

Vogtle PEmails

From: Hoellman, Jordan
Sent: Tuesday, January 10, 2017 2:51 PM
To: Willis, Frederick H.; Nick Kellenberger (SCANA)
Cc: Patel, Chandu; Woods, David F.; Haggerty, Neil; Gleaves, Bill; RICE, APRIL R
Subject: ICN and UIN Discussion Items for January 12, 2017 Public Meeting
Attachments: 2017-01-12 VOGTLE AND SUMMER ICN and UIN Discussion Items.docx

Hi Fred and Nick –

Please see the attached document detailing the ITAAC Closure Notifications (ICNs) and Uncompleted ITAAC Notifications (UINs) that the staff would like to discuss at this week's public meeting, on January 12th, 2017.

Please let me know if you have any questions or concerns.

Thank you,

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Options

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**VOGTLE AND SUMMER
ICN / UIN
ISSUES TRACKING SHEET**

Date	No.	ICN OR UIN	TOPIC	ITAAC INDEX NUMBERS RECEIVED	ISSUE
1/3	10	UIN	AS-built IDS fault currents vs MFRG equipment ratings	Vogtle 3 617, 618,	<p>Item was preliminarily briefed to SNC during public call on 12/15/16.</p> <p>ITAAC 617, 618, and 619 are similar in nature in that each requires the same analyses be performed to determine the as-built IDS dc electrical distribution system fault currents and that the results of the analyses be compared against the manufacturers ratings for the various equipment. We suggest that the three ICNs/UINs be written in the same format with the description for the fault analysis being identical in each ICN/UIN. The current UIN submittals for 617 & 618 do not take this approach. The description provided in UIN 617 is very confusing and can be interpreted incorrectly. While referencing the UFSAR in UIN 618 maybe acceptable for the UIN it would not be acceptable for the ICN because the method is not clearly and specifically defined in section 8.3.2.2.</p> <p>These UINs are confusing to read because they refer to the interrupting ratings of components and protective devices instead of worst case fault currents and vice versa especially in how they are derived; because of incomplete, inaccurate, and no references when required; because of referring to fault currents instead of strictly DC fault currents when AC fault currents could also apply; and because of sentence structure and the incorrect use of some terminology. These UINs and others like them in regard to fault currents should be written similarly and use the correct terminology. They should be able to be understood by an experienced person without any confusion by that person as to what was done for the ITAAC.</p>

Date	No.	ICN OR UIN	TOPIC	ITAAC INDEX NUMBERS RECEIVED	ISSUE
1/3	11	ICN	HFE HIS task support verification	Vogtle 3 Vogtle 4 Summer 2 Summer 3 739,739, 739,739	<p>Item was preliminarily briefed to SNC during public call on 12/15/16.</p> <p>This ICN refers to execution of the HSI task support verification without any explanation of what that is. In addition it discusses an evaluation to ensure the task support verification was conducted in conformance with the Human Factors Engineering Task Support Verification Plan and to verify that the task support verification includes verification that the information and controls provided by the HSI match the display and control requirements generated by the function-based task analyses and the operational sequence analyses. The evaluation is not discussed summarily as to its purpose and what must be done to perform it. There is very little information provided as to what the evaluation accomplishes. In that same vein, there is reference to the results of the evaluation being documented in the AP1000 Human Factors Engineering Task Support Verification Summary Report, APP-OCS-GER-220 without ever stating summarily what those results are and what is included in them. An ICN should provide a summary of what the licensee did to complete an ITAAC in a clear manner not obtusely and also provide references without the references becoming the sum total of the detail provided in the ICN.</p>

Date	No.	ICN OR UIN	TOPIC	ITAAC INDEX NUMBERS RECEIVED	ISSUE
1/3	12	UIN	HFE MCR HSI. resources available	Vogtle 3 751	<p>Item was preliminarily briefed to SNC during public call on 12/15/16.</p> <p>For this UIN, an inspection of the HSI resources is performed to confirm that the HSI resources available in the MCR for the MCR operators at the time of plant startup include an alarm system, plant information system (nonsafety-related displays), wall panel information system, nonsafety-related controls (soft and dedicated), and computerized procedure system. The UIN does not state the purpose of the inspection or what was done to perform it. It merely refers to verification of the inclusion of HSI systems and controls in the MCR without ever stating how that was done or what that exactly means. The UIN also refers to results without stating what those results are and what is contained in them.</p>

Date	No.	ICN OR UIN	TOPIC	ITAAC INDEX NUMBERS RECEIVED	ISSUE
1/9	17	UIN	HFE HSI Design Verification	Vogtle 3 & 4 740	<p>The subject ITAAC performs an evaluation of the implementation of the human system interface (HSI) design verification. The HSI design verification was conducted in conformance with the NRC approved API 000 human factors engineering design verification plan, APP-OCS-GEH-120 (reference 1). The implementation plan includes the methodology by which the HSI resources and operation and control center system design is evaluated against the human factors design guidelines. The results of the evaluation are documented in the AP 1000 human factors engineering design verification report, APP-OCS-GER-120 (reference 2) and conclude the HSI design verification was conducted in accordance with the implementation plan and includes verification that the HSI design is consistent with the AP 1000 specific design guidelines developed for each HSI resource.</p> <p>DEFINE IN SIMPLE TERMS WHAT THE DESIGN VERIFICATION IS AND ITS PURPOSE IN TWO OR THREE SENTENCES WITHOUT GOING INTO TOO MUCH DETAIL. ESSENTIALLY ALL THAT IS GIVEN NOW IS REFERENCES TO DESIGN VERIFICATION PLAN AND THE RESULTS IN DESIGN VERIFICATION REPORT. UNLESS SOMEONE IS PRIVY TO THESE TWO REFERENCES, THE ICN ESSENTIALLY SAYS NOTHING.</p>

Date	No.	ICN OR UIN	TOPIC	ITAAC INDEX NUMBERS RECEIVED	ISSUE
1/3	14	UIN	Electrical separation	Vogtle 3 791	IDB contains an incomplete sentence that makes no sense and needs to be fixed to match same sentence in UIN 826.

