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RC-18-0027

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Subject: VIRGIL C. SUMMER NUCLEAR STATION (VCSNS), UNIT 1
DOCKET NO. 50-395
OPERATING LICENSE NO. NPF-12
REPLY TO A NOTICE OF VIOLATION

References:

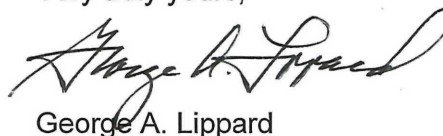
LaDonna B. Suggs, Chief, NRC to George A. Lippard III, SCE&G, "NRC Integrated Inspection Report 05000395/2017004 and Notice of Violation", dated February 13, 2018 [ML18044A413]

By letter dated February 13, 2018, titled "NRC Integrated Inspection Report 05000395/2017004 and Notice of Violation", the Nuclear Regulatory Commission (NRC) notified VCSNS of an NRC-identified finding of very low safety significance (Green) with a cited violation. This violation states the licensee failed to correct a condition adverse to quality (CAQ) involving a design in which the Emergency Feedwater (EFW) flow control valves were susceptible to plugging by tubercles or other debris when the safety-related Service Water system was used as the supply for the EFW pumps.

Pursuant to the provisions of 10 CFR 2.201, SCE&G hereby submits a response to the alleged violation in Attachment I.

If you have any questions about this submittal, please contact Mr. Michael S. Moore at (803) 345-4752.

Very truly yours,



George A. Lippard

BJD/GAL/nk

Attachments:

Attachment I – Reply to Notice of Violation 05000395/2017004-02

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PRSF (RC-18-0027)

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

ATTACHMENT I

REPLY TO NOTICE OF VIOLATION 05000395/2017004-02

NOTICE OF VIOLATION

During an NRC inspection conducted between October 1 and December 31, 2017, a violation of NRC requirements was identified. For convenience, the violation is restated below:

10 CFR 50, Appendix B, Criterion XVI states, in part, that measures shall be established to assure that conditions adverse to quality (CAQs) are promptly identified and corrected.

Contrary to the above, as of December 31, 2017, the licensee failed to correct a CAQ involving Emergency Feedwater (EFW) flow control valves that were susceptible to plugging by tubercles or other debris when the safety-related Service Water system was used as the essential suction source for the EFW pumps. NRC Inspection Report 05000395/2005007, (Agency Document Access and Management System (ADAMS) Accession No. ML050700044) issued on March 10, 2005, identified a previous 10 CFR 50, Appendix B, Criterion XVI non-cited violation (NCV 05000395/2005007-01, "EFW Flow Control Valves Are Susceptible to Plugging by Tubercles or Other Debris from Service Water") which involved the failure to correct this CAQ. As of December 31, 2017, the licensee had not corrected the CAQ involving the EFW control valves.

This violation was associated with a very low safety significance (Green), reactor oversight process (ROP) finding as determined by the significance determination process (SDP).

RESPONSE TO THE NOTICE OF VIOLATION

1. Reason for the violation

In 2005, when NCV 05000395/2005007-01 was issued, the station's Corrective Action Program (CAP) did not require an adequate level of review for NCVs to ensure compliance restoration. In this instance, once compensatory measures were implemented, the urgency for a final resolution was not properly monitored nor addressed.

2. The corrective steps that have been taken and the results achieved

In regard to ensuring lower level violations such as NCVs receive appropriate levels of review, oversight and timely resolution, VCSNS has taken the following steps:

- a. To address the timeliness aspect of the violation, the following corrective actions to preclude repetition (CAPR), from Root Cause Analysis RCA-17-00537 (RCA), were implemented to place a greater emphasis on tracking and restoring regulatory compliance.
 - i. Revised Station Administrative Procedure (SAP) SAP-0999 Corrective Action Program with the following:
 - i. Established a Conditions Adverse to Regulatory Compliance (CARC) classification.
 - ii. When the Condition Report (CR) is written for a current license basis issue, it must clearly identify the condition as such.
 - iii. Any condition not in compliance with the current license basis is an example of a CARC.

