in the quality assurance program are reportable whether or not the breakdown actually resulted in a defect in a design approved and released for construction, installation, or manufacture.

In addition, appropriate procedures must be adopted to:

(ii) Ensure that if an evaluation of an identified deviation or failure to comply potentially associated with a substantial safety hazard cannot be completed within 60 days from discovery of the deviation or failure to comply, an interim report is prepared and submitted to the Commission through a director or responsible officer or designated person as discussed in paragraph (e)(4)(v) of this section.

Contrary to the above, the adoption of the procedure for evaluating deviations and failures to comply was inadequate as follows:

- 1) From November 21, 2012, the licensee did not adopt adequate procedures to evaluate whether a significant breakdown in any portion of the quality assurance program conducted under the requirements of Appendix B could have produced a defect in a basic component. As evidenced by the evaluation in Southern Nuclear Company condition report 542665, the evaluations performed by the licensee implemented invalid criteria; specifically, 1) that a breakdown in source inspections alone could not produce a defect, and 2) that a breakdown in multiple areas of the quality assurance program was required for the condition to qualify as significant.
- 2) From March 9, 2012, the licensee failed to ensure procedures adopted by their agent for engineering, procurement, and construction were sufficient to identify significant breakdowns in any portion of the quality assurance program conducted under the requirements of Appendix B which could have produced a defect in a basic component. As evidenced by the following examples, evaluations prepared by Westinghouse Electric Corporation implemented invalid criteria; specifically, 1) procedure WEC 21.0 for evaluating reportability of breakdowns of quality assurance programs required a reportable breakdown to be manifested by degradation of multiple elements of the quality program; and 2) the evaluation in issue report 12-062-M069 stated that significant breakdowns in quality assurance programs were not reportable unless an actual defect had resulted from the condition.



- 3) From March 9, 2012, the licensee did not adopt adequate procedures to ensure that if an evaluation of an identified deviation or failure to comply potentially associated with a substantial safety hazard cannot be completed within 60 days from discovery of the deviation or failure to comply, an interim report is prepared and submitted to the Commission through a director or responsible officer or designated person. The evaluation of Westinghouse issue report 12-062-M069 was conducted for a period of more than 180 days from discovery of the deviation and failure to comply without submittal of an interim report.

This is a Severity Level IV Violation.

Pursuant to the provisions of 10 CFR 2.201, Southern Nuclear Operating Company is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001 with a copy to the Regional Administrator, Region II, and a copy to the NRC Resident Inspector at the facility that is the subject of this Notice, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation: (1) the reason for the violation, or, if contested, the basis for disputing the violation or severity level, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken, and (4) the date when full compliance will be achieved. Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as to why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

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

Because your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>, to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that delete such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

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

Dated this 12th day of March, 2013

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

Docket Numbers: 05200025  
05200026

License Numbers: NPF-91  
NPF-92

Report Numbers: 05200025/2013007  
05200026/2013007

Licensee: Southern Nuclear Operating Company

Facility: Vogtle Electric Generating Plant Unit 3  
Vogtle Electric Generating Plant Unit 4

Location: Waynesboro, GA

Inspection Dates: January 28, 2013 through February 1, 2013

Inspectors: J. Brady, Senior Construction Inspector, DCI  
B. Davis, Senior Construction Inspector, DCI  
C. Huffman, Resident Inspector, DCP  
C. Jones, Senior Construction Inspector, DCI  
M. Magee, Resident Inspector, DCP  
D. Piccirillo, Senior Project Inspector, DCP

Approved by: Michael Ernstes, Chief  
Division of Construction Projects  
Branch 4

## SUMMARY OF FINDINGS

Inspection Report 05200025/2013007, 05200026/2013007; 01/28/2013 through 02/01/2013; Vogtle Electric Generating Plant Unit 3, Vogtle Electric Generating Plant Unit 4, Quality Assurance Program Implementation During Construction and Pre-Construction Activities.

This report covers an announced annual program inspection by regional and resident inspectors. One violation was identified consistent with Nuclear Regulatory Commission (NRC) Enforcement Policy, Sections 6.5 and 6.9. The significance of the finding is indicated by the severity level as defined in the enforcement policy. When applicable, construction cross cutting aspects are determined using IMC 0613P, "Power Reactor Construction Inspection Reports - Pilot." The NRC's program for overseeing the construction of commercial nuclear power reactors is described in IMC 2506, "Construction Reactor Oversight Process General Guidance and Basis Document."

### A. NRC-Identified and Self Revealed Findings

#### Cornerstone: (None)

- (Severity Level IV) Inspectors identified a cited violation (VIO) of 10 CFR 50.55(e)(3) with three examples for the licensee's failure to adopt adequate procedures to evaluate, identify, and to provide interim status reports to NRC of evaluations for significant breakdowns in quality assurance programs which could have produced a defect in a basic component. The licensee issued condition report 582729 to address the indeterminate status of the identified evaluations and to determine necessary corrective actions.

This performance deficiency had greater than minor safety significance based on the following: In the cases of issue report 12-062-M069 and condition report 542665, the violation was greater than minor because it represented a substantive failure to implement an adequate program that if left uncorrected could have resulted in unreported defects and/or failures to comply. This item was similar to example 6.5.d.5 in the NRC Enforcement Policy. In the case of issue report 12-062-M069, the violation was similar to example 6.9.d.12 in the NRC Enforcement Policy, which describes a failure to make an interim report of an evaluation of defects and failures to comply. The finding was evaluated under the traditional enforcement process as outlined in IMC 613P, Section 09. This finding was determined to be a Severity Level IV violation because the failures to adopt adequate procedures did not result in an unreported defect or substantial hazard pursuant to 10 CFR 50.55(e)(3)(iii)(C). Violations evaluated using the traditional enforcement process are not assigned a construction cross-cutting aspect. (Section 1P01.1.i)

### B. Licensee-Identified Violations

No findings were identified.

## REPORT DETAILS

### 1. CONSTRUCTION REACTOR SAFETY

#### Cornerstones: Design/Engineering, Construction/Installation

#### 1P01 Corrective Action Program Annual Assessment (35007)

##### .1 Assessment Of The Corrective Action Program Effectiveness

##### a. Inspection Scope

The inspectors reviewed the licensee's corrective action program to assess whether the licensee effectively implemented their 10 CFR Part 50, Appendix B approved quality assurance plan as required by 10 CFR Part 50.55. The licensee, Southern Nuclear Operating Company (SNC), delegated responsibility for implementing elements of the corrective action program to an engineering, procurement, and construction (EPC) consortium consisting of suppliers Chicago Bridge and Iron (CB&I – formerly Shaw) and Westinghouse Electric Corporation (WEC). The delegation was permitted by the licensee's quality assurance plan; however, the plan also stated that the licensee maintained responsibility for the effectiveness of corrective action measures. Consequently, the inspection scope included a review of programs established by both the licensee and the EPC consortium.

