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Manager
New Nuclear Licensing

April 28, 2017
NND-17-0203
10 CFR 52.99(c)(1)

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

Subject: Virgil C. Summer Nuclear Station (VCSNS) Unit 2
Combined License No. NPF-93
Docket Number 52-027
ITAAC Closure Notification on Completion of ITAAC 2.3.06.07a.i [Index No. 366]

Attachments: (1) References
(2) Excerpt from V.C. Summer Unit 2 COL Appendix C Table 2.3.6-1

The purpose of this letter is to notify the Nuclear Regulatory Commission (NRC) in accordance with 10 CFR 52.99(c)(1) of the completion of Virgil C. Summer Nuclear Station (VCSNS) Unit 2 Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) Item 2.3.06.07a.i for verifying the Class 1E equipment identified in Table 2.3.6-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis event. The closure process for this ITAAC is based on the guidance described in NEI 08-01 (Reference 1), which was endorsed by the NRC in Regulatory Guide 1.215.

ITAAC Statement

Design Commitment:

7.a) *The Class 1E equipment identified in Tables 2.3.6-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.*

Inspections, Tests, Analyses:

i) *Type tests, analyses, or a combination of type tests and analyses will be performed on Class 1E equipment located in a harsh environment.*

Acceptance Criteria:

i) A report exists and concludes that the Class 1E equipment identified in Table 2.3.6-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.

ITAAC Determination Basis

Multiple ITAAC are performed to demonstrate that the Class 1E equipment identified in the V.C. Summer Unit 2 Combined License (COL) Appendix C Table 2.3.6-1 (Attachment 2) as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function. The subject ITAAC requires type tests, analyses, or a combination of type tests and analyses to be performed on Class 1E equipment located in a harsh environment.

Equipment qualification reports for the Class 1E equipment identified in Table 2.3.6-1 as being qualified for a harsh environment conclude that the equipment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.

For Class 1E electrical equipment, a combination of type testing and analysis was performed in accordance with IEEE 323-1974 (Reference 2) and Regulatory Guide 1.89, “Qualification of Class 1E Equipment for Nuclear Power Plants,” to meet the requirements of 10 CFR 50.49, “Environmental Qualification of Electrical Equipment Important to Safety for Nuclear Power Plants.” For safety-related mechanical equipment, such as tanks and valves, type testing meets the requirements of Appendix A to 10 CFR Part 50, General Design Criterion 4, “Environmental and Dynamic Effects Design Bases.” Additional information about the methods used to qualify safety-related equipment supplied for the AP1000 is provided in the V.C. Summer Units 2 & 3 Updated Final Safety Analysis Report, Appendix 3D, “Methodology for Qualifying AP1000 Safety-Related Electrical and Mechanical Equipment” (Reference 3).

Equipment Qualification Data Packages (EQDPs) and Equipment Qualification Summary Reports (EQSRs) (References 4 through 8), are identified in Attachment 2 for each Class 1E electrical component located in a harsh environment. These documents contain the applicable test reports, analyses, and associated documentation and conclude the equipment identified in Table 2.3.6-1, can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.

ITAAC Finding Review

In accordance with plant procedures for ITAAC completion, SCE&G performed a review of all findings pertaining to the subject ITAAC and associated corrective actions. This review found that there are no relevant ITAAC findings associated with this ITAAC. The ITAAC completion review is documented in the ITAAC Completion Package for ITAAC 2.3.06.07a.i (Reference 9) and available for NRC inspection.

ITAAC Completion Statement

Based on the above information, SCE&G hereby notifies the NRC that ITAAC 2.3.06.07a.i was performed for VCSNS Unit 2 and that the prescribed acceptance criteria are met.

Systems, structures, and components verified as part of this ITAAC are being maintained in their as-designed, ITAAC compliant condition in accordance with approved plant programs and procedures.

We request NRC staff confirmation of this determination and publication of the required notice in the Federal Register per 10 CFR 52.99(e)(1).

If there are any questions, please contact Ryder Thompson at (803) 941-9812.

Sincerely,

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RT/AR/rc

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Attachment 1

References (available for NRC inspection):

1. NEI 08-01, “Industry Guideline for the ITAAC Closure Process Under 10 CFR Part 52”

2. IEEE Std. 323-1974, “IEEE Standard for Qualifying Class 1E Equipment for Nuclear Generating Stations”

3. Updated Final Safety Analysis Report, Appendix 3D, “Methodology for Qualifying AP1000 Safety-Related Electrical and Mechanical Equipment”

4. APP-PV01-VBR-012, “Equipment Qualification Data Package for Flowserve Flex Wedge Gate Valves with Limitorque Motor Operators for Use in the AP1000 Plant”

5. APP-PV01-VBR-011, “Equipment Qualification Summary Report for Flowserve Flex Wedge Gate Valves with Limitorque Motor Operators for Use in the AP1000 Plant”

6. APP-PV14-VBR-001, “Equipment Qualification Summary Report for Fisher HPNS Control Valves for Use in the AP1000 Plant”

7. APP-PV14-VBR-002, “Equipment Qualification Data Package for Fisher HPNS Control Valves for Use in the AP1000 Plant”

8. APP-GW-GEF-1844, “Reduced Qualified Life of ASCO Solenoid Valves for PV10, PV14, and PV20 Commodities to Address CAPAL #100435653”

9. ITAAC 2.3.06.07a.i Completion Package

Attachment 2

EXCERPT FROM V.C. SUMMER UNIT 2 COL APPENDIX C TABLE 2.3.6-1

SYSTEM: NORMAL RESIDUAL HEAT REMOVAL SYSTEM

Equipment Name	Tag Number	Class 1E/ Qual. For Harsh Environ.	EQ Summary Report	EQ Data Package
RCS Inner Hot Leg Suction Motor-operated Isolation Valve	RNS-PL-V001A	Yes/Yes	APP-PV01-VBR-011	APP-PV01-VBR-012
RCS Inner Hot Leg Suction Motor-operated Isolation Valve	RNS-PL-V001B	Yes/Yes	APP-PV01-VBR-011	APP-PV01-VBR-012
RCS Outer Hot Leg Suction Motor-operated Isolation Valve	RNS-PL-V002A	Yes/Yes	APP-PV01-VBR-011	APP-PV01-VBR-012
RCS Outer Hot Leg Suction Motor-operated Isolation Valve	RNS-PL-V002B	Yes/Yes	APP-PV01-VBR-011	APP-PV01-VBR-012
RNS Suction from IRWST Motor-operated Isolation Valve	RNS-PL-V023	Yes/Yes	APP-PV01-VBR-011	APP-PV01-VBR-012
RNS Return from Chemical and Volume Control System (CVS) Containment Isolation Valve	RNS-PL-V061	Yes/Yes	APP-PV14-VBR-001 APP-GW-GEF-1844	APP-PV14-VBR-002 APP-GW-GEF-1844