

## Vogtle PEmails

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**From:** Patel, Chandu  
**Sent:** Wednesday, October 2, 2019 5:31 PM  
**To:** Vogtle PEmails; X2NRKELL@Southernco.com  
**Cc:** Schiller, Alina; Roberts, Kelli Anne  
**Subject:** VOGTLE ELECTRIC GENERATING PLANT UNITS 3 AND 4, REQUEST FOR ADDITIONAL INFORMATION REGARDING LICENSE AMENDMENT REQUEST (LAR) 19-013, Pressurizer Surge Line Stratification  
**Attachments:** Vogtle LAR 19-013 RAI.pdf

Dear Mr. Kellenburger,

By letter dated July 26, 2019 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML19207A727), Southern Nuclear Operating Company (SNC) submitted a request (19-013) for a license amendment to Combined License (COL) Numbers NPF-91 and NPF-92, for the Vogtle Electric Generating Plant Units 3 and 4, respectively. The requested amendments would eliminate COL condition 2.D.(2)(a)1 which describes a first plant Pressurizer Surge Line Stratification Evaluation and make related revisions to the Updated Final Safety Analysis Report Tier 2 information.

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the information provided in your application and determined that additional information is required in order to complete the review. The staff's request for additional information (RAI) is provided in the attachment. The NRC staff requests your response to the RAI by November 1, 2019.

If you have any questions, please contact me at (301) 415-3025 or [Chandu.Patel@nrc.gov](mailto:Chandu.Patel@nrc.gov).

**Sincerely,**  
**Chandu Patel, Senior Project Manager**  
**U.S. NRC, Office of New Reactors**  
**NRC/NRO/DNRL/LB4,**  
**Washington, DC 20555-0001**  
**301.415.3025**  
**MS T6C20M**

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**Subject:** VOGTLE ELECTRIC GENERATING PLANT UNITS 3 AND 4, REQUEST FOR  
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Pressurizer Surge Line Stratification

**Sent Date:** 10/2/2019 5:30:54 PM

**Received Date:** 10/2/2019 5:30:58 PM

**From:** Patel, Chandu

**Created By:** Chandu.Patel@nrc.gov

**Recipients:**

"Schiller, Alina" <Alina.Schiller@nrc.gov>

Tracking Status: None

"Roberts, Kelli Anne" <KROBERTS@southernco.com>

Tracking Status: None

"Vogtle PEmails" <Vogtle.PEmails@nrc.gov>

Tracking Status: None

"X2NRKELL@Southernco.com" <X2NRKELL@Southernco.com>

Tracking Status: None

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MESSAGE	1267	10/2/2019 5:30:58 PM
Vogtle LAR 19-013 RAI.pdf	92608	

**Options**

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**Sensitivity:** Normal

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**Recipients Received:**

REQUEST FOR ADDITIONAL INFORMATION

LICENSE AMENDMENT REQUEST 19-013

ELIMINATION OF LICENSE CONDITION TO EVALUATE PRESSURIZER

SURGE LINE STRATIFICATION

SOUTHERN NUCLEAR OPERATING COMPANY, INC.

VOGTLE ELECTRIC GENERATING PLANT UNITS 3 AND 4

DOCKET NOS. 52-025 AND 52-026

Request for Additional Information (RAI) - 1

General Design Criterion (GDC) 1, "Quality standards and records," in Appendix A, "General Design Criteria for Nuclear Power Plants," to 10 CFR Part 50 states that structures, systems, and components (SSCs) important to safety shall be designed, fabricated, erected, and tested to quality standards commensurate with the importance of the safety functions to be performed.

Bulletin 88-11 states that the licensing basis according to 10 CFR 50.55a for all PWRs requires that the licensee meet the American Society of Mechanical Engineers Boiler and Pressure Vessel Code Sections III and XI and to reconcile the pipe stresses and fatigue evaluation when any significant differences are observed between measured data and the analytical results for the hypothesized conditions.

Question 1

Vogtle Electric Generating Plant (VEGP) Units 3 and 4 LAR-19-013 states the following in Section 2.3, Reason for the Proposed Change:

"First plant data **has been collected and will be used** to verify the inputs used in the pressurizer surge line design analysis, which will be included as part of the as-built reconciliation of the reactor coolant system ASME Section III Piping System. The as-built reconciliation includes the evaluation of pipe break dynamic loads, changes in support locations, construction deviations, and completion of the small bore piping analysis."

In Section 3, Technical Evaluation, states that:

"... the first AP1000 plant (Sanmen Unit 1) monitored the temperature in the pressurizer surge line using temporary RTDs and displacement sensors, as well as, the three permanent plant RTDs during hot functional testing and the first fuel cycle. The steady state displacement and temperature measurements of the surge line at different plateaus during hot functional testing heat up and cooldown have met acceptance criteria."

From the above, it is not clear that the Sanmen Unit 1 surge line as-built reconciliation, including piping configuration and support location changes, has been performed. Please verify that the thermal stratification data collected for temperature distributions and thermal displacements of the Sanmen Unit 1 surge line piping during hot functional testing and during the first fuel cycle have been utilized to validate the surge line piping design analysis, as indicated by the second statement above. If this work, as-built reconciliation and design validation from thermal stratification collected data, has not been performed, discuss when it is scheduled to be completed and how this work will be referenced for VEGP 3 and 4.

## Question 2

Vogtle Electric Generating Plant (VEGP) Units 3 and 4 LAR-19-013 in Section 3.4, First Plant Testing, states the following:

“Reviews were completed of design documents specific to the Sanmen Unit 1 surge line to confirm there were no site-specific deviations that would invalidate the surge line data from being used at Vogtle Units 3 and 4. Similarly, Sanmen Unit 1 heat up and cooldown procedures and transients were reviewed which also confirmed that the changes and transients did not invalidate the surge line data from being used at Vogtle Units 3 and 4.”

The second sentence in the above LAR paragraph indicates that “changes” in the Sanmen Unit 1 heat up and cooldown procedures and transients were reviewed and did not invalidate the surge line data from being used at Vogtle Units 3 and 4. The staff would like to understand what these changes were and how were they reconciled or justified.