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SCE&G
A SCANA COMPANY

June 26, 2017
NND-17-0347
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 2.7.01.05.ii [Index No. 685]

Attachments: (1) References
(2) Excerpt from V.C. Summer Unit 2 COL Appendix C Table 2.7.1-1

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 2.7.01.05.ii for verifying that a report exists and concludes that the seismic Category I equipment supporting the Nonradioactive Ventilation System can withstand seismic design basis loads without loss of safety function. 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:

5. *The seismic Category I equipment identified in Table 2.7.1-1 can withstand seismic design basis loads without loss of safety function.*

Inspections, Tests, Analyses:

ii) Type tests, analyses, or a combination of type tests and analyses of seismic Category I equipment will be performed.

Acceptance Criteria:

ii) A report exists and concludes that the seismic Category I equipment can withstand seismic design basis loads without loss of safety function.

ITAAC Determination Basis

Multiple ITAAC are performed to demonstrate that the seismic Category I components identified in V.C. Summer Unit 2 Combined License Appendix C Table 2.7.1-1 (Attachment 2) can withstand seismic design basis loads without loss of safety function. The subject ITAAC requires type tests, analyses, or a combination of type tests and analyses to be performed on seismic Category I components identified in Table 2.7.1-1.

The seismic Category I valves listed in Table 2.7.1-1 were qualified using a combination of type tests and analyses to demonstrate structural integrity and operability. Structural integrity of the seismic Category I valves was demonstrated by analysis in accordance with American Society of Mechanical Engineers Boiler and Pressure Vessel (B&PV) Code Section III, Rules for Construction of Nuclear Power Plant Components (Reference 2). For the subset of active safety-related valves identified in Table 2.7.1-1, functionality of the active valves under seismic loads was accomplished by using the guidance of ASME QME-1-2007 (Reference 3).

Safety-related (Class 1E) electrical equipment identified in Table 2.7.1-1 was seismically qualified by type testing combined with analysis in accordance with IEEE Std. 344-1987 (Reference 4). This equipment includes safety-related active valve accessories such as electric actuators, position switches, and electrical connector assemblies.

The specific qualification method (i.e., type testing, analysis, or combination) used for each component is identified in Attachment 2. 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 (UFSAR) Appendix 3D, “Methodology for Qualifying AP1000 Safety-Related Electrical and Mechanical Equipment,” (Reference 5).

Equipment Qualification Data Packages (EQDPs) and Equipment Qualification Summary Reports (EQSRs) (References 6 through 13) are identified in Attachment 2 for each seismic Category I components identified in Table 2.7.1-1. The EQDPs and EQSRs contain applicable test reports and associated documentation and conclude that the seismic Category I equipment can withstand seismic design basis loads without loss of safety function.

ITAAC Finding Review

In accordance with plant procedures for ITAAC completion, SCE&G performed a review of all ITAAC findings pertaining to the subject ITAAC and associated corrective actions. This review found one (1) Notice of Nonconformance associated with this ITAAC:

1. 99901412/2012-201-02

The corrective actions for the finding have been completed and the finding is closed. The ITAAC completion review is documented in the V.C. Summer Unit 2 ITAAC Completion Package for ITAAC 2.7.01.05.ii (Reference 14) and available for NRC inspection.

ITAAC Completion Statement

Based on the above information, SCE&G hereby notifies the NRC that ITAAC 2.7.01.05.ii 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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Manager
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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. American Society of Mechanical Engineers (ASME) Boiler & Pressure Vessel Code, 1998 Edition with 2000 Addenda, Section III, “Rules for Construction of Nuclear Power Plant Components”

3. ASME QME-1-2007, “Qualification of Active Mechanical Equipment Used in Nuclear Power Plants”

4. IEEE Std. 344-1987, “IEEE Recommended Practices for Seismic Qualification of Class 1E Equipment for Nuclear Power Generating Stations”

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

6. APP-PV02-VBR-010, “Equipment Qualification Data Package for PV02 Manually Operated Globe Valves for Use in the AP1000 Plant”