##### *Effectiveness of Problem Identification*

Samples of corrective action program procedures, documents and records initiated or changed since the last NRC corrective action program inspection in March 2012 were reviewed to determine whether the licensee and EPC consortium were identifying conditions adverse to quality at proper thresholds and entering them into their respective corrective action programs. The inspection scope included an assessment of the implementation effectiveness of the integrated corrective action programs, including the handoffs of corrective action program tasks between the licensee and the members of the EPC consortium.

The inspection scope included a review of a sample of CB&I quality inspection reports and nonconformance and disposition reports to determine whether items associated with unsatisfactory quality inspection results met the appropriate threshold for screening as conditions adverse to quality. Specifically, the review of these reports was performed to determine whether they were completed in accordance with applicable procedures and whether discrepant items received:

- the appropriate disposition;
- a nonconformance and disposition report when a disposition of use-as-is or repair was required; and
- the appropriate screening for entry into the corrective action program.

Inspection samples included reviews of applicable results documented in the previous 12 months of routine baseline inspection reports to assess the ongoing effectiveness of the corrective action program. Reports reviewed included the following:

- NRC Integrated Inspection Reports 05200025/2012-005 and 05200026/2012-005, dated January 30, 2013 (ML13030A390);
- NRC Integrated Inspection Reports 05200025/2012-004 and 05200026/2012-004, dated November 14, 2012 (ML12319A458), and;
- NRC Integrated Inspection Reports 05200025/2012-003 and 05200026/2012-003, dated August 7, 2012 (ML12220A476).

#### *Prioritization and Evaluation of Issues*

The inspectors examined selected samples of corrective action program entries made by the licensee and the EPC consortium to determine whether their evaluations adequately considered the risk/safety significance, consequence of malfunctions or failures, complexity of design and fabrication, needs for special controls or surveillance over activities, the degree to which functional compliance could be demonstrated by inspection or test, the quality history and degree of standardization of items, and the difficulty of repair or replacement.

The inspection scope included observations of routine initial screening meetings conducted by the licensee and CB&I for determining significance, priority, and responsibilities for evaluation and corrective actions. The inspectors observed whether the meeting attendees focused on assuring corrective action reports contained adequate descriptions, proper classifications, assignments of responsible organization, assignments of responsible review manager, and assignment of appropriate levels of causal evaluations. The inspectors observed in the cases where identified items were the responsibility of CB&I corporate, such as the need for corporate procedure changes, the items were referred to the corporate screening committee for classification, assignment of responsible organization, cause evaluation, and identification of corrective actions.

The inspectors also observed meetings conducted by a corrective action review board, a screening committee for the integrated corrective action program, and an integrated corrective action program management review committee. The inspectors observed these meetings to determine if conditions adverse to quality were given the appropriate level of attention, assigned appropriate actions, and reviewed in a timely manner. The training records for all personnel attending these meetings were reviewed by the inspectors to confirm that program requirements and management expectations had been adequately communicated.

#### *Effectiveness of Corrective Actions*

The inspectors reviewed the selected samples of corrective action program entries to determine for the ones with completed corrective actions, whether the actions corrected the identified problem, and whether actions to correct identified conditions were dispositioned on a timely basis. Actions implemented for significant conditions adverse to quality were reviewed to determine whether actions were designed to prevent recurrence.

#### *Trending*

The inspectors evaluated the use of performance metrics and trending to determine the adequacy of management oversight of corrective action program activities. The scope of review included an evaluation of the licensee's compliance to Southern Nuclear

Operating Company's Nuclear Development Quality Assurance Manual Section 16, related to the identification, documentation, resolution, and reporting of adverse trends.

The inspection scope included a review of the 2012 third quarter Quarterly Aggregate Trending Report issued by the licensee, CB&I, and WEC. This report was addressed to the integrated corrective action program corrective action review board which is chaired by senior management from the licensee and consortium members. The presentation of this report to the meeting of the integrated corrective action program corrective action review board was observed by the inspectors to determine if trends were accurately captured between the consortium and consideration was given to repetitive issues for elevated management review to ensure adequate and timely corrective actions.

Documents and records reviewed for this assessment are listed in the attachment.

b. Assessment

(1) Overall Assessment

The inspectors' review of a sample of corrective action program activities by Southern Nuclear Operating Company and the engineering, procurement, and construction consortium determined that each of the programs provided methods for prioritizing issues and developing technical evaluations of issues. Overall, the licensee was adequately identifying issues at an appropriate threshold, prioritizing and evaluating those issues, and correcting the issues.

(2) Effectiveness of Problem Identification

The inspectors determined that, in general, conditions adverse to quality, including significant conditions adverse to quality were identified and corrected on a timely basis at the Vogtle 3 & 4 construction project.

Conditions identified in licensee condition reports, CB&I corrective action requests, and WEC issue reports were identified, evaluated, and dispositioned in accordance with the respective implementing procedures and applicable corrective action program performance attributes. Thresholds for identifying conditions adverse to quality were adequate to assure that adverse conditions were evaluated and corrected. Adverse conditions identified under other programs outside of the corrective action program, including quality assurance audits, CB&I nonconformance and disposition reports, and CB&I quality inspection reports were screened to determine whether the conditions were adverse to quality and were entered into the respective corrective action programs as required.

Baseline inspections of corrective action program implementation conducted during the previous 12 months identified that the licensee, EPC consortium, and subcontractors had adequately documented conditions adverse to quality, including deficiencies with equipment or activities, issues from quality assurance audits, and factors that contributed to adverse trends. In addition, the baseline inspections determined that identified conditions were appropriately screened, evaluated, and reported as required by 10 CFR 50.55(e) and 10 CFR Part 21.

### Findings

No findings were identified.

#### (3) Effectiveness of Prioritization and Evaluation of Issues

The inspectors' review of a sample of corrective action program entries by the licensee and the EPC consortium determined that in general, each of the programs implemented adequate methods for prioritizing issues and developing technical evaluations of issues. Significant conditions adverse to quality were identified, causes were determined, and corrective actions were taken to prevent recurrence. The reviews of significant conditions adverse to quality also addressed the extent of conditions, extent of cause, generic implications, and previous occurrences. Reporting was provided to appropriate levels of management.

