

Mark D. Rauckhorst
Construction Vice President
Vogtle 3&4

Southern Nuclear
Operating Company, Inc.
7825 River Road
Waynesboro, GA 30830

Tel 706.826.5500
Fax 706.826.5570
mdrauckh@southernco.com



February 23, 2015

Docket No.: 52-025
52-026

ND-15-0284
10 CFR 50.55(e)

U.S. Nuclear Regulatory Commission
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Washington, DC 20555-0001

**SUBJECT: 10 CFR 50.55(e) REPORT REGARDING DEVIATIONS ON SUB MODULES
CA03-06, CA03-08, AND CA03-09 FOR VOGTLE UNITS 3&4**

This letter provides a written notification in accordance with 10 CFR 50.55(e)(4)(iii) pertaining to the fabrication and construction of material, equipment, and services associated with basic components by Stone & Webster, Inc, and currently doing business under the name of its parent, Chicago Bridge and Iron (hereinafter CB&I), for the Vogtle Units 3 and 4, nuclear project.

The written notification pursuant to 50.55(e) is for a failure to comply by CB&I, a member of the Consortium that is the EPC Contractor for the Licensees of Vogtle 3&4, to meet the requirements of 10 CFR 50, Appendix B. The QA Criteria that were determined to be relevant to the identified conditions and the root and contributing causes include, Criterion I Organization, Criterion IV Procurement Document Control, Criterion VII Control of Purchased Material, Equipment, and Services, Criterion IX Control of Special Processes, Criterion X Inspection, Criterion XVI Corrective Action, and Criterion XVIII Audits. It is concluded that the QA programmatic issues, as identified by the root cause analysis, could have produced a defect, and this condition is reportable in accordance with 10 CFR 50.55(e)(3)(iii)(C). This written notification closes the interim report submitted on December 9, 2014 by CB&I and is the follow up to the initial notification by Southern Nuclear Operating Company on February 9, 2015 (EN 50798). This letter contains no new NRC regulatory commitments. See Enclosure for the detailed content of the notification.

If you have any questions, please contact Michael Yox, Regulatory Affairs Director, at 706-437-6459.

Respectfully submitted,

SOUTHERN NUCLEAR OPERATING COMPANY

A handwritten signature in black ink, appearing to read "Mark D. Rauckhorst". The signature is fluid and cursive, with the first name "Mark" being the most prominent.

Mark D. Rauckhorst

Enclosure: 10 CFR 50.55(e) REPORT REGARDING DEVIATIONS ON SUB MODULES
CA03-06, CA03-08, AND CA03-09 FOR VOGTLE UNITS 3&4

cc:

Southern Nuclear Operating Company/ Georgia Power Company

Mr. S. E. Kuczynski (w/o enclosures)
Mr. J. A. Miller
Mr. D. A. Bost (w/o enclosures)
Mr. M. D. Rauckhorst (w/o enclosures)
Mr. J. T. Gasser (w/o enclosures)
Mr. D. H. Jones (w/o enclosures)
Mr. D. L. McKinney (w/o enclosures)
Mr. D. R. Madison
Mr. D. M. Lloyd
Mr. B. H. Whitley
Mr. C. R. Pierce
Mr. D. L. Fulton
Mr. M. J. Yox
Mr. W. A. Sparkman
Mr. C. B. Meadors
Mr. J. P. Redd
Document Services RTYPE: VND.LI.L00
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Nuclear Regulatory Commission

Mr. V. M. McCree (w/o enclosures)
Mr. F.M. Akstulewicz (w/o enclosures)
Mr. M. Delligatti (w/o enclosures)
Mr. L. Burkhart (w/o enclosures)
Mr. D. H. Jaffe
Ms. D. L. McGovern
Mr. B. M. Baval
Ms. R. Reyes
Ms. M. A. Sutton
Mr. M. E. Ernstes
Mr. G. Khouri
Mr. L. M. Cain
Mr. J. D. Fuller
Mr. C. B. Abbott
Ms. S. Temple

Oglethorpe Power Corporation

Mr. M. W. Price
Mr. K. T. Haynes
Ms. A. Whaley

Municipal Electric Authority of Georgia

Mr. J. E. Fuller
Mr. S. M. Jackson

U. S. Nuclear Regulatory Commission
ND-15-0284
Page 4 of 4

Dalton Utilities

Mr. D. Cope

CB&I

Mr. J. Simmons (w/o enclosures)

Ms. K. Stoner (w/o enclosures)

Mr. C. A. Castell

Westinghouse Electric Company, LLC

Mr. T. C. Geer (w/o enclosures)

Mr. S. W. Gray (w/o enclosures)

Mr. P. A. Russ

Mr. G. F. Couture

Mr. M. Y. Shaqqo

Mr. B. J. Bedford

Mr. M. P. Rubin

Ms. S. DiTommaso

Other

Mr. R. W. Prunty, Bechtel Power Corporation

Ms. K. K. Patterson, Tetra Tech NUS, Inc.

Dr. W. R. Jacobs, Jr., Ph.D., GDS Associates, Inc.

Mr. S. Roetger, Georgia Public Service Commission

Ms. S. W. Kernizan, Georgia Public Service Commission

Mr. K. C. Greene, Troutman Sanders

Mr. S. Blanton, Balch Bingham

ND-15-0284

Enclosure

10 CFR 50.55(e) REPORT REGARDING DEVIATIONS ON SUB MODULES CA03-06, CA03-08, AND CA03-09 FOR VOGTLE UNITS 3&4

- (i) Name and address of the individual or individuals informing the Commission.