- iv. Evaluations assigned to address current license basis issues are to have a due date established by the Management Review Team (MRT) and a Commitment lock placed on the evaluation.
- ii. Revised SAP-0999E Corrective Action Review Board (CARB)
 - i. Current license basis issues without an immediate corrective action, interim action, or Work Order are to be reviewed by CARB to review the adequacy of the evaluations and timeliness of scheduled corrective actions.
- iii. Communicated the new CARC standard to the station.
 - i. Developed an Agenda Item to summarize any NRC Identified CAQs/CARCs in CRRT/MRT.
 - ii. Added a list of CRs for NRC Identified CAQs/CARCs that are being evaluated to be included in MRT package.
 - iii. CRRT/MRT discussed in detail why the station is placing more emphasis on NRC Identified CAQs/CARCs.
- iv. Training Request 17-0142 has been completed for Current License Basis Compliance Training. This training was performed by an external subject matter expert as part of Leadership Continuing Training. Training topics covered:
 - i. Defined what is a Current License Basis (CLB).
 - ii. Reinforced that compliance with current license basis (CLB) requires comparison to actual in-field SSC conditions (not solely a comparison between design and CLB).
 - iii. Current License Basis Compliance concerns are identified appropriately as a CARC.
 - iv. Current License Basis concerns are evaluated appropriately.
 - v. Current License Basis concerns are resolved in a timely manner

In regard to the underlying technical issue of clogging or plugging in the EFW Flow Control Valves, VCSNS has taken the below corrective steps:

- a. CR-04-03416 was written when the issue was first raised during the NRC inspection and it included actions to perform cleaning of the Service Water (SW) piping, review plant procedures, complete training with plant personnel, and institute revised chemistry controls.
- b. CR-04-03416 also included an action to develop a long term plan to address corrosion in the eight-inch cross-connect lines between the SW and EFW system. The outcome of this action was a modification to eliminate and prevent corrosion (including microbiologically induced corrosion (MIC)) leading to tubercle formation within the normally stagnant cross-connect lines. Specifically, the installation of cured-in-place pipe (CIPP) was selected as the appropriate modification to accomplish the desired elimination of MIC.
- c. The CIPP was installed in the first cross-connect piping in the spring of 2011 (RF19). The CIPP was installed in the second cross-connect line during the spring of 2017 (RF23). The decision to delay the second CIPP installation was based on satisfactory cleaning and inspections of the SW piping that reduced the urgency of performing this modification on the second cross-connect line. While these actions were untimely, as related to the 2005 violation, they were effective in resolving the tubercle issue.

- d. VCSNS has implemented improvements to the SW system surveillance and control program in the form of chemical treatments and procedure updates.
- e. During the recent 2017 Design Basis Assurance Inspection, the station developed Technical Report TR05220-008 Service Water Supply Quality Relative to the Emergency Feedwater System to document the basis for concluding that the system will perform its design function if EFW were to be supplied by SW.

3. The corrective steps that will be taken

As noted above, VCSNS has taken substantial corrective actions to address the timeliness issue described in the violation. Per the RCA, the station will continue monitoring the implementation of the CAPRs and will perform an effectiveness review to ensure the CAPR has been successfully ingrained into station processes and culture. These corrective actions will prevent similar compliance issue in the future.

4. The date when full compliance will be achieved

In regard to ensuring that lower level violations such as NCVs receive appropriate levels of review, oversight and timely resolution; it is VCSNS's position that the CAPRs are sufficient to achieve full compliance.

In regard to the underlying technical issue of clogging or plugging in the EFW Flow Control Valves; it is VCSNS's position that the installation of the CIPP and chemical treatments of the SW pond are adequate in solving the potential clogging of the EFW Flow Control Valves.

5. Other Considerations

The above discussion regarding the timeliness of VCSNS's resolution of the tubercle issue relies on a position that the tubercles are the only credible mechanism that could clog or plug the EFW System to the degree that its safety function could not be performed. However, SCE&G remains concerned with the NRC's repeated mention of "other debris", which is an undefined term not addressed in the VCSNS licensing basis. If the NRC disagrees with the VCSNS position as discussed in response #4, we respectfully request continuing discussions with the NRC (e.g., meeting, telecon, etc.) to ensure that this matter is resolved.