In general, the cause evaluations for significant conditions adverse to quality were adequately thorough to determine the causes and to identify the appropriate corrective actions. In cases where formal root cause analyses were conducted, the corporate organization was involved to provide an independent perspective for the site line organization. A number of the corrective action reports reviewed by the inspectors addressed program issues from the 2012 NRC inspection of the corrective action program. The inspectors determined that corrective actions from these corrective action reports resulted in an overall improvement in the implementation of the corrective action program over the last year.

CB&I issued corrective action request 2013-015 to address an inspection assessment that a substantial number of condition reports documented incorrect rationales for determining applicability to Inspection, Tests, Analyses, and Acceptance Criteria (ITAAC), and to reportability under 10 CFR 50.55(e). However, the inspectors determined that, except for the violation cited below, the identified evaluations did not involve failures to comply with applicable requirements.

### Findings

#### .i Failure to Adopt Adequate Procedure for Evaluations Required by 10 CFR 50.55(e)(3)

Introduction: The inspectors identified a severity level IV cited violation (VIO) with three examples for the licensee's failure to adopt adequate procedures to evaluate, identify, and to provide interim status reports to NRC of evaluations for significant breakdowns in quality assurance programs which could have produced a defect in a basic component. The applicable requirements are contained in 10 CFR 50.55(e)(3).

#### Description:

1. During the review of corrective action program condition reports prepared by the licensee, the inspectors determined that condition report 542665 had not been adequately evaluated to determine whether a breakdown in a quality assurance program had the potential to result in a substantial safety hazard as required by 10 CFR 50.55(e)(3).

On November 21, 2012, condition report 542665 documented an adverse trend in

source inspections at Shaw Modular Solutions (SMS) exemplified by 37 condition reports generated on SMS hardware between April 19, 2012 and November 11, 2012. The evaluation performed by the licensee stated "Shaw Nuclear's source inspection process for meeting Criteria VII puts the responsibility of technical quality control on embedded source inspectors at the SMS facility in Lake Charles, LA. Once a sub-module is shipped there is no formal plan or procedure requiring onsite QC inspectors to verify sub-modules meet technical requirements. The implementation of Shaw's Source Inspection process at SMS has not and does not meet Criteria VII requirements as sub-modules and their associated document packages delivered to the site continue to be in deficient conditions per design specifications, design drawings, NQA-1 1994, AWS D1.1, ACI-349, and/or UFSAR."

The licensee initiated an evaluation to determine whether the condition was a significant breakdown in the quality assurance program for control of purchased material, equipment, and services as implemented by CB&I. On December 18, 2012, the licensee's evaluation concluded that the condition would not result in a substantial safety hazard because; 1) source inspection activities could not produce a defect and 2) the potential quality assurance breakdown did not meet the criteria for a "significant breakdown" because the deficiency identified pertained to only one quality assurance activity and not multiple activities.

The inspectors determined that the basis for the licensee's determination that source inspection activities could not produce a defect was not valid. As prescribed by 10 CFR Part 50, Appendix B, Criterion VII, inspections conducted at the contractor source are necessary to assure that purchased material, equipment, and services, whether purchased directly or through contractors and subcontractors, conform to the procurement documents. The NRC inspectors determined that the quality inspection process was necessary in part, to assure that critical characteristics of products received and placed into the licensee's Appendix B inventory were free from deviations and failures to comply. As quoted from condition report 542665, once a sub-module was shipped there was no further quality inspection to verify sub-modules met technical requirements. In other words, the source inspections were the final point of control to prevent the introduction of associated defects into the plant configuration.

In addition, the inspectors determined that the licensee's criterion that defined significant breakdown as a breakdown in "multiple QA activities" did not comply with the regulation. In contrast, 10 CFR 50.55(e)(3)(iii)(C) stated that a condition may be reportable if a significant breakdown occurred in any portion of the quality assurance program.

The inspectors' review of licensee procedure ND-LI-001, "10 CFR Part 21 and 10 CFR 50.55(e) Evaluating and Reporting of Defects and Noncompliance for Nuclear Development," Version 8.0, determined that the procedure did not provide specific criteria to determine when identified conditions represented significant breakdowns in any portion of a quality assurance program. In particular, the inspectors determined that the criteria cited in the licensee's evaluation of condition report 542665 were not contained in the procedure.



2. During the review of corrective action program issue reports prepared by WEC, the inspectors determined that issue report 12-062-M069 had not been adequately evaluated to determine whether a breakdown in a quality assurance program could have resulted in a substantial safety hazard as required by 10 CFR 50.55(e)(3).

Issue report 12-062-M069 identified multiple examples where design drawings and specifications had not incorporated applicable license basis requirements. The issue report identified that as a result, incorrect design features had been incorporated into configurations installed in the plant. The evaluation statement provided for the issue report stated that a negative trend had been identified with the lack of consistency between design documents and the licensing commitments for the Vogtle 3 & 4 new plant construction. On November 1, 2012, WEC's evaluation of the condition under 10 CFR 50.55(e) stated, in part, that the condition did not meet the specified criteria for a "significant breakdown" in a quality assurance program because no defect as defined under Part 21 had been identified.

The inspectors determined that the criterion used to determine whether the condition had the potential to result in a substantial safety hazard did not comply with the applicable regulation under 10 CFR 50.55(e), which stated reportability was not contingent upon whether or not the breakdown actually resulted in a defect in a design approved and released for construction, installation, or manufacture.

In addition, the inspectors' review of Westinghouse procedure WEC 21.0, "Identification and Reporting of Conditions Adverse to Nuclear Safety," revision 7.1, determined that the procedure contained guidance for determining reportability that also could lead to an incorrect result. Specifically, Section 4.16, screening question number 3, stated "Is the condition due to a failure in the implementation of the Quality Program that resulted from a degradation of multiple elements of the quality program such that there is a loss of control over the activities?" The procedure indicated that the answer to the question must be "yes" in order for a breakdown in a quality assurance program to be reportable.

The inspectors determined that the procedure guidance did not comply with the applicable rule under 10 CFR 50.55(e) which stated that reportability was required for a significant breakdown in any portion of a quality assurance program, as opposed to the "multiple elements" specified in the WEC procedure.

3. During the review of issue report 12-062-M069 prepared by WEC, the inspectors determined that the evaluation of the adverse condition required more than 180 days after discovery to complete. The action to perform the evaluation was assigned on or before March 9, 2012, and was not completed until November 1, 2012. No interim report was submitted within each 60 days in accordance with the regulation.

The inspectors' review of Westinghouse procedure WEC 21.0 determined that the procedure did not identify a requirement to ensure interim reports were submitted if evaluations of reportability under 50.55(e) could not be completed within 60 days.

