

George A. Lippard
Vice President, Nuclear Operations
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April 28, 2016
RC-16-0059

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 12-02439
TECHNICAL SPECIFICATION CHANGE REQUEST FOR TS 3.5.4
REFUELING WATER STORAGE TANK (RWST)

- References:
1. SCE&G Letter from T. D. Gatlin to Document Control Desk (NRC), "License Amendment Request – LAR 10-03912 Technical Specification Change Request for TS 3.5.4, Refueling Water Storage Tank (RWST)," dated June 29, 2012 [ML121850005]
 2. Letter from Robert E. Martin (NRC) to T.D. Gatlin (SCE&G), "Virgil C. Summer Nuclear Station, Unit No. 1, Issuance of Amendment (TAC No. ME8952)," dated October 12, 2012 [ML12270A301]

South Carolina Electric & Gas Company (SCE&G), acting for itself and as an agent for South Carolina Public Service Authority pursuant to 10 CFR 50.90, hereby submits a request for amendment to Technical Specifications (TS).

In Reference 1, SCE&G submitted a TS change revising 3.5.4, "Refueling Water Storage Tank," such that the nonseismically qualified piping of the Spent Fuel Pool (SFP) purification system may be connected to the RWST's seismic piping by manual operation of a RWST seismically qualified boundary valve under administrative controls for performance of RWST surveillance requirements and filtration. This TS change added a note to the Limiting Condition of Operation (LCO) for TS 3.5.4. The NRC approved the LAR as Amendment 192 (Reference 2).

This proposed amendment would delete the LCO note associated with TS 3.5.4, "Refueling Water Storage Tank," to reflect the current Refueling Water Storage Tank (RWST) system design. Attachment I provides an evaluation of the changes proposed in this LAR. Attachment II contains a marked-up version of the affected TS page. Attachment III contains a reprinted version of the affected TS page.

In accordance with 10 CFR 50.91, a copy of this application, with attachments, is being provided to the designated South Carolina Official.

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This proposed change has been reviewed and approved by both the VCSNS Plant Safety Review Committee and the VCSNS Nuclear Safety Review Committee.

SCE&G requests approval of the proposed amendment by November 30, 2016. Once approved, the amendment shall be implemented within 30 days.

The proposed change does not include any new commitments. If you have any questions or require additional information, please contact Bruce Thompson at (803) 931-5042.

I certify under penalty of perjury that the information contained herein is true and correct.

4/28/16
Executed on


George A. Lippard

WLT/GAL/BD

Attachments:

- I. Analysis of Proposed Technical Specification Change
- II. Proposed Change - Marked Up TS Page
- III. Proposed TS Pages - Retyped

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VIRGIL C. SUMMER NUCLEAR STATION (VCSNS) UNIT 1

ATTACHMENT I

ANALYSIS OF PROPOSED TECHNICAL SPECIFICATION CHANGE

Subject: This evaluation supports a request to amend South Carolina Electric & Gas Company (SCE&G), Technical Specifications (TS) 3.5.4 "Refueling Water Storage Tank," by removing a note for the Limiting Condition for Operation (LCO).

1.0 SUMMARY DESCRIPTION

In accordance with the provisions of Section 50.90 of Title 10 of the Code of Federal Regulations, South Carolina Electric & Gas Company, acting for itself and as agent for South Carolina Public Service Authority, requests Nuclear Regulatory Commission (NRC) review and approval to amend Operating License NPF-12 for Virgil C. Summer Nuclear Station (VCSNS) Unit 1.

The proposed change would delete the LCO Note associated with TS 3.5.4, "Refueling Water Storage Tank," to reflect the current Refueling Water Storage Tank (RWST) system design and ensure the RWST system operation is consistent with TS 3.5.4 requirements.

The proposed change will delete the following note associated with TS 3.5.4 LCO:

RWST piping may be unisolated from non-safety related piping for ≤ 4 hours under administrative controls to perform SR 4.5.4.a.2.

RWST piping may be unisolated from non-safety related piping for ≤ 30 days (cumulative) per fuel cycle under administrative controls for filtration.

These alignments cannot be used after RF-22 (Fall 2015).

2.0 DETAILED DESCRIPTION

The proposed change is a non-technical change only.

