

Vogtle PEmails

From: Reyes-Maldonado, Ruth
Sent: Monday, January 09, 2017 4:59 PM
To: Vogtle PEmails; Chamberlain, Amy Christine
Cc: Green, Brian; Patel, Chandu; 'syagee@southernco.com'
Subject: Request for Additional Information (DCIP/HOIB) - SNC Vogtle Electric Generating Plant Units 3&4: Request for License Amendment and Exemption: ADS and IRWST Injection Block (LAR-16-018)
Attachments: Request for Additional Information Regarding the Review of LAR-16-018 (HOIB).docx

Ms. Chamberlain,

By letter dated October 14, 2016, Southern Nuclear Operating Company, LLC., (SNC, the licensee) requested an amendment to the combined licenses (COLs) for Vogtle Electric Generating Plant (VEGP) Units 3 and 4 (Agencywide Documents Access and Management System (ADAMS) Accession Number ML16288A810). The requested amendment proposes changes to provide additional design details related to the automatic depressurization system (ADS) actuation blocking device, which is used to reduce the potential for spurious actuations of the ADS valves.

The attached requests for additional information (RAIs) are needed to support NRC staff's continued technical review of the proposed LAR.

If you have any questions, please contact me.

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Generating Plant Units 3&4: Request for License Amendment and Exemption: ADS and IRWST Injection
Block (LAR-16-018)

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From: Reyes-Maldonado, Ruth

Created By: Ruth.Reyes@nrc.gov

Recipients:

"Green, Brian" <Brian.Green@nrc.gov>
Tracking Status: None
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"syagee@southernco.com" <syagee@southernco.com>
Tracking Status: None
"Vogtle PEmails" <Vogtle.PEmails@nrc.gov>
Tracking Status: None
"Chamberlain, Amy Christine" <ACCHAMBE@southernco.com>
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Request for Additional Information Regarding the Review of LAR-16-018 (HOIB).docx		
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Options

Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
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REQUESTS FOR ADDITIONAL INFORMATION

REQUEST FOR LICENSE AMENDMENT AND EXEMPTION

ADS AND IRWST INJECTION BLOCK (LAR-16-018)

VOGTLE ELECTRIC GENERATING PLANT, UNITS 3 AND 4

LICENSE NOS NPF-91 AND NPF-92

NRC human factors reviews address programs, procedures, training, plant design features, and operator manual actions related to operator performance during normal and accident conditions. The Human Performance, Operator Licensing & ITAAC branch (HOIB) