

Vogle PEmails

From: Hoellman, Jordan
Sent: Wednesday, April 05, 2017 11:32 AM
To: THOMPSON, RYDER CLARK; Willis, Frederick H.
Cc: Haggerty, Neil; Chamberlain, Amy Christine; Woods, David F.; Rivera-Varona, Aida; Welch, Christopher; Stacy, Kara M.; Gleaves, Bill; Patel, Chandu; Nick Kellenberger (nicholas.r.kellenberger@scana.com)
Subject: ITAAC Discussion documents for 4/6/17 public meeting
Attachments: 2017-04-06 UIN ICN comment status sheet april 2017 rev1.docx; UIN for ITAAC 2.2.01.08 (109) EVALUATION - 3-29-17.docx; Final Comparing Demo 5 with the UIN 617 for ITAAC 2 6 03 08.docx; Final UIN for ITAAC 2 6 03 09 (Index No 618).docx

Good Morning –

Please see the attached documents providing comments related to the outstanding ITAAC items from the March 23, 2017, public meeting. These will be discussed at the public meeting tomorrow, April 6, 2017.

Let me know if you have any questions/concerns.

Thank you,

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From: Hoellman, Jordan

Created By: Jordan.Hoellman2@nrc.gov

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MESSAGE	540	4/5/2017 11:32:28 AM	
2017-04-06 UIN ICN comment status sheet april 2017 rev1.docx			32823
UIN for ITAAC 2.2.01.08 (109) EVALUATION - 3-29-17.docx			22759
Final Comparing Demo 5 with the UIN 617 for ITAAC 2 6 03 08.docx			21530
Final UIN for ITAAC 2 6 03 09 (Index No 618).docx		20215	

Options

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ITEM #	ICN UIN	TOPIC	ITAAC INDEX #	ISSUE	Licensee Comment
1	ICN	HFE HIS task support verification	V3 739 V4 739 S2 739 S3 739	<p>IDB references non- public documents, it should include a brief summary of the salient information included in those documents.</p> <p>Discussed 2/16/17 licensee agreed to add additional references to public version of proprietary documents and evaluate possibility of providing further information to IDB.</p> <p>ACTION: Confirm final status. Licensee to provide status of resubmittal of ICN.</p>	<p>Licensee understands and is aligned with Staff comment ICN's shall be revised.</p> <p>New: SCE&G and SNC plan to revise the ICN for ITAAC 739 to provide additional information in lieu of providing an additional public version reference.</p>
2	ICN	HFE	V3 740 V4 740	<p>IDB references non- public documents, it should include a brief summary of the salient information included in those documents.</p> <p>Discussed 2/16/17 licensee agreed to add additional references to public version of proprietary documents and evaluate possibility of providing further information to IDB.</p> <p>ACTION: Confirm final status and that response to ITAAC 739 also applies to ITAAC 740. Licensee to provide status of resubmittal of ICN.</p>	<p>Licensee understands and is aligned with Staff comment ICN's shall be revised.</p> <p>New: SCE&G and SNC plan to revise the ICN for ITAAC 739 to provide additional information in lieu of providing an additional public version reference.</p>
3a	UIN	HFE	V3 751	<p>IDB references non- public documents, it should include a brief summary of the salient information included in those documents.</p> <p>Discussed 2/16/17 licensee agreed to add additional references to public version of proprietary documents and evaluate possibility of providing further information to IDB.</p> <p>ACTION: Confirm final status and that response to ITAAC 739 also applies to ITAAC 751. Licensee to provide status of resubmittal of ICN.</p>	<p>Licensee understands and is aligned with Staff comment ICN's shall be revised.</p> <p>New: SCE&G and SNC plan to revise the ICN for ITAAC 739 to provide additional information in lieu of providing an additional public version reference.</p>

ITEM #	ICN UIN	TOPIC	ITAAC INDEX #	ISSUE	Licensee Comment
4	UIN	Containment electrical penetrations	V3 109	<p>The UIN does not adequately describe which method of protection will be utilized.</p> <p>ACTION: Staff is providing additional comments on this UIN (see separate handout).</p>	Licensee understands and is aligned with Staff comment UIN shall be revised.

ITEM #	ICN UIN	TOPIC	ITAAC INDEX #	ISSUE	Licensee Comment
5	UIN	Thermocouple sheath	V3 570	<p>NRC Comment: UIN should include quality aspect of inspection results of sheathing (no cracking etc.)</p> <p>SNC does not intend to withdraw or modify the UIN. Tier 2 chapter 4 section 4.4.6.1 does not support comment as being required to complete ITAAC. UIN refers to appropriate quality inspection procedure to verify presence of sheaths.</p> <p>This ITAAC is similar to ITAAC that use the phrase something exists. Tier 1 states when this language is used it means the item is present and capable of performing its function as described in the design description.</p> <p>ACTION: Staff to provide additional update on this UIN. Staff will provide additional information if it comes available before the public meeting. Right now staff does not have any additional information to provide.</p>	No action on Licensee part.