VCSNS TS 3.5.4, "Refueling Water Storage Tank," is applicable in Modes 1, 2, 3 and 4. TS 3.5.4 contains a note (see Section 1.0) that allows the RWST to align to the non-safety related Spent Fuel (SF) Purification system for periodic cleaning and boron mixing of the safety related RWST. This note was added to TS by Amendment 192 (Reference 2) and has since expired. This note is being removed following the implementation in the fall 2015 refueling outage of the modification described below.

Permanent plant modifications were implemented under 10CFR50.59 during the fall 2015 refueling outage to prevent drainage of the RWST below the TS minimum level of 461.4 feet without operator interaction. The modification (Engineering Change Request 50879) installed a safety related stand pipe, or riser loop seal, before the Refueling Water Storage Tank Spent Fuel Purification Header Support Isolation Valve, with sufficient elevation to maintain a required volume in the RWST and sized to allow adequate flow and Net Positive Suction Head (NPSH) to the Spent Fuel Purification Pump. The loop seal piping, is located on the outside wall of the Auxiliary Building (AB), and provides a seismically qualified pipe to a level above the current RWST low level of 93% of the tank volume or 597.1 inches (Approximate El. 461.76 ft.). Suction is taken from the existing 10 inch pipe upstream of the Refueling Water Storage Tank Spent Fuel Isolation Valve, inside the tank pit. RWST Loop Seal Isolation Valve (a normally closed isolation valve) was installed in the riser loop to prevent flow into the loop when the 10 inch line is being utilized to fill the RWST. The riser loop discharges into the 3 inch pipe upstream of the Refuel Water Storage Tank Spent Fuel Purification Header Support Isolation valve. The remaining 3 inch pipe, connected to the 20 inch pipe beyond the Refueling Water Storage Tank Outlet Valve was capped. A vent pipe was installed at the top of the riser loop, tying into the RWST vent pipe. A bypass line connecting the two legs of the riser loop was provided allowing for operation of the purification system at low tank volume levels. This bypass contains a locked closed valve, XVA78094-SF, RWST Loop Seal Bypass Isolation Valve.

3.0 TECHNICAL EVALUATION

The proposed change is a non-technical change which removes an expired note added by Amendment 192 (Reference 2). VCSNS has implemented a modification that renders this note no longer necessary.

Given that this change is a non-technical change, additional Technical Evaluation is not necessary. The modification was made under the 10CFR50.59 process.

4.0 REGULATORY EVALUATION

4.1 Applicable Regulatory Requirements / Criteria

4.1.1 GDC 2

General Design Criteria (GDC) 2 establishes the requirements that structures, systems, and components important to safety shall be designed to withstand the effects of natural phenomena such as earthquakes, tornadoes, hurricanes, floods, tsunamis, and seiches without loss of capability to perform their safety functions.

The modification described in Section 2 provide a seismically qualified pipe to a level above the current RWST low level of 93% of the tank volume or 597.1 inches (Approximate El. 461.76 ft). This modification ensures that the RWST will not drain below the TS minimum level should a seismic event cause failure in the SF purification piping when aligned to the RWST.

4.2 Precedent

None. This TS change is unique to V.C. Summer Nuclear Station, Unit 1.

4.3 No Significant Hazards Consideration

1. Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No. This LAR proposes a non-technical change only. The SFP Purification Loop is not credited for safe shutdown of the plant or accident mitigation. A combination of design and administrative controls ensure that the SFP Purification Loop maintains RWST boron concentration and water volume requirements whenever the contents of the RWST are processed through the system.

Since the RWST will continue to perform its safety function and meet all surveillance requirements, overall system performance is not affected. Assumptions previously made in evaluating the consequences of the accident are not altered, and the consequences of the accident are not increased. Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No. This LAR proposes a non-technical change only. The proposed change will not alter the design requirements of any Structure, System or Component or its function during accident conditions. No new or different accidents result from the proposed changes. The changes do not alter assumptions made in the safety analysis.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any previously evaluated.

3. Does the proposed change involve a significant reduction in a margin of safety?

Response: No. This LAR proposes a non-technical change only. The proposed changes do not alter the manner in which safety limits, limiting safety system settings or limiting conditions for operation are determined. The safety analysis acceptance criteria are not affected by these changes. The proposed changes will not result in plant operation in a configuration outside the design basis. The proposed changes do not adversely affect systems that respond to safely shutdown the plant and to maintain the plant in a safe shutdown condition.

