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A SCANA COMPANY

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Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Sir / Madam:

Subject: VIRGIL C. SUMMER NUCLEAR STATION (VCSNS), UNIT 1
DOCKET NO. 50-395
OPERATING LICENSE NO. NPF-12
LICENSE AMENDMENT REQUEST - LAR (17-04110)
TECHNICAL SPECIFICATION CHANGE REQUEST FOR THE REVISION OF THE SURVEILLANCE FREQUENCY OF THE TURBINE TRIP FUNCTIONAL UNIT.
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

References:
1. Letter from G.A. Lippard, SCE&G, to NRC Document Control Desk, "LICENSE AMENDMENT REQUEST - LAR (17-04110) TECHNICAL SPECIFICATION CHANGE REQUEST FOR THE REVISION OF THE SURVEILLANCE FREQUENCY OF THE TURBINE TRIP FUNCTIONAL UNIT", dated April 3, 2018 [ML18094A189]

2. Letter from S.A. Williams, NRC, to G.A. Lippard, SCE&G, "VIRGIL C. SUMMER NUCLEAR STATION, UNIT NO. 1 – REQUEST FOR ADDITIONAL INFORMATION RE: SURVEILLANCE FREQUENCY OF THE TURBINE TRIP FUNCTION UNIT (EPID NO. L-2018-LLA-0085)", dated July 23, 2018 [ML18204A007].

South Carolina Electric & Gas Company (SCE&G), acting for itself and as agent for South Carolina Public Service Authority, submitted a License Amendment Request to change the Technical Specifications (TSs) for the Virgil C. Summer Nuclear Plant (Reference 1). The proposed amendment would change Functional Units 17.A and 17.B of TS Table 4.3-1, "Reactor Trip System Instrumentation Surveillance Requirements". The NRC staff's review of the License Amendment Request determined additional information was required and a request for additional information (RAI) was issued (Reference 2).

Enclosed is SCE&G's response to this RAI.

If you have any questions or require additional information, please contact Michael S. Moore at (803) 345-4752.

Very truly yours,

George A. Lippard

BAB/GAL/wk

Enclosure: Response to Request for Additional Information

c:	J.E. Addison	NRC Resident Inspector
	W.K. Kissam	K.M. Sutton
	J. B. Archie	S.E. Jenkins
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	G. J. Lindamood	NSRC
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	S. A. Williams	PRSF (RC-18-0100)

VIRGIL C. SUMMER NUCLEAR STATION (VCSNS) UNIT 1
DOCKET NO. 50-395
OPERATING LICENSE NO. NPF-12

ENCLOSURE

Response to Request For Additional Information For
LICENSE AMENDMENT REQUEST - LAR (17-04110) TECHNICAL SPECIFICATION CHANGE REQUEST FOR THE REVISION OF THE SURVEILLANCE FREQUENCY OF THE TURBINE TRIP FUNCTIONAL UNIT.

During the NRC review, the staff identified an area where insufficient information was provided in the License Amendment Request to conduct the detailed review. This area is as follows:

RAI No. 1

Regulatory Basis - Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50.36 "Technical specifications," establish the requirements related to the content of the Technical Specifications (TS). Section 50.36(c)(3) states: "Surveillance requirements. Surveillance requirements are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions for operation will be met."

Page 1 of Attachment 1 to the license amendment request states that "This change is desired because of the significant risk of causing a Safety Injection (SI) during the performance of this surveillance test prior to reactor startup. The steam demand required for this surveillance causes a cooldown of the Reactor Coolant System (RCS), and with very low decay heat, produces a large cooldown and depressurization. This configuration increases the potential of causing a SI due to the rapid cooldown and depressurization of the Main Steam and RCS."

Given the risk of generating a SI signal during performance of the surveillance with very low decay heat (currently performed in Mode 3), the NRC staff requests the licensee to confirm that performing this surveillance in Mode 2 does not increase the risk of generating an SI signal. In addition, staff requests the licensee to confirm that performing this surveillance at power (up to 5% as allowed in Mode 2) does not have any unintended consequences.

SCE&G Response

The station's current revision of TS requires the surveillance test of the reactor trip system instrumentation that initiates a turbine trip be performed prior to MODE 2. In order to comply with the requirements of Table 4.3-1, Functional Unit 17.A and 17.B, VCSNS performs Surveillance Test Procedure 142.005, "Turbine Trip Actuating Device Operational Test", prior to the availability of nuclear heat (Mode 3). If it is performed during secondary plant heat up, the only heat input to the secondary system is that from decay heat and the reactor coolant pumps. When the Main Turbine is reset prior to performing this test, the Main Stop Valves open causing a sudden demand on the Main Steam supply. With the limited amount of heat available prior to

reactor startup, this sudden demand will drop the Main Steam pressure with a corresponding drop in the RCS pressure. A SI will occur if the pressurizer pressure drops to 1850 PSIG or the steam line pressure drops to 675 PSIG. This cooldown decreases the margin to a SI on low Steam Header Pressure and forces the crew to expedite performance of the surveillance test.

Performance of this Surveillance Test Procedure while the plant is in Mode 2 would not increase the risk of generating a SI signal or result in any unintended consequences. Removing the startup requirement will allow the test to be performed with reactor power sufficient (up to 5%) to prevent a SI due to the rapid cooldown and depressurization of the Main Steam and RCS. In the requested change to be in a Mode 2 configuration, the Steam Header Pressure would be maintained by additional steam flow from the Steam Generators. Since the reactor would be critical above the Point of Adding Heat, this additional steam flow would cause a small power increase, instead of an RCS cooldown, which is what currently happens. With the reactor above the Point of Adding Heat, RCS temperature and Steam Header pressure would remain constant, and margin to Safety Injection would also remain constant.