Date	No.	ICN OR UIN	TOPIC	ITAAC INDEX NUMBERS RECEIVED	ISSUE
1/3	15	UIN	Capability of the as-built MOVs bound the tested conditions	Vogtle 3 155	<p>The safety-related MOVs for Vogtle Units 3 and 4 will be qualified in accordance with ASME Standard QME-1-2007 as accepted in Revision 3 to RG 1.100 as required by AP1000 DCD Tier 2, Section 3.9.3.2.2, "Valve Operability," as incorporated into the Vogtle UFSAR, and stated in the AP1000 design specifications discussed in NUREG-2124 (NRC FSER for Vogtle Units 3 and 4 COL).</p> <p>With respect to MOVs, ASME Standard QME-1-2007 requires (1) dynamic testing to qualify a specific MOV design with extrapolation provisions to other MOV sizes and designs; (2) dynamic testing of production valves (at the vendor or post-installation) to demonstrate their functional capability consistent with the qualified design; and (3) post-installation and IST baseline testing of each installed MOV.</p> <p>These three aspects of MOV testing in ASME QME-1-2007 are addressed in ITA Items i, ii, and iii of ITAAC 2.2.02.11a. In particular, Item i applies to qualification testing of the MOV design, Item ii applies to dynamic testing of the production valves; and Item iii applies to post-installation and IST baseline testing.</p> <p>The submitted UIN letter for ITAAC 2.2.02.11a.ii addresses inspection activities related to satisfactory installation and the as-built reconciliation report for the PCS MOVs. This information in the submitted UIN letter is appropriate as part of the description of the completion of ITAAC 2.2.02.11a.ii for the PCS MOVs.</p> <p>However, the submitted UIN letter for ITAAC 2.2.02.11a.ii does not address the dynamic testing of production valves to demonstrate their functional capability consistent with the qualified MOV design as required by ASME Standard QME-1-2007. For example, ASME QME-1-2007 requires preparation of a Functional Qualification Report and Application Report to demonstrate that MOVs are capable of performing their design-basis functions.</p> <p>In addition to providing the necessary information in the submitted UIN letter, the UIN letter for ITAAC 2.2.02.11a.ii should also identify the applicable Functional Qualification Reports and Application Reports that were prepared to satisfy ASME Standard QME-1-2007. These reports should be listed in the UIN letter as references that will be available for NRC inspection.</p>

Date	No.	ICN OR UIN	TOPIC	ITAAC INDEX NUMBERS RECEIVED	ISSUE
1/9	16	ICN	Electromagnetic Compatibility qualification of the non-safety related Diverse Actuation System (DAS)	Vogtle 3 & 4 514	<p>Design Commitment of ITAAC: The DAS has electrical surge withstand capability (SWC), and can withstand the electromagnetic interference (EMI), radio frequency (RFI), and electrostatic discharge (ESD) conditions that exist where the DAS equipment is located in the plant.</p> <p>ITAAC Determination Basis in ICN: Electromagnetic Compatibility qualification of the non-safety related Diverse Actuation System (DAS) was performed by a combination of type tests and analyses to demonstrate that the DAS equipment can withstand the SWC, EMI, RFI, and ESD conditions that exist where the DAS equipment is located in the plant (i.e. Auxiliary Building).</p> <p>The DAS equipment were qualified by a combination of type testing and analysis in accordance with Regulatory Guide 1.180, "Guidelines for Evaluating Electromagnetic and Radio-Frequency Interference in Safety-Related Instrumentation and Control Systems" (Reference 2) and the methodology in APP-GW-G1-002, "API 000 Plant Equipment Qualification Methodology" (Reference 1) to demonstrate that DAS equipment can withstand the SWC, EMI, RFI and ESD conditions that exist where the DAS equipment is located in the plant.</p> <p>The results of the tests and analysis are documented in Equipment Qualification Summary Report (EQSR) APP-DAS-VBR-003 and Equipment Qualification Data Package (EQDP) APPDAS-VBR-002 (References 3 and 4) and conclude that the DAS equipment can withstand the SWC, EMI, RFI and ESD conditions that exist where the DAS equipment is located in the plant.</p> <p>Issues with these ICNs:</p> <ol style="list-style-type: none"> 1. Does not spell out acronyms for SWC, EMI, RFI, and ESD 2. Does not state for each what was done by analysis and what was done by testing. The ICN should at least summarize basically what was done to complete the ITAAC. 3. RG 1.180 endorses two standards for EMI/RFI emissions testing MIL-STD-461E and IEC 61000-6-4 test methods. Each has a series of tests with each series having to be completed in their entirety with no mixing and matching of test methods. The ICN does not state which was used and whether used in their entirety. 4. The same RG endorses IEEE C62.41-1991 and the IEC Methods for SWC testing, and does not state which was used or what type of waveforms were applied. 5. The same RG does not address electrostatic discharge (ESD) 6. The methodology that was used was per APP-GW-G1-002, and that document is a not readily available to the public.

Date	No.	ICN OR UIN	TOPIC	ITAAC INDEX NUMBERS RECEIVED	ISSUE
1/9	18	UIN		ICN for #523	- correction to the attachment Verify that the description in UINs for reference ITAAC such as #702 should be 10 sec or 20 sec for VFS-PL-V003, V004, V009, V010.