The inspectors determined that, for these three instances, the reportability screening procedures as adopted by the licensee applied excessively high thresholds for determining whether significant breakdowns in quality assurance programs could have produced defects in basic components. In addition, the procedures did not assure that

interim reports were provided to the NRC when evaluations could not be completed within 60 days. The failures to ensure correct determinations of significant breakdowns in quality assurance programs and to report interim progress of evaluations had regulatory importance in that correct and complete reporting was necessary for the NRC to implement the regulatory process (e.g. evaluate existing regulatory positions or initiate substantial further inquiries).

Analysis: The inspectors determined that the failures to adopt adequate procedures for identifying significant breakdowns in quality assurance programs and for providing interim reports for extended evaluations in accordance with 10 CFR 50.55(e) was a performance deficiency. The failures were associated with impacting the regulatory process and were evaluated using the traditional enforcement examples provided in Enforcement Policy Sections 6.5 and 6.9.

The performance deficiency was determined to be more than minor because:

(1) In the cases of issue report 12-062-M069 and condition report 542665, this issue was greater than minor because it represented a substantive failure to implement an adequate program that if left uncorrected could have resulted in unreported defects and/or failures to comply. This item was similar to example 6.5.d.5 in the NRC Enforcement Policy.

(2) In the case of issue report 12-062-M069, the violation was similar to example 6.9.d.12 in the NRC Enforcement Policy, where a licensee fails to make an interim report of an evaluation of defects and failures to comply.

The violation was evaluated using the traditional enforcement process, and as such, is not assigned a construction cross-cutting aspect as defined in IMC 2519P, Appendix A. This finding was determined to be a Severity Level IV violation because the failures to adopt adequate procedures did not result in an unreported defect or substantial hazard pursuant to 10 CFR 50.55(e)(3)(iii)(C).

Enforcement: Regulations under 10 CFR 50.55(e)(3) require, in part, the licensee to adopt procedures to evaluate deviations and failures to comply and to identify:

(iii)(C) ... any significant breakdown in *any portion* of the quality assurance program conducted under the requirements of Appendix B which could have produced a defect in a basic component (emphasis added). These breakdowns in the quality assurance program are reportable whether or not the breakdown actually resulted in a defect in a design approved and released for construction, installation, or manufacture.

In addition, procedures must:

(ii) Ensure that if an evaluation of an identified deviation or failure to comply potentially associated with a substantial safety hazard cannot be completed within 60 days from discovery of the deviation or failure to comply, an interim report is prepared and submitted to the Commission through a director or responsible officer or designated person as discussed in paragraph (e)(4)(v) of this section.

Contrary to the above:

1. From November 21, 2012, the licensee did not adopt adequate procedures to evaluate whether a significant breakdown in any portion of the quality assurance program conducted under the requirements of Appendix B could have produced a defect in a basic component. For example, the evaluation provided for SNC condition report 542665 determined that a breakdown in quality control source acceptance inspections could not have produced a defect in a basic component. In addition, the evaluation determined that a reportable breakdown in a quality assurance program must be manifested by degradation of multiple elements of the quality program.
2. From March 9, 2012, the licensee failed to ensure procedures adopted by their agent for engineering, procurement, and construction were sufficient to identify significant breakdowns in any portion of the quality assurance program conducted under the requirements of Appendix B which could have produced a defect in a basic component. As evidenced by the following examples, evaluations prepared by WEC implemented invalid criteria; specifically, 1) procedure WEC 21.0 for evaluating reportability of breakdowns of quality assurance programs required a reportable breakdown to be manifested by degradation of multiple elements of the quality program; and 2) the evaluation in issue report 12-062-M069 stated that significant breakdowns in quality assurance programs were not reportable unless an actual defect had resulted from the condition.
3. From March 9, 2012, the licensee did not adopt adequate procedures to ensure that if an evaluation of an identified deviation or failure to comply potentially associated with a substantial safety hazard cannot be completed within 60 days from discovery of the deviation or failure to comply, an interim report is prepared and submitted to the Commission through a director or responsible officer or designated person. The evaluation of WEC issue report 12-062-M069 was conducted for a period of more than 180 days from discovery of the deviation and failure to comply without submittal of an interim report.

This is a violation of 10 CFR 50.55(e)(3) (VIO 05200025/2013007-01, 05200026/2013007-01, Failure to adopt adequate procedures to identify significant breakdowns in quality assurance programs). A Notice of Violation is attached.

The licensee issued condition report 582729 to address the indeterminate status of the identified evaluations and to determine necessary corrective actions.

(4) Effectiveness of Corrective Actions

The inspectors reviewed a sample of corrective action program entries and respective assigned corrective actions implemented by the licensee and the EPC consortium. The inspectors determined the assigned corrective actions for conditions adverse to quality were appropriate for the level of significance of the conditions, completed in a timely manner commensurate with the significance, and adequately tracked through cross organizational programs to ensure completion and effectiveness.

### Findings

No findings were identified.

## .2 Assessment of the Use of Construction Experience

### a. Inspection Scope

The inspectors reviewed construction experience programs to determine whether the licensee and its EPC contractors were systematically implementing the following:

- Relevant internal and external construction and operating experience items were collected;
- Collected experience items were evaluated;
- Relevant experience items were communicated to affected stakeholders; and
- Experience items were used to inform plant design and work processes.

The inspectors reviewed licensee construction experience screening committee meeting minutes to determine whether internal and external construction experience items were appropriately reviewed, screened, added to the licensee's database and assigned to the appropriate affected site stakeholder. The inspectors reviewed the licensee's construction experience database and corrective action program to determine whether experience items that were classified as applicable were stored in the construction experience database and entered into the corrective action program as specified by procedure. The inspectors reviewed the licensee construction experience database to determine whether the licensee appropriately added NRC related information such as 10 CFR Part 21 notifications and Generic Letters. The inspectors reviewed a sample of licensee corrective action items to determine whether issues associated with the construction experience program were properly identified and corrected.

Documents and records reviewed for this assessment are listed in the attachment.

### b. Assessment

The inspectors determined construction experience items were appropriately screened, stored in the licensee's database and evaluated for potential effects on plant systems and work being performed by the licensee and its vendors.

### Findings

No findings were identified.

## .3 Assessment of the Use of Self-Assessments and Audits

### a. Inspection Scope

The inspectors reviewed a sample of audits, self-assessments, and surveillance reports issued by the licensee, CB&I, and Westinghouse. The review was performed to determine whether the licensee and EPC consortium oversight of the corrective action program was sufficient to verify the health of the corrective program and to identify areas

for improvement as needed. The inspectors also compared the results of the audits and self-assessments to the results of the inspection to determine if there were any discrepancies between the results of the inspection of the conclusions of the licensee.

