

Part 21 (PAR)

Event # 50734

Rep Org: CB&I NUCLEAR	Notification Date / Time: 01/14/2015 14:10 (EST)
Supplier: CB&I NUCLEAR	Event Date / Time: 01/13/2015 (EST)
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Region: 1	Docket #:
City: CHARLOTTE	Agreement State: Yes
County:	License #:
State: NC	
NRC Notified by: CURTIS CASTELL	Notifications: RANDY MUSSER R2DO
HQ Ops Officer: STEVE SANDIN	PART 21 GROUP EMAIL
Emergency Class: NON EMERGENCY	
10 CFR Section:	
21.21(d)(3)(i) DEFECTS AND NONCOMPLIANCE	

10 CFR PART 21 REPORT REGARDING DEVIATIONS OF COATINGS FOR PIPE SUPPORTS FOR AP1000 PROJECTS

The following report was received via email:

"This report is being provided in accordance with 10 CFR 21.21.

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

"Michael Hickey
 CB&I Nuclear
 128 S. Tryon St., Suite 1000
 Charlotte, NC 28202

"(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 basic components being supplied are pipe supports to be used inside the containment for the V. C. Summer and Vogtle AP1000 nuclear projects. The pipe supports are classified as ASME B31.1 Code and Quality Assurance (QA) Categories II and III. These supports are associated with various non-safety-related portions of several systems inside containment, including Component Cooling, Passive Core Cooling, Spent Fuel Pool Cooling, Waste Liquid, and others. The material being procured was not basic component materials and 10 CFR Part 21 was not applicable. The basic component aspect became inadvertently introduced based on the decision to use a coating that was based on inorganic zinc (IOZ) in lieu of the appropriate coating, which is a Self-Priming High Solids Epoxy (SPHSE). Use of the IOZ coating required the application to be performed as a safety-related

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application. Due to misinterpretation of the design specification requirements, the wrong safety-class was invoked and the wrong coating material was selected. The piping supports are not impacted by this use of the IOZ coating and would have not been impacted for meeting the pipe support design function. The use of the incorrect coatings, with the incorrect safety classification, could have impacted the ability of the required systems to perform the long-term cooling function, which is considered a safety-related functional impact. The approximate number of supports that are impacted for each unit is provided as follows: 952 Vogtle Unit 3, 275 Vogtle Unit 4, 967 V. C. Summer Unit 2, and 625 V. C. Summer Unit 3.

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

"The affected piping supports are being supplied by LISEGA Inc. USA, 370 East Dumplin Valley Rd., Kodak, TN 37764. Note that LISEGA supplied the pipe supports with coating material as specified in the procurement documents. Subsequent review has determined that the procurement documents specified incorrect information for many of the supports, which should have been coated with a different material. The procurement documentation was provided to the supplier by CB&I Power, 128 South Tryon Street Charlotte, NC 28202.

"(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.

"The use of the incorrect coating inside containment impacts debris generation and long-term cooling analyses performed for the AP1000 design. It is estimated that the amount of unqualified IOZ coating that could have been added to the containment would have eventually caused impairment of the long-term cooling function during events that require that capability. Therefore, if left uncorrected this condition could have caused a substantial safety hazard for the V. C. Summer and Vogtle AP1000 nuclear projects.

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

"The discovery date of these deviations is based on the date of the associated CB&I Power Corrective Action Report (CAR). That CAR was initiated on March 10, 2014. Interim Part 21 reports dated October 15, 2014, and December 11, 2014, were submitted to the NRC.

"(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.

"The impacted materials are pipe supports with incorrect coatings intended to be used inside containment for the V. C. Summer and Vogtle AP1000 nuclear projects. The approximate number of supports that are impacted for each unit is provided as follows: 952 Vogtle Unit 3, 275 Vogtle Unit 4, 967 V. C. Summer Unit 2, and 625 V. C. Summer Unit 3.