Therefore, the proposed change does not involve a significant reduction in a margin of safety.

4.4 Conclusion

Based on the above, SCE&G concludes that the proposed amendment presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and accordingly, a finding of "no significant hazards consideration" is justified.

5.0 Environmental Consideration

This LAR proposes a non-technical change only. SCE&G has evaluated the proposed amendment change and determined the changes do not involve (i) a significant hazards consideration, (ii) a significant change in the types or a significant increase in the amounts of any effluents that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure.

Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10CFR51.22(c)(9). Therefore, pursuant to 10CFR51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

6.0 REFERENCES

1. Letter from T.D. Gatlin (VCSNS) to Document Control Desk (NRC), "License Amendment Request – LAR 10-03912 Technical Specification Change Request for TS 3.5.4, Refueling Water Storage Tank (RWST)," dated June 29, 2012 (RC-12-0075) [ML121850005]
2. Letter from Robert E. Martin (NRC) to T.D. Gatlin (SCE&G), "Virgil C. Summer Nuclear Station, Unit No. 1, Issuance of Amendment (TAC No. ME8952)," dated October 12, 2012 [ML12270A301]
3. Letter from T.D. Gatlin (VCSNS) to Document Control Desk (NRC), "South Carolina Electric & Gas (SCE&G) Response to Request for Additional Information License Amendment Request – LAR 10-03912 Technical Specification Change Request for TS 3.5.4 Refueling Water Storage Tank (RWST)," dated September 12, 2012 (RC-12-0132) [ML12258A073]
4. Letter from T.D. Gatlin (VCSNS) to Document Control Desk (NRC), "South Carolina Electric & Gas (SCE&G) Response to Request for Additional Information License Amendment Request – LAR 10-03912 Technical Specification Change Request for TS 3.5.4 Refueling Water Storage Tank (RWST)," dated September 20, 2012 (RC-12-0141) [ML12268A319]
5. Letter from T.D. Gatlin (VCSNS) to Document Control Desk (NRC), "South Carolina Electric & Gas (SCE&G) Response to Request for Additional Information License Amendment Request – LAR 10-03912 Technical Specification Change Request for TS 3.5.4 Refueling Water Storage Tank (RWST)," dated October 10, 2012 (RC-12-0146) [ML12286A331]

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ATTACHMENT II

PROPOSED CHANGE – MARKED UP TS PAGE

EMERGENCY CORE COOLING SYSTEMS

3/4.5.4 REFUELING WATER STORAGE TANK

LIMITING CONDITION FOR OPERATION

3.5.4 The refueling water storage tank (RWST) shall be OPERABLE ☒ with:

- a. A minimum contained borated water volume of 453,800 gallons,
- b. A boron concentration of between 2300 and 2500 ppm of boron, and
- c. A minimum water temperature of 40°F.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With the refueling water storage tank inoperable, restore the tank to OPERABLE status within 1 hour or be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.5.4 The RWST shall be demonstrated OPERABLE:

- a. At least once per 7 days by:
 1. Verifying the contained borated water volume in the tank, and
 2. Verifying the boron concentration of the water.
- b. At least once per 24 hours by verifying the RWST temperature when the outside air temperature is less than 40°F.

* RWST piping may be unisolated from non-safety related piping for ≤ 4 hours under administrative controls to perform SR 4.5.4.a.2.

RWST piping may be unisolated from non-safety related piping for ≤ 30 days (cumulative) per fuel cycle under administrative controls for filtration.

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VIRGIL C. SUMMER NUCLEAR STATION (VCSNS) UNIT 1

ATTACHMENT III

PROPOSED TS PAGES - RETYPED

Proposed Technical Specification Changes Summary

Replace the following pages of the Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove Pages
3/4 5-9

Insert Pages
3/4 5-9

<u>Page</u>	<u>Affected Section</u>	<u>Bar #</u>	<u>Description of Change</u>	<u>Reason for Change</u>
3/4 5-9	3.5.4	1	Remove asterisk (*)	Expiration of note
3/4 5-9	3.5.4	2	Remove note	Expiration of note

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