

## Vogle PEmails

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**From:** Hoellman, Jordan  
**Sent:** Thursday, September 13, 2018 11:26 AM  
**To:** Vogle PEmails  
**Subject:** UIN 328 - Material for public call  
**Attachments:** 2018-09-13 draft resubmittal IDB for UIN (ITAAC 328).docx

Forwarding to ADAMS for use in the discussion of the UIN for ITAAC Index No. 328 at the September 13, 2018, public meeting between the NRC and SNC.

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**From:** Petrak, Tom G. [mailto:TGPETRAK@southernco.com]  
**Sent:** Wednesday, September 12, 2018 3:59 PM  
**To:** Gaslevic, James <James.Gaslevic@nrc.gov>; Hoellman, Jordan <Jordan.Hoellman2@nrc.gov>  
**Cc:** Agee, Stephanie Y. <SYAGEE@southernco.com>; Morrow, Calvin Eugene <CEMORROW@SOUTHERNCO.COM>; Roberts, Kelli Anne <KROBERTS@southernco.com>; Wilson, Gregory C. <X2GCWILS@SOUTHERNCO.COM>  
**Subject:** [External\_Sender] UIN 328 - Material for public call

Jim,

Attached is a draft revision to UIN 328. This draft includes changes made based on input we received from you earlier today.

Please feel free to call me if you would like to discuss further.

## Thomas G. Petrak

Vogle 3&4 ITAAC Manager  
Southern Nuclear Operating Company

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**From:** Gaslevic, James  
**Sent:** Wednesday, September 12, 2018 7:54 AM  
**To:** Petrak, Tom G. <TGPETRAK@southernco.com>  
**Cc:** Arora, Surinder <Surinder.Arora@nrc.gov>; Le, Tuan <Tuan.Le@nrc.gov>; Lupold, Timothy <Timothy.Lupold@nrc.gov>; Welch, Christopher <Christopher.Welch@nrc.gov>; Hoellman, Jordan <Jordan.Hoellman2@nrc.gov>  
**Subject:** UIN #328

Tom - I received some advance material from our review staff in prep for tomorrow's call. To resolve the issue of the incorrect stress limit, SNC should resubmit UIN #328 that would include the stress limit for Service Level D condition of JCB and RCF piping.

For example, the new UIN could include the following:

"The JCB and RCF piping are designed to be functional following a SSE. The UFSAR Table 3.9-11 provides that Service Level D condition shall have the stress limit of Equation 9 equals to smaller of 3.0 Sh or 2.0 Sy. The stress limit will be used in the stress analysis of ITAAC 2.3.04.02.ii to verify the functional piping of JCB and RCF system."

The ASME stress limit of Equation 9 equals to smaller of  $3.0 S_h$  or  $2.0 S_y$  acceptable, and that the stress limit should be included in the UIN.

Thanks

**Hearing Identifier:** Vogtle\_COL\_Docs\_Public  
**Email Number:** 367

**Mail Envelope Properties** (SN6PR0901MB2366FBDEBDB2CEBC203FADFED51A0)

**Subject:** UIN 328 - Material for public call  
**Sent Date:** 9/13/2018 11:25:35 AM  
**Received Date:** 9/13/2018 11:25:39 AM  
**From:** Hoellman, Jordan

**Created By:** Jordan.Hoellman2@nrc.gov

**Recipients:**  
"Vogtle PEmails" <Vogtle.PEmails@nrc.gov>  
Tracking Status: None

**Post Office:** SN6PR0901MB2366.namprd09.prod.outlook.com

Files	Size	Date & Time
MESSAGE	2132	9/13/2018 11:25:39 AM
2018-09-13 draft resubmittal IDB for UIN (ITAAC 328).docx		28292

**Options**  
**Priority:** Standard  
**Return Notification:** No  
**Reply Requested:** No  
**Sensitivity:** Normal  
**Expiration Date:**  
**Recipients Received:**

**Southern Nuclear Operating Company  
ND-18-xxxx  
Enclosure**

**Vogtle Electric Generating Plant (VEGP) Unit 3 & Unit 4  
Completion Plan for Uncompleted ITAAC 2.3.04.02.ii [Index Number 328]**

DRAFT

## **ITAAC Statement**

### **Design Commitment**

2. The FPS piping shown on Figure 2.3.4-2 remains functional following a safe shutdown earthquake.

### **Inspections/Tests/Analyses**

ii) A reconciliation analysis using the as-designed and as-built piping information will be performed, or an analysis of the as-built piping will be performed.

### **Acceptance Criteria**

ii) The as-built piping stress report exists and concludes that the piping remains functional following a safe shutdown earthquake.

