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NND-17-0384
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 3
Combined License No. NPF-94
Docket Number 52-028
ITAAC Closure Notification on Completion of ITAAC 2.5.02.07c [Index
No. 536]

Attachments: (1) References

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 3 Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) Item 2.5.02.07c for verifying data communication between safety and non-safety systems does not inhibit the performance of safety functions. 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.c) *Data communication between safety and nonsafety systems does not inhibit the performance of the safety function.*

Inspections, Tests, Analyses:

Type tests, analyses, or a combination of type tests and analyses of the PMS gateways will be performed.

Acceptance Criteria:

A report exists and concludes that data communication between safety and nonsafety systems does not inhibit the performance of the safety function.

ITAAC Determination Basis

The subject ITAAC requires type tests, analyses, or a combination of type tests and analyses of the PMS gateways be performed to verify the data communication between safety and nonsafety systems, via gateways, does not inhibit the performance of the safety function. The safety system is the Protection and Safety Monitoring System (PMS) and the nonsafety system which directly communicates through PMS gateways is the Data Display and Processing System (DDS).

Analysis was performed to demonstrate the methods of data communication from the safety system to the nonsafety system through PMS gateways would not inhibit the performance of the required safety function in PMS. The analysis consisted of a review of the design documentation and physical arrangement of the PMS gateways. The PMS gateways are unidirectional fiber-optic data communication links between the safety and nonsafety systems. Data can only be transferred from the safety system to the nonsafety system through the PMS gateways. This arrangement prevents all data flow (data, protocols, and handshaking) from the non-safety system to the safety system providing the communication isolation as required by Institute of Electrical and Electronics Engineers (IEEE) 7-4.3.2 (Reference 2). The flow of information between the two gateway subsystems is strictly from the safety subsystem to the nonsafety subsystem. The unidirectional nature of the gateway is assured by the use of a single fiber-optic cable to connect the two gateway subsystems. Within the safety system, the fiber-optic cable is connected to an optical transmitter. Within the nonsafety system, the fiber-optic cable is connected to a fiber-optic receiver. This one-way interface through the PMS gateways prevents the nonsafety system from inhibiting performance of the required safety function in PMS.

The results of the analyses are documented in APP-GW-GLR-803, "Technical Report to Support ITAAC 2.5.02.07c: Data Communication Between Safety and Non-Safety Systems" (Reference 3), which concludes data communication between safety and nonsafety systems does not inhibit the performance of 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 2.5.02.07c (Reference 4) and available for NRC inspection.

ITAAC Completion Statement

Based on the above information, SCE&G hereby notifies the NRC that ITAAC 2.5.02.07c was performed for VCSNS Unit 3 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. IEEE 7-4.3.2-1993, "IEEE Standard Criteria for Digital Computers in Safety Systems of Nuclear Power Generating Stations"
3. APP-GW-GLR-803, Revision 0, "Technical Report to Support ITAAC 2.5.02.07c: Data Communication Between Safety and Non-Safety Systems"
4. ITAAC 2.5.02.07c Completion Package