Documents and records reviewed for this assessment are listed in the attachment.

b. Assessment

The inspectors determined that the conduct of audits and self-assessments by the licensee and EPC consortium members was accomplished in accordance with appropriate procedures. The implementation of the oversight and independent verifications provided sufficient assessments of program effectiveness, including the handoffs of corrective action program tasks across organizational boundaries.

Findings

No findings were identified.

**4. OTHER ACTIVITIES**

4OA3 Followup of Licensee Reports and NOVs

.1 (Closed) VIO 05200025/2012006-01, Failure to Properly classify Conditions Adverse to Quality

The inspectors reviewed the licensee's corrective actions and commitments to correct violation number 05200025/2012006-01. The violation was associated with the licensee's failure to assure the effectiveness of corrective action measures implemented by CB&I and WEC, in that, adverse conditions identified in CB&I corrective action reports and WEC issue reports were not promptly identified as conditions adverse to quality. The violation identified four examples of failures to identify conditions adverse to quality, including CB&I corrective action reports 2011-0706, 2011-0728, and 2011-0776; and WEC issue report 12-079-M022. In addition, the violation identified that the process for screening WEC issue reports did not provide a record of whether issues categorized as "Fix/Trend" were treated as conditions adverse to quality.

The purpose of this inspection was to determine whether the licensee's corrective actions associated with the commitments made in their reply to the notice of violation dated July 19, 2012 and August 3, 2012, met and adequately corrected the issues identified by the aforementioned Notice.

The inspectors reviewed the associated corrective action documents to determine whether the licensee and its contractors identified the appropriate causes and corrective actions. Specifically, the inspector reviewed:

- Reasons for violation;
- Immediate corrective actions, and;
- Corrective actions taken, or to be taken.

The inspector verified the licensee, CB&I, and WEC had reclassified the examples cited in the NRC inspection report as conditions adverse to quality in the respective corrective

action programs. The inspectors reviewed the new CB&I corrective action reports and the WEC issue report that had been generated to evaluate and reclassify the conditions as adverse to quality. The inspector reviewed CB&I procedure QS 16.5, Revision 001, Corrective Action Program, and verified the procedure had been revised to include improved guidance to identify conditions adverse to quality. Associated personnel training reports were reviewed to verify appropriate individuals received training. The inspectors reviewed licensee technical evaluations 504372 and 504349 to verify that additional guidance for the identification of conditions adverse to quality had been provided to the appropriate personnel. The inspector also reviewed CB&I corrective action report 2012-0454, its associated apparent cause evaluation, and WEC issue report 12-111-M006 to verify that the EPC consortium had conducted a back-review of corrective action documents issued after January 1, 2012 to identify conditions which should have been classified as conditions adverse to quality.

Documents and records reviewed for this assessment are listed in the attachment.

The inspectors determined that the stated corrective actions implemented by the licensee adequately corrected violation 05200025/2012006-01. This item is closed.

.2 (Closed) VIO 05200025/2012006-02, Failure to Establish Measures to Control the Delegation of Corrective Action to Shaw

The inspectors reviewed the licensee's corrective actions and commitments to correct violation number 05200025/2012006-02. The violation was associated with the licensee's failure to assure that conditions adverse to quality identified in SNC corrective action report 191465, and condition reports 348648 and 400029, were promptly corrected. Specifically the licensee closed the aforementioned corrective action tracking documents following the delegation of evaluations and corrective actions to CB&I (formerly Shaw), who subsequently failed to enter the conditions adverse to quality into their corrective action program.

The purpose of this inspection was to determine whether the licensee's corrective actions associated with the commitments made in their reply to the notice of violation dated July 19, 2012 and August 3, 2012, met and adequately corrected the issues identified by the aforementioned Notice.

The inspectors reviewed the associated corrective action documents to determine whether the licensee and its contractors identified the appropriate causes and corrective actions. Specifically, the inspector reviewed:

- Reasons for violation;
- Immediate corrective actions, and;
- Corrective actions taken, or to be taken.

The inspector reviewed the apparent cause determination for SNC corrective action report 194738, and the apparent cause determinations for CB&I corrective action requests 2012-399 and 2012-401. The review was performed to determine whether the licensee and CB&I identified the appropriate causes and corrective actions. The inspector also reviewed the causal analysis in the apparent cause determination for SNC corrective action report 194738 related to SNC oversight of the integrated corrective action program for the Vogtle construction project. In addition, the inspectors reviewed

the procedure guidance for the integrated corrective action program and verified that it contained revised guidance on consortium acceptance of licensee condition reports and evaluations of potential conditions adverse to quality, including significant conditions adverse to quality.

Documents and records reviewed for this assessment are listed in the attachment.

The inspectors determined that the stated corrective actions implemented by the licensee adequately corrected violation 05200025/2012006-02. This item is closed.

#### 4OA6 Management Meetings

##### .1 Exit Meeting Summary

On February 1, 2013, the inspectors presented the inspection results to Mr. David Jones, along with other licensee and consortium staff members. The inspectors stated that no proprietary information would be included in the inspection report.

## KEY POINTS OF CONTACT

### Licensee and Contractor Personnel

P. Albuquerque, SNC CAP/Performance Improvement  
T. Amundson, SNC Licensing  
R. Berube, SNC Performance Improvement  
C. Castell, CB&I, Licensing  
M. Connor, CB&I CAP/Performance Improvement  
S. Courtney, CB&I CAP  
W. Fuller, SNC CAP/Performance Improvement  
N. Jackiw, SNC Licensing  
D. Jones, SNC VP Tech Compliance  
D. Logue, SNC Project Engineering  
B. Lowry, SNC Quality Assurance  
H. Mahan, SNC Licensing  
C. Morrow, SNC Licensing  
A. Reynolds, CB&I Quality Control  
A. Rickman, SNC Performance Improvement  
M. Sawyers, SNC Surveillance Construction  
P. Shaw, WEC Licensing  
B. Sullivan, SNC Surveillance Construction  
M. Tanner, SNC Quality Assurance  
J. Tull, WEC Quality Assurance  
R. Usher, CB&I Commitment Tracking & Performance Improvement  
J. Wahl, CB&I Lessons Learned  
L. Wetzel, SNC Licensing  
D. Whitehead, CB&I Quality Assurance/Quality Control  
M. Williams, SNC Licensing Engineer  
F. Willis, SNC Licensing

### LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

#### Opened

	VIO	Failure to adopt adequate procedures to identify significant breakdowns in quality assurance programs (Section 1P01.1.i)
05200026/2013007-01	VIO	Failure to adopt adequate procedures to identify significant breakdowns in quality assurance programs (Section 1P01.1.i)