"(vii) 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 nonconforming pipe supports were initially placed into a hold status and are being corrected. A corrective action report (CAR 2014-2574) has been entered in the CB&I Power Corrective Action Program that describes the circumstances that led to the identification of this potential substantial safety hazard. That CAR is identified as a Level 1, significant condition adverse to quality, and a root cause analysis of the condition is required by CB&I Power Corrective Action Program. The actions necessary to correct the identified conditions and the causes for these conditions will be established and tracked to completion under the CB&I Power Corrective Action Program.

"(viii) 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 prior to installation of the affected components and the components are being corrected. Therefore, there is no additional action or advice needed for the licensees at this time. The condition has also been evaluated by CB&I Power for potential 10 CFR 50.55(e) reporting by the affected

combined operating license holders. CB&I Power has recommended to the licensees that this condition is reportable under 10 CFR 50.55(e).

"(ix) In the case of an early site permit, the entities to whom an early site permit was transferred.

"Not applicable.

"This condition was previously identified by interim report letters dated October 15, 2014 [ML14296A427 - Log No. 2014-76-00], and December 11, 2014.

"If you have any questions pertaining to this information, please contact Curtis Castell, Licensing Manager, at 980-321-8314."

From: [Castell, Curtis](#)
To: [HOO Hoc](#)
Subject: Part 21 Notification Chicago Bridge & Iron
Date: Wednesday, January 14, 2015 1:36:54 PM
Attachments: [image001.png](#)
[1342_001.pdf](#)
[NRC Letter Part 21 January 13 2015 pipe support coatings.doc](#)

Attached to this e-mail please find a scanned Adobe® pdf copy of a report being provided as a Part 21 notification by Chicago Bridge and Iron. Additionally, a copy of the report in the native file Word® document format is also provided for your convenience.

Please let me know if you have any questions.

Thank you,



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10 CFR 21.21

January 13, 2015

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555-0001

**SUBJECT: 10 CFR PART 21 REPORT REGARDING DEVIATIONS OF COATINGS FOR
PIPE SUPPORTS FOR AP1000® PROJECTS**

The attachment to this letter provides a report in accordance with 10 CFR 21.21 pertaining to the identification of defects associated with coatings on pipe supports being supplied for the V. C. Summer and Vogtle AP1000® nuclear projects. The defects are associated with the procurement of pipe supports that were coated incorrectly.

This condition was previously identified by interim report letters dated October 15, 2014, and December 11, 2014.

If you have any questions pertaining to this information, please contact Curtis Castell, Licensing Manager, at 980-321-8314.

Sincerely,

A handwritten signature in black ink that reads 'Michael Hickey'. The signature is fluid and cursive, with a long, sweeping underline.

Michael Hickey
Senior Vice President

cc: Regional Administrator, USNRC, Region II

Attachment

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SUPPORTS FOR AP1000® PROJECTS

This report is being provided in accordance with 10 CFR 21.21.

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Michael Hickey
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(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.

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

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(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.

The use of the incorrect coating inside containment impacts debris generation and long-term cooling analyses performed for the AP1000® design. It is estimated that the amount of unqualified IOZ coating that could have been added to the containment would have eventually caused impairment of the long-term cooling function during events that require that capability. Therefore, if left uncorrected this condition could have caused a substantial safety hazard for the V. C. Summer and Vogtle AP1000® nuclear projects.

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The nonconforming pipe supports were initially placed into a "hold" status and are being corrected. A corrective action report (CAR 2014-2574) has been entered in the CB&I Power Corrective Action Program that describes the circumstances that led to the identification of this potential substantial safety hazard. That CAR is identified as a Level 1, significant condition adverse to quality, and a root cause analysis of the condition is required by CB&I Power Corrective Action Program. The actions necessary to correct the identified conditions and the causes for these conditions will be established and tracked to completion under the CB&I Power Corrective Action Program.

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potential 10 CFR 50.55(e) reporting by the affected combined operating license holders. CB&I Power has recommended to the licensees that this condition is reportable under 10 CFR 50.55(e).

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Not applicable.