Mark D. Rauckhorst
Southern Nuclear Operating Company, Inc.
Construction Vice President
Vogtle 3&4
7825 River Road
Waynesboro, GA 30830

- (ii) Identification of the facility, the activity, or the basic component supplied for such facility or such activity within the United States which fails to comply or contains a defect.

The activity being conducted is fabrication and procurement of AP1000® project construction sub-modules and associated assemblies. The basic components are structural components being used for the construction of AP1000® safety-related structures. This report is related to evaluation of activities and conditions previously identified in interim 10 CFR Part 21 reports submitted by CB&I, dated October 23, and December 9, 2014. Specifically, deviations were found in sub-modules CA03-06, -08, and -09, which initiated the discovery and evaluation processes for both Part 21 and 10 CFR 50.55(e) by CB&I. Those sub-modules are for use in the fabrication and assembly of structural module CA03 for Vogtle Unit 3 AP1000® project. These sub-modules were received from SMCI Division of MetalTek International. The deviations being evaluated include some identified circumstances of weld undersize, underfill, lack-of fusion, and incomplete weld fusion. The CA03 structural module being fabricated and assembled is a wall module for the In-containment Refueling Water Storage Tank (IRWST) for the Vogtle Unit 3 AP1000® construction project. It has been concluded that the material deviations did not result in the introduction of a defect or substantial safety hazard. This report is associated with the Quality Assurance Program elements that failed to prevent the conditions from occurring.

A root cause analysis of the identified conditions was performed by CB&I (Corrective Action Report 2014-1961). The results of that analysis were utilized in the evaluation of these conditions in accordance with 10 CFR 50.55(e)(3)(iii)(C). The QA Criteria that were determined to be relevant to the identified conditions and the root and contributing causes include Criterion I Organization, Criterion IV Procurement Document Control, Criterion VII Control of Purchased Material, Equipment, and Services, Criterion IX Control of Special Processes, Criterion X Inspection, Criterion XVI Corrective Action, and Criterion XVIII Audits. Additionally, other recently identified conditions (e.g., overlay plate coupler weld issues, CA01 sub-module deviations as reported in CB&I interim Part 21 reports dated January 20, January 22, and January 29, 2015, and conditions reported in CB&I interim Part 21 report dated December 4, 2014) are considered to be additional examples of recent QA issues that are consistent with the circumstances of the QA breakdown identified in this report.

- (iii) Identification of the firm constructing the facility or supplying the basic component which fails to comply or contains a defect.

The CA03 sub-modules with identified deviations were fabricated and supplied by SMC Division of MetalTek International, 4015 Drane Field Road, Lakeland, FL 22813. The procurement activities are being performed by CB&I Power, 128 South Tryon Street Charlotte, NC 28202, for both the V.C. Summer and Vogtle AP1000® projects. The identified CA01 sub-module fabrication (interim reports dated January 20 and 29, 2015) was performed by CB&I Lake Charles, 3191 West Lincoln Rd., Lake Charles, LA 70605.

- (iv) Nature of the defect or failure to comply and the safety hazard which is created or could be created by such defect or failure to comply.

As previously stated, it has been concluded that the material deviations did not result in the introduction of a defect or substantial safety hazard. This report is associated with the Quality Assurance Program elements that failed to prevent the conditions from occurring. It is postulated that identified QA Program failures presented the potential for introduction of a defect. The preventive and corrective actions being taken are intended to identify and resolve these conditions.

- (v) The date on which the information of such defect or failure to comply was obtained.

The earliest discovery date of the identified deviations is August 25, 2014, based on date of the earliest completed inspections that identified the weld deviations. The root cause analysis associated with this condition was completed on December 16, 2014.

- (vi) In the case of a basic component which contains a defect or fails to comply, the number and location of these components in use at, supplied for, being supplied for, or may be supplied for, manufactured, or being manufactured for one or more facilities or activities subject to the regulations in this part.

No basic components were found to contain a defect or fail to comply such that a substantial safety hazard was introduced. This report is based on the criterion in 10 CFR 50.55(e)(3)(iii)(C), which states, "Undergoes 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."

- (vii) In the case of a completed reactor manufactured under part 52 of this chapter, the entities to which the reactor was supplied

Not Applicable.

- (viii) The corrective action which has been, is being, or will be taken; the name of the individual or organization responsible for the action; and the length of time that has been or will be taken to complete the action.

The actions necessary to correct the identified conditions and causes will be established and tracked to completion under the CB&I Power Corrective Action Program (CAP). The

preventive action listed in the CB&I CAP to correct the root causes of the condition is currently identified with a due date of April 30, 2015. The corrective actions for these conditions have various due dates, with the latest currently identified due date of June 15, 2015. Note that these dates are subject to change and will be managed via the CB&I CAP. The immediate actions put in place are the development of interim guidance for the development and approval of recovery plans, interim guidance for investigating corrective actions requests for issues found during or after receipt inspection and interim guidance for the communication of significant module supplier quality issues. The licensee will perform a review of the effectiveness of preventative actions subsequent to implementation by CB&I.

- (ix) Any advice related to the defect or failure to comply about the facility, activity, or basic component that has been, is being, or will be given to purchasers or licensees.

The condition was discovered by CB&I Power and a Root Cause Analysis has been performed. Corrective actions have been developed and are being tracked under the CB&I Corrective Action Program. Therefore, there is no additional action or advice needed at this time.