ITEM #	ICN UIN	TOPIC	ITAAC INDEX	ISSUE	Licensee Comment
6	UIN	AS-built IDS fault currents vs MFGR equipment ratings	V3 617 V3 618	<p>NEI 08-01 Demo 5 was written for ITAAC index No. 617. ITAAC index Nos. 618 and 619 are very similar and Demo 5 would be an appropriate example for these UINs.</p> <p>The UINs for 617 & 618 are not consistent with NEI 08-01 Section 6, which requires that UIN/ICNs describe/explain the methodology and key steps used in performing the ITA and determining that each element of the AC was met.</p> <p>Review of ITAAC 617 & 618 and the two UINs identify the key steps include: analysis to calculate the maximum IDS fault currents, analysis to determine the breaker/fuse minimum required interrupt capacity and analysis to complete the IDS protection coordination study (which appears to be critical in each of these ITAAC). The submitted UINs do not describe / explain the methodology and key steps to perform the short circuit (i.e. fault) analyses or circuit interrupting device coordination analyses, nor do they provide adequate reference to the appropriate IEEE standard and section(s). UIN 618 refers to the short circuit analysis document while 617 does not. Reference to section 7.1 of IEEE-946-1992 is incomplete, providing only a portion of the necessary information.</p> <p>Pursuant to UFSAR section 8.3.2.2, short circuit analyses are performed per IEEE 964 and circuit interrupting device coordination analyses are performed per IEEE 141 and 142 (or other applicable industry standards or practices). While referencing the UFSAR (UIN 618) may be acceptable for the UIN it would not be acceptable for the ICN because the method used is not specifically defined in section 8.3.2.2 of FSAR.</p> <p>The IDB for Demo 5 verifies the AC is met by comparing the nameplate ratings for the circuit breakers and fuses to the analytically determined fault currents (i.e. short circuit analysis). In the UIN it compares the name plate ratings to the analyses documented in the IDS protection coordination study.</p> <p>All three ICNs/UINs for ITAAC 617, 618, and 619 should be written in the same format with the description for the required analyses being identical in each ICN/UIN with the appropriate references.</p> <p>ACTION: Discuss Licensee's comments to staff's discussion during the last public meeting. Additional staff comments have been provided in separate handouts.</p>	<p>Staff comments were reviewed, and UIN's were revised based on comments. Some staff comments were difficult to understand. Drafts of revised UIN's are enclosed as attachments (7, 8, 9). Licensee understands Staff comment that where standards (IEEE, etc.) are referenced that provide multiple acceptable paths of compliance, the ITAAC closure would be required to describe which path to compliance was utilized. Licensee asserts level of detail provided in UIN's for 617, 618 and 619 was consistent with that described in DEMO 5.</p>

Review of UIN for ITAAC 2.2.01.08, Index No. 109

- (1) The UIN, in attachment A, should identify how the ITAAC was performed for each penetration (i.e. whether ensuring that load currents are always less than the continuous current rating of the containment electrical penetration assembly or by installing redundant protective devices in each circuit passing through the electrical penetration assembly).
- (2) The second sentence of first paragraph of UIN description states that the circuits have redundant protective devices in series. The UIN should indicate whether that means each circuit passing through a penetration assembly has redundant protective devices in series or just some circuits.
- (3) The second sentence of first paragraph for item (2) of UIN description states that redundant current protection devices are coordinated with the containment electrical penetration assembly's rated short circuit thermal capacity data. This seems unclear because it is difficult to coordinate protective devices with just data. Typically, protective devices are coordinated with each other based on time current curves with there being the required gap between the curves for the entirety of those curves. The UIN could state that the protective devices trip prior to exceeding the time current curve of the rated short-circuit thermal capacity (I^2t) of an electrical penetration assembly at least in the continuous current range. If there is no time current curve, the UIN could also state that the protective devices trip in the continuous current range prior to exceeding the short circuit thermal capacity of a containment electrical penetration assembly. That rated short-circuit thermal capacity (I^2t) is discussed in Sections 4.2.5 and 4.3.4 of IEEE 317.
- (4) The second sentence of first paragraph for item (2) of UIN description states that the redundant protective devices "prevent" current from exceeding the continuous current rating of the containment electrical penetration assembly. It seems unclear what current the UIN refers to in this sentence. In addition, protective devices do not prevent currents from exceeding the continuous current rating of the penetration assembly, but what they do is interrupt the excessive currents after a certain time to prevent damage to the containment electrical penetration assembly. Excessive currents can occur in any circuit for a variety of reasons. The excessive currents will flow even though for a short time until interrupted by the protective devices after a certain time.
- (5) The third sentence of second paragraph of UIN description states that the analysis of the as-built containment electrical penetration assemblies include the applicable coordination calculations. It is unclear as to how the supporting coordination calculations factor into the analysis performed for the electrical penetration assemblies.

Comparing Demo 5 with the UIN for ITAAC 2.6.03.08

- (1) The first and second sentences of the second paragraph refer to an IDS interrupt capacity rating calculation but neither provides a reference for it. Is this calculation a separate document in addition to the short circuit analysis and protection coordination study?

- (2) Given that the ITAAC does not include a table with the list of breakers and fuses involved with this ITAAC, please include an attachment to this UIN for a table that lists all the breakers and fuses involved with this ITAAC.

UIN for ITAAC 2.6.03.09 (Index No. 618)

- (1) The first paragraph, the first sentence of the UIN refers to batteries, battery chargers, DC distribution panels, and MCCs. The ICN does not address the DC switchboard and Fused Transfer Switch shown in Figure 2.6.3.1 of Tier 1 and in Table 8.3.2-5 of Tier 2 and FSAR.
- (2) The first sentence in the third paragraph states: "The manufacturer's fault current ratings of the as-built IDS batteries, battery chargers, DC distribution panels, and MCCs are inspected in accordance with QS1 10.1-V. Is this inspection of the vendor's documents or the nameplate ratings because typically batteries and battery chargers do not have fault ratings on their nameplates?"
- (3) Given that the ITAAC does not include a table with the list of equipment involved with this ITAAC, please include an attachment to this UIN for a table that lists all the electrical equipment involved with this ITAAC.
- (4) The last sentence in the first paragraph is acceptable for the UIN but would not be acceptable for the ICN due to the wording in the FSAR not being specific as to what standards are used.