#### Closed

05200025/2012006-01	VIO	Failure to Properly Classify Conditions Adverse to Quality (Section 4OA3.1)
05200025/2012006-02	VIO	Failure to establish measures to control the delegation of corrective action to Shaw (Section 4OA3.2)



Discussed

None

**LIST OF DOCUMENTS REVIEWED**Procedures:

- (CB&I) NCAP 2.1, "Trend Analysis," Rev. 000
- (CB&I) PP 4-2, 0405 Vogtle Corrective action Report screening committee Form (PP Form 8.1), Rev. G
- (CB&I) PP 4-2, "Vogtle CAR Screening Committee Project Procedure"
- (CB&I) QAD 14.1 "Inspection Report System Type "A" Inspection Report," Rev. B
- (CB&I) QS 3.1-V, Attachment 7.4, "Significance Review Checklist for IRs"
- (CB&I) QS 5.2, Attachment 3.5, "Significance Review Checklist for IRs and N&Ds"
- (CB&I) QS 10.1, "Inspection Planning and Reporting," Rev. 001
- (CB&I) QS 15.1, "Nonconformance and Disposition Report," Rev. 002
- (CB&I) QS 16.2, "Notifying Clients of Potentially Reportable Deficiencies Under 10CFR50.55(e)," Rev. D
- (CB&I) QS 16.3, "Identifying and Reporting Defects and Failures to Comply Under 10CFR21 and 10CFR50.55(e)," Rev 1 (Replaced prior versions of QS 16.2 & 16.3)
- (CB&I) QS 16.5, "Corrective Action Program," Rev. 001
- (CB&I) QA Form 15002 – Reportability Screening
- (CB&I) QA Form 16005 – Initiation/Review/Evaluation Form (10CFR21/10CFR50.55(e))
- (CB&I) QA Form 16001 – ITAAC Evaluation Form
- (CB&I) Vogtle Dashboard sheet for CAP
- (SNC) ND-AD-002, "Nuclear Development Corrective Action Program," Version 16.0
- (SNC) ND-AD-002-F02, "Event Codes, Condition Report Types, and Action Item Types," Version 6.0
- (SNC) ND-AD-002-F13, "Severity Level Descriptions, Criteria, and Examples," Version 3.0
- (SNC) ND-AD-002-F14, "Determination of Conditions Adverse to Quality (CAQ) and Significant Conditions Adverse to Quality (SCAQ)," Version 3.0
- (SNC) ND-AD-002-F22, "Creating a Technical Evaluation (TE) from a Condition Report (CR)," Version 1.0
- (SNC) ND-AD-002-F23, "Creating a Corrective Action Report (CAR) from a Condition Report (CR)," Version 1.0
- (SNC) ND-AD-003, "Nuclear Development Self-Assessment Procedure," Version 2.0
- (SNC) ND-AD-VNP-001, "Interface of Corrective Action Process," Version 2.0
- (SNC) ND-LI-001, "10 CFR Part 21 and 10 CFR 50.55(e) Evaluating and Reporting of Defects and Noncompliance for Nuclear Development," Version 8.0
- (SNC) ND-QA-003, "Quality Assurance Surveillances," Version 6.0
- (WEC) 16.2, "Westinghouse Corrective Action Process," Rev. 4.1
- (WEC) 21.0, "Identification and Reporting of Conditions Adverse to Nuclear Safety," revision 7.1

Audits, Assessments and Surveillances:

- (CB&I) IP F-S511-01, "Mechanical Rebar Splices: Threaded Lenton Coupler Splices/Weldable Couplers," Rev. 4
- (CB&I) IP F-S511-02, "Mechanical Rebar Splices: Threaded Lenton Terminator," Rev. 2
- (CB&I) IP F-S510, "Cadwelding: Exothermic Reinforcing Steel Splicing," Rev. 1
- (CB&I) IP F-C112-02, "Pre-placement: Nuclear Island Concrete," Rev. 6

- (CB&I) S-132175-2012-037, "Corrective Action Program Surveillance," dated 9/27/2012  
 (SNC) SNC-ND-2012.05-SHAW-SITE-QA, "ND QA Audit Checklist"  
 (SNC) NDQA-2012-S07, Inspection Report  
 (SNC) NDQA-2012-S36, Surveillance Report  
 (SNC) NDQA-2012-S61, Surveillance Report  
 (SNC) NDQA-2012-S73, Surveillance Report  
 (SNC) NDQA-2012-S76, Surveillance Report  
 (SNC) NDQA-2012.01-CAP, 3/13/2012, "Corrective Action Program/Integrated Corrective Action Program (CAP/ICAP) Focused Self-Assessment"  
 (SNC) NDQA-2012.01-CAP, "Nuclear Development Quality Assurance (NDQA) Audit of Corrective Action Program (CAP)," dated 3/2/2012  
 (SNC) SNC-ND-2012.03-WEC-SITE-QA, "Southern Nuclear Operating Company Nuclear Development Quality Assurance Audit Report of Westinghouse Electric Company," dated 5/21/2012  
 (SNC) SNC-ND-2012.09-LSA-SHAW-Corporate, "Southern Nuclear Operating Company Nuclear Development Quality Assurance Audit Report of Shaw Nuclear Services," dated 10/17/2012  
 (SNC) SNC-ND-2012.05-SHAW-SITE-QA, "Southern Nuclear Operating Company Nuclear Development Quality Assurance Audit Report of Shaw Nuclear Services," dated 7/3/2012  
 (WEC) WEC-12-58, "Westinghouse Internal Audit – Vogtle Site," dated 10/28/2012

SNC Condition Reports, Corrective Action Reports, and Technical Evaluations:

