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NND-17-0181
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 2.3.07.05.ii [Index
No. 397]

Attachments: (1) References
(2) Excerpt from V.C. Summer Unit 2 Combined License Appendix C
Table 2.3.7-1

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 2.3.07.05.ii for verifying that a report exists and concludes that the seismic Category I equipment in the Spent Fuel Pool Cooling 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 components identified in Table 2.3.7-1 can withstand seismic design basis loads without loss of safety functions.*

Inspections, Tests, Analyses:

- ii) *Type tests, analyses, or a combination of type tests and analyses of seismic Category 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 (COL) Appendix C Table 2.3.7-1 (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 2.3.7-1.

The seismic Category I valves listed in Table 2.3.7-1 were qualified using a combination of type tests and analyses to demonstrate structural integrity and operability. Structural integrity of all 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 2.3.7-1, 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 2.3.7-1 was seismically qualified by type testing combined with analysis in accordance with IEEE Std 344-1987 (Reference 4). This equipment includes safety-related (Class 1E) field sensors and the safety-related active valve accessories such as electric actuators, position switches, pilot solenoid valves 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 15) are identified in Attachment 2 for each seismic Category I component identified in Table 2.3.7-1. 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) closed Notice of Nonconformance (NON) associated with this ITAAC:

1. 99901412/2012-201-02

The corrective actions for the finding have been completed and the finding is closed. This review is documented in the V.C. Summer Unit 2 ITAAC Completion Package for ITAAC 2.3.07.05.ii (Reference 16), which is available for NRC inspection.

ITAAC Completion Statement

Based on the above information, SCE&G hereby notifies the NRC that ITAAC 2.3.07.05.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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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-JE52-VBR-001, "Equipment Qualification Summary Report for DTN2070 Pressure and Differential Pressure Transmitter for Use in the AP1000 Plant"
7. APP-JE52-VBR-002, "Equipment Qualification Data Package for Model DTN2070, Pressure and Differential Pressure Transmitter for Use in the AP1000 Plant"
8. APP-PV11-VBR-001, "Equipment Qualification Summary Report for Manual TRICENTRIC Butterfly Valves for Use in the AP1000 Plants"
9. APP-PV11-VBR-002, Equipment Qualification Data Package for Manual TRICENTRIC Butterfly Valves for Use in the AP1000 Plant"
10. APP-PV10-VBR-001, "Equipment Qualification Summary Report for Manually Operated Plug Valves for Use in the AP1000 Plant"
11. APP-PV10-VBR-002, "Equipment Qualification Data Package for Manually Operated Plug Valves for Use in the AP1000 Plant"
12. APP-PV10-VBR-007, "Equipment Qualification Summary Report for Manually Operated Ball Valves for Use in the AP1000 Plant"
13. APP-PV10-VBR-008, "Equipment Qualification Data Package for Manually Operated Ball Valves for Use in the AP1000 Plant"

14. APP-PV03-VBR-013, "Equipment Qualification Summary Report for Flowserve Self-Actuated Swing Check Valves for Use in the AP1000 Plant"
15. APP-PV03-VBR-014, "Equipment Qualification Data Package for Flowserve Self-Actuated Swing Check Valves for Use in the AP1000 Plant"
16. ITAAC 2.3.07.05.ii Completion Package

Attachment 2

Excerpt from V.C. Summer Unit 2 Combined License Appendix C Table 2.3.7-1

SYSTEM: SPENT FUEL POOL COOLING SYSTEM

Equipment Name	Tag Number	Seismic Cat. I	Type of Qualification	Qualification Report Numbers
Spent Fuel Pool Level Sensor	SFS-019A	Yes	Type Tests & Analyses	APP-JE52-VBR-001 APP-JE52-VBR-002
Spent Fuel Pool Level Sensor	SFS-019B	Yes	Type Tests & Analyses	APP-JE52-VBR-001 APP-JE52-VBR-002
Spent Fuel Pool Level Sensor	SFS-019C	Yes	Type Tests & Analyses	APP-JE52-VBR-001 APP-JE52-VBR-002
Refueling Cavity Drain to SGS Compartment Isolation Valve	SFS-PL-V031	Yes	Type Tests & Analyses	APP-PV11-VBR-001 APP-PV11-VBR-002
Refueling Cavity to SFS Pump Suction Isolation Valve	SFS-PL-V032	Yes	Type Tests & Analyses	APP-PV11-VBR-001 APP-PV11-VBR-002
Refueling Cavity Drain to Containment Sump Isolation Valve	SFS-PL-V033	Yes	Type Tests & Analyses	APP-PV10-VBR-001 APP-PV10-VBR-002
IRWST to SFS Pump Suction Line Isolation Valve	SFS-PL-V039	Yes	Type Tests & Analyses	APP-PV11-VBR-001 APP-PV11-VBR-002
Fuel Transfer Canal to SFS Pump Suction Iso. Valve	SFS-PL-V040	Yes	Type Tests & Analyses	APP-PV11-VBR-001 APP-PV11-VBR-002
Cask Loading Pit to SFS Pump Suction Isolation Valve	SFS-PL-V041	Yes	Type Tests & Analyses	APP-PV11-VBR-001 APP-PV11-VBR-002
Cask Loading Pit to SFS Pump Suction Isolation Valve	SFS-PL-V042	Yes	Type Tests & Analyses	APP-PV11-VBR-001 APP-PV11-VBR-002
SFS Pump Discharge Line to Cask Loading Pit Isolation Valve	SFS-PL-V045	Yes	Type Tests & Analyses	APP-PV11-VBR-001 APP-PV11-VBR-002

Equipment Name	Tag Number	Seismic Cat. I	Type of Qualification	Qualification Report Numbers
Cask Loading Pit to WLS Isolation Valve	SFS-PL-V049	Yes	Type Tests & Analyses	APP-PV10-VBR-001 APP-PV10-VBR-002
Spent Fuel Pool to Cask Washdown Pit Isolation Valve	SFS-PL-V066	Yes	Type Tests & Analyses	APP-PV10-VBR-007 APP-PV10-VBR-008
Cask Washdown Pit Drain Isolation Valve	SFS-PL-V068	Yes	Type Tests & Analyses	APP-PV11-VBR-001 APP-PV11-VBR-002
Refueling Cavity Drain Line Check Valve	SFS-PL-V071	Yes	Type Tests & Analyses	APP-PV03-VBR-013 APP-PV03-VBR-014
Refueling Cavity Drain Line Check Valve	SFS-PL-V072	Yes	Type Tests & Analyses	APP-PV03-VBR-013 APP-PV03-VBR-014
SFS Containment Floodup Isolation Valve	SFS-PL-V075	Yes	Type Tests & Analyses	APP-PV11-VBR-001 APP-PV11-VBR-002