7. APP-PV02-VBR-009, “Equipment Qualification Summary Report for PV02 Manually Operated Globe Valves for Use in the AP1000 Plant”

8. APP-PV03-VBR-006, “Equipment Qualification Data Package for Non-Active Flex Wedge Gate Valves for Use in the AP1000 Plant”

9. APP-PV03-VBR-005, “Equipment Qualification Summary Report for Non-Active Flex Wedge Gate Valves for Use in the AP1000 Plant”

10. APP-PV11-VBR-006, “Equipment Qualification Data Package for Motor-Operated TRICENTRIC Butterfly Valve for Use in the AP1000 Plant”

11. APP-PV11-VBR-005, “Equipment Qualification Summary Report for Motor-Operated TRICENTRIC Butterfly Valves for Use in the AP1000 Plant”

12. APP-PV18-VBR-002, “Equipment Qualification Data Package for Vacuum Relief Valves and Vacuum Breaker Valves for Use in the AP1000 Plant”

13. APP-PV18-VBR-001, “Equipment Qualification Summary Report for Vacuum Relief Valves and Vacuum Breaker Valves for Use in the AP1000 Plant”

14. ITAAC 2.7.01.05.ii Completion Package

Attachment 2

EXCERPT FROM V.C. SUMMER UNIT 2 COL APPENDIX C TABLE 2.7.1-1

SYSTEM: NONRADIOACTIVE VENTILATION SYSTEM

Equipment Name	Tag No.	Seismic Cat. I	Active Function	Type of Qualification	Qualification Report Numbers
MCR Supply Air Isolation Valve	VBS-PL-V186	Yes	Transfer Closed	Type Tests & Analyses	APP-PV11-VBR-005 APP-PV11-VBR-006
MCR Supply Air Isolation Valve	VBS-PL-V187	Yes	Transfer Closed	Type Tests & Analyses	APP-PV11-VBR-005 APP-PV11-VBR-006
MCR Return Air Isolation Valve	VBS-PL-V188	Yes	Transfer Closed	Type Tests & Analyses	APP-PV11-VBR-005 APP-PV11-VBR-006
MCR Return Air Isolation Valve	VBS-PL-V189	Yes	Transfer Closed	Type Tests & Analyses	APP-PV11-VBR-005 APP-PV11-VBR-006
MCR Exhaust Air Isolation Valve	VBS-PL-V190	Yes	Transfer Closed	Type Tests & Analyses	APP-PV11-VBR-005 APP-PV11-VBR-006
MCR Exhaust Air Isolation Valve	VBS-PL-V191	Yes	Transfer Closed	Type Tests & Analyses	APP-PV11-VBR-005 APP-PV11-VBR-006
PWS MCR Isolation Valve	PWS-PL-V418	Yes	Transfer Closed	Type Tests & Analyses	APP-PV02-VBR-009 APP-PV02-VBR-010
PWS MCR Isolation Valve	PWS-PL-V420	Yes	Transfer Closed	Type Tests & Analyses	APP-PV02-VBR-009 APP-PV02-VBR-010
PWS MCR Vacuum Relief	PWS-PL-V498	Yes	Transfer Open	Type Tests & Analyses	APP-PV18-VBR-001 APP-PV18-VBR-002

Equipment Name	Tag No.	Seismic Cat. I	Active Function	Type of Qualification	Qualification Report Numbers
MCR SDS (Vent) Isolation Valve	SDS-PL-V001	Yes	Transfer Closed	Type Tests & Analyses	APP-PV11-VBR-005 APP-PV11-VBR-006
MCR SDS (Vent) Isolation Valve	SDS-PL-V002	Yes	Transfer Closed	Type Tests & Analyses	APP-PV11-VBR-005 APP-PV11-VBR-006
MCR WWS Isolation Valve	WWS-PL-V506	Yes	-	Analyses	APP-PV03-VBR-005 APP-PV03-VBR-006