- CAR 194738, "NRC Team identified 5 examples where CAP entries were designated Non-CAQ's instead of CAQ's," dated 04/19/2012; including Apparent Cause Determination Report, Version 1  
 CAR 195621, "SNC oversight of Shaw source inspection process," dated 8/8/2012; including Apparent Cause Determination Report  
 Root Cause Evaluation for CAR 193929, "Nuclear Development Corrective Action Program"  
 CR 339491, "Potential adverse trend concerning the breakdown of internal processes"  
 CR 348648, "Continuing potential adverse trend concerning the breakdown of Shaw's internal process"  
 CR 394799, "Potential Adverse Trend – Failure to follow procedure"  
 CR 400029, "Repetitive Failure to Follow Procedures," dated 01/30/2012  
 CR 407981, "ICAP FSA trending," dated 2/15/2012  
 CR 407973, "ICAP FSA performance indicators," dated 2/15/2012  
 CR 408420, "Failure to implement portions of CA program," dated 2/15/2012  
 CR 441941, "NRC team identified 5 examples where CAP entries were designated Non-CAQ's instead of CAQ's," dated 04/19/2012  
 CR 442272, "Failure to oversee WEC design process," dated 4/20/2012  
 CR 442273, "Failure to seek NRC approval," dated 4/20/2012  
 CR 444088, "Approved change without license amendment," dated 4/24/2012  
 CR 483604, "NRC has challenged SNC oversight of the Shaw Source inspection process," dated 7/12/2012  
 CR 495055, "NOV issued in 5/17/2012 inspection associated with Cross Cutting Component A.1(a), Decision Making," dated 08/03/2012  
 CR 497359, "NRC has challenged SNC oversight of the Shaw Source inspection process," dated 08/08/2012  
 CR 517636, "Shear reinforcement for sump and elevator pits," dated 9/14/2012  
 CR 520736, "Corrective action closed without sufficient evidence," dated 9/20/2012

CR 520750, "Action item closed without sufficient evidence," dated 9/20/2012  
 CR 520756, "Causal Evaluation shortfalls not captured," dated 9/20/2012  
 CR 520844, "Concerns with Shaw CAR 2012-0274," dated 9/20/2012  
 CR 532772, "Sump and Elevator pits design challenged at Summer," dated 10/11/2012  
 CR 540941, "NRC design control URI at VC Summer," dated 10/29/2012  
 CR 542665, "Inadequate Shaw source inspections at SMS," dated 11/1/2012  
 CR 544092, "FNC T Headed Reinforcement," dated 11/05/2012  
 CR 547219, "SNC oversight of Shaw source inspections," dated 11/12/2012  
 CR 551060, "SNC Oversight of Shaw Source Inspection Inadequate," dated 11/21/2012  
 CR 572024, "Historical review of Level 4 CRs," dated 1/11/2013  
 CR 577172, "Adverse trend of 3E Configuration Mismatch," dated 1/22/2013  
 CR 579928, "NQA-1 Basic Requirement III," dated 1/28/2013  
 CR 580395, "Performance Improvement training requirements," dated 1/28/2013  
 CR 580401, "Performance Improvement Program," dated 1/28/2013  
 TE 199989, "Meet with consortium CAP members to develop interface procedure"  
 TE 504349, "Ensure WEC procedure has been developed or revised"  
 TE 504372, "Develop a process with training for CAQ/SCAQ identification," dated 08/21/2012  
 TE 504378, "Revise and Implement ND-AD-VNP-001"  
 TE 504383, "Develop process on proper way to write clear action"  
 TE 504392, "Implement Revision 2 of ND-AD-VNP-001 which has incorporated a process of  
 timeliness"  
 TE 504393, "Improve documentation of the meeting minutes for VIPSC/VCARB/PMRC"  
 TE 504395, "Develop and implement a process for greater enforcement of the required items in  
 NP-AD-VNP-001"  
 TE 504403, "Develop a workdown curve and complete action eliminate backlog of TE's  
 requiring Generation"  
 TE 504408, "Reinforce the direction to revise CR event Date when generating the CR"  
 TE 504412, "Establish a process for revising reportability and ITAAC Log entries"  
 TE 504416, "Develop a plan to review previously generated CAP Documents for CAQ/SCAQ"

#### WEC Issue Reports:

12-111-M006, "NRC Inspection-IR not being identified as a CAQ", dated 04/24/2012  
 12-193-M009, "ICAP - SNC Construction Engineering Oversight Review of E&DCRs"  
 12-311-M010, "Incorrectly identified Condition Adverse to Quality for SCAR 12-109-M031 (E)  
 12-079-M022, "Samshin Paint Issues," dated 3/19/2012  
 12-117-M023, "SNC AFR 2012-05 – Audit of Vogtle 3 & 4 Site," dated 4/26/2012  
 12-060-M024, "Specifications Revised Inconsistent with Licensing Basis," dated 2/29/2012  
 12-111-M027, "NRC Inspection-IR Screening process for CAQ's", dated 04/20/2012  
 12-111-M030, "NRC Inspection-Non-Compliance to Procedure," dated 04/20/2012  
 12-111-M032, "NRC Inspection-IRs not being voided properly", dated 04/26/2012  
 12-111-M033, "IR 12-290-M009 voided improperly," dated 04/20/2012  
 12-296-M034, "Commitment 11-160-M011.01 Does not provide evidence of proper closure",  
 dated 10/25/2012  
 12-076-M036, "Error in Analysis of Diffuser Ring Segment," dated 3/16/2012  
 12-221-M040, "Reheat Induced Linear Indications after Completion of Post Weld Heat  
 Treatment," dated 8/8/2012  
 12-103-M041, "NRC Inspection Summary CAP"  
 12-076-M043, "Commitment Improperly Closed," dated 3/16/2012  
 12-066-M047, "Safety related Paint on Valve Components"  
 12-304-M066, "ICAP - Three deficiencies identified with E&DCR SV3-CR01-GEF-000027"

12-062-M069, "Design Compliance to Licensing Commitments," dated 3/2/2012  
 12-271-M074, "SNC Eng Review of E&DCRs - Missing Licensing Impact Checklist"  
 13-015-C012, "Safety Committee Evaluation of Engineering Design Process Issues for Reportability under 10CFR50.55(e)," dated 1/15/2013

CB&I Corrective Action Requests:

2012-0355, "CA-20 embed plates"  
 2012-0357, "Work package change without revision"  
 2012-0374, "N&Ds/ CARs do not have program requirement for ties to specific ITAAC"  
 2012-0379, "Unauthorized work actions on N&D"  
 2012-0392, "Incorrect data entered in IR for WK package"  
 2012-0399, "NRC CAP Inspection – CAQ's Designated as Non-CAQ's," dated 04/20/2012; including Apparent Cause Evaluation and Effectiveness Review  
 2012-0400, "CAR did not mention SNC CR or NRC identification"  
 2012-0401, "NRC CAP Inspection – Failure to Conduct Project Trending for CAQs," dated 04/20/2012; including Apparent Cause Evaluation  
 2012-0402, "Potential adverse trend not identified"  
 2012-0403, "Failure to enter OE into CAP"  
 2012-0404, "Non-CAQ should have been CAQ"  
 2012-0405, "Non-CAQ should have been CAQ"  
 2012-0409, "QA audit failed to identify item as CAQ"  
 2012-0454, "Repetitive Failure to Follow Procedures," dated 04/30/2012; including Apparent Cause Evaluation, Rev 0  
 2012-0473, "Rebar documentation deviation part 21 evaluation"  
 2012-0495, "Two unsatisfactory IR part 21 evaluations"  
 2012-0528, "Contaminated pipe from BF Shaw"  
 2012-0618, "CA-20 embed plates supplied without coatings part 21 evaluation"  
 2012-0630, "Concrete lab temperature recorder inoperable"  
 2012-0641, "CA-20-02 studs omitted"  
 2012-0687, "Work packages not put on hold when procedures revised"  
 2012-0724, "CA-20-08A deviation from drawing part 21 evaluation"  
 2012-0832, "Exceeded time requirements for 50.55(e) evaluations"  
 2012-0839, "N&D on temp recordings is CAQ"  
 2012-0850, "To Correct CAR 2011-0776," dated 07/09/2012  
 2012-0851, "To Correct CAR 2011-0728," dated 07/09/2012  
 2012-0852, "To Correct CAR 2011-0706," dated 07/09/2012  
 2012-0874, "Evaluation of Vendor's failure to provide quality products"  
 2012-1007, "Improper use of E&DCR"  
 2012-1070, "Inspection reports not processed in full compliance with procedures"  
 2012-1098, "Missing nelson studs on CA-20-52 (part 21 evaluation)"  
 2012-1447, "Lack of objective evidence for attributes inspected by CIVES"  
 2013-0008, "Extent of Condition in CAR 2012-0399 not fully addressed by the Corrective Actions," dated 11/14/2012  
 2013-0145, "Inspection reports not processed in full compliance with procedures"  
 2013-0152, (NRC Identified) "Corrective Action Interfaces Between Consortium Members"  
 2013-0153, (NRC Identified) "NRC Review of Shaw Inspection Reports"  
 2013-0154, (NRC Identified) "Shaw QA Form 16005 Reportability Evaluation"  
 2013-0156, (NRC Identified) "Causal Analysis in 2012-0874 Excludes Event"

Nonconformance and Disposition Reports, and Inspection Reports:

(CB&I) IR C112-02-12-0117, "NI-3 Reinforcing Steel Routine Inspection Aux. Area 2"  
 (CB&I) IR C112-02-12-0076, "Containment bottom-head rebar layer 10c"  
 (CB&I) IR C112-02-12-0115, "Containment bottom-head rebar"  
 (CB&I) IR C112-02-12-0096, "Construction aids for embeds"  
 (CB&I) IR C112-02-12-0003, "Pipe support construction aids"  
 (CB&I) IR C112-02-12-0002, "NI-3 temporary construction staircase"  
 (CB&I) IR C112-02-12-0087, "NI-3 Reinforcing Steel"  
 (CB&I) IR C112-02-12-0127, "NI-3 #4 Rebar"  
 (CB&I) IR S511-02-12-0047, "Shear Tire Terminator Installation"  
 (CB&I) IR S511-02-12-0046, "Shear Tire Terminator Installation"  
 (CB&I) IR S511-01-12-0079, "Mechanical Rebar Couplers Inspection"  
 (CB&I) IR C112-02-12-0053, "NI-3 Reinforcing Steel"  
 (CB&I) IR S510-12-0005, "Cadwelding Rebar Splice"  
 (CB&I) IR C112-02-12-0129, "NI-3 Reinforcing Steel – Improper Storage"  
 (CB&I) IR C112-02-12-0122, "NI-3 Aux. Bldg. Battery Rack Embedment Plate Headed Anchors"  
 (CB&I) IR S511-01-12-0083, "Mechanical Rebar Couplers Inspection"  
 (WEC) N&D SV3-CE01-GNR-000005, Rev. 0  
 (WEC) N&D SV3-CR01-GNR-000007, Rev. 0  
 (WEC) N&D SV3-CE01-GNR-000001, Rev. 0

Corrective Action Trend Evaluation Reports:

12-Month Analysis, CAR Program Trend Evaluation Report: Vogtle Results (2010),  
 dated 08/22/1012  
 12-Month Analysis, CAR Program Trend Evaluation Report: Vogtle Results (2011),  
 dated 08/22/2012  
 6-Month Analysis, CAR Program Trend Evaluation Report: Vogtle Results (June 30, 2012),  
 dated 08/22/2012

Operating Experience and Construction Experience Review

Construction Experience (CE) Meeting Minutes – January 30, 2013  
 Evaluation of Vogtle 3&4 OE/CE Program  
 December 2012 – Health of the Performance Improvement Programs for Vogtle 3&4  
 SNC Technical Evaluation 519455, "Develop performance indicators to measure health of  
 OE/CE program"  
 SNC Technical Evaluation 519081 "Incorporate lessons learned into work package planning"  
 SNC Technical Evaluation 519003, "Increase occurrence of CE screening meetings to weekly"  
 SNC Technical Evaluation 519014, "Create and manage an OE/CE/LL database in PIMs for  
 storage"  
 SNC Technical Evaluation 519091, "Review NUREG-1055 and INPO 08-005"  
 SNC Technical Evaluation 519978, "Provide access to INPO daily OE/CE to CMP and  
 supervisors"  
 Vogtle 3&4 Construction Experience Screening Process  
 SNC Construction Experience Program Procedure ND-AD-VNP-004 Version 6.0  
 Problem Identification and Resolution Focused Self Assessment, dated September 25, 2012  
 Shaw Group Vogtle 3&4 PI&R Presentation Materials

Miscellaneous:

12-111-M006.02, "CAP CAQ Determination prior to January 2012.xlsx"

12-111-M006.03, "CAP CAZ Determination Tull-Malzi-Yeager.xlsx"

12-111-M027, "Commitment 03 New IRs.pdf"

NU-QADPT-0549, "QS 16.5 Training Attendance Report," dated 10/10/2012

NOV Actions/Commitments Tracking – NOV 2012-006-01&02 (July 12 & Aug 3, 2012)

Significance Review Checklist for IRs and N&Ds – Reference QSI 5.2, Attachment 3.5

Significance Review Checklist for IRs – Reference QSI 3.1-V, Attachment 7.4

**LIST OF ACRONYMS**

CB&I	Chicago Bridge and Iron (formerly Shaw)
CFR	Code of Federal Regulations
EPC	Engineering, Procurement, and Construction
IMC	Inspection Manual Chapter
ITAAC	Inspection, Tests, Analyses, and Acceptance Criteria
NRC	Nuclear Regulatory Commission
QC	Quality Control
QA	Quality Assurance
SMS	Shaw Modular Systems
SNC	Southern Nuclear Operating Company
UFSAR	Updated Final Safety Analysis Report
VIO	Cited Violation
WEC	Westinghouse Electric Company, LLC