## **ITAAC Completion Description**

Multiple ITAAC are performed to demonstrate the Fire Protection System (FPS) piping shown on Combined License (COL) Appendix C, Figure 2.3.4-2 ("the figure") remains functional following a safe shutdown earthquake (SSE). The subject ITAAC requires a reconciliation analysis using the as-designed and as-built piping information be performed, or an analysis of the as-built piping be performed and documented in the as-built piping stress report that concludes the piping remains functional following a SSE.

The portion of the FPS piping shown in the figure that is designated as "JCB" (i.e., equipment class B) is classified as Seismic Category I and designed in accordance with American Society of Mechanical Engineers (ASME), Boiler & Pressure Vessel Code Section III, 1998 Edition, 2000 Addenda (Reference 1). The portions of the FPS piping shown in the figure that are designated as "RCF" (i.e., equipment class F) are classified as Seismic Category II and designed in accordance with ASME B31.1, 1989 Edition, 1989 Addenda (Reference 2) and are seismically analyzed consistent with ASME Section III Class 3 systems. UFSAR Table 3.9-11 provides that Service Level D conditions be applied using the stress limit of ASME Equation 9 which equals less than the smaller of 3.0 allowable stress ( $S_h$ ) or 2.0 yield strength ( $S_y$ ). This stress limit will be used in the stress analysis for the piping represented in COL Appendix C Figure 2.3.4-2 for ITAAC 2.3.04.02.ii to demonstrate the piping classified as JCB and RCF remains functional following a SSE (Reference 3). Additional information on the classification designations and applicable code requirements are described in Subsection 3.2.1 and Table 3.2-3 of the Updated Final Safety Analysis Report (UFSAR) (Reference 3).

The Unit 3 and Unit 4 ASME Section III as-built piping design reports (References 4 and 5, respectively) for the FPS piping (including valves) identified as equipment class B in the figure are completed and conclude that the as-built FPS piping (including valves) remains functional following a SSE.

The Unit 3 and Unit 4 ASME B31.1 as-built piping stress reports (References 8 and 9, respectively) identified as equipment class F in the figure are completed and conclude that the as-built piping (including valves) remain functional following a SSE. Specific functional requirements for FPS piping identified as equipment class F in the figure are defined in Subsection 3.7.3.13.4.2 of the UFSAR (Reference 3).

The as-built piping system identified as equipment class B and class F in the figure is subjected to a reconciliation process (References 6 and 7), which verifies that the as-built piping system has been analyzed for normal operating loads, seismic loads and for compliance with the design specification. Design reconciliation of the as-built system designated as equipment class B and class F in the figure validates that construction completion, including field changes and any nonconforming condition dispositions, is consistent with and bounded by the approved design. The results of the physical inspection of the piping and reconciliation are incorporated into the as-built piping stress reports.

The Unit 3 and Unit 4 as-built piping stress reports (References 8 and 9, respectively) along with the Unit 3 and Unit 4 as-built FPS ASME Design Reports (References 4 and 5, respectively) exist and conclude that the FPS piping shown on COL Appendix C, Figure 2.3.4-2 remains functional following a safe shutdown earthquake.

References 4, 5, 6, 7, 8 and 9, are available for NRC inspection as part of the Unit 3 and Unit 4 ITAAC Completion Packages (Reference 10 and 11, respectively).

### **List of ITAAC Findings**

In accordance with plant procedures for ITAAC completion, Southern Nuclear Operating Company (SNC) performed a review of all findings pertaining to the subject ITAAC and associated corrective actions. This review found there are no relevant ITAAC findings associated with this ITAAC.

### **References (available for NRC inspection)**

1. ASME Boiler and Pressure Vessel Code, Section III, "Rules for Construction of Nuclear Facility Components", 1998 Edition, 2000 Addenda
2. ASME B31.1, "Power Piping", 1989 Edition, 1989 Addenda (formally ANSI)
3. VEGP 3&4 Updated Final Safety Analysis Report,
  - a. Subsection 3.2.1, Seismic Classification
  - b. Table 3.2-3, AP1000 Classification of Mechanical and Fluid Systems, Components, Equipment
  - c. Subsection 3.7.3.13.4.2, Seismic Category II Piping
  - d. Table 3.9-11, Piping Functional Capability – ASME Class 1, 2, and 3
4. FPS ASME As-Built Design Report (Unit 3)
5. FPS ASME As-Built Design Report (Unit 4)
6. APP-GW-GAP-139, "Westinghouse/WECTEC ASME N-5 Interface Procedure"
7. XXX As-Built Reconciliation process for Class F B31.1 Piping
8. FPS As-built piping stress report(s) (Unit 3)
9. FPS As-built piping stress report(s) (Unit 4)
10. 2.3.04.02.ii-U3-CP-Rev0, ITAAC Completion Package
11. 2.3.04.02.ii-U4-CP-Rev0, ITAAC Completion Package
12. NEI 08-01, "Industry Guideline for the ITAAC Closure Process Under 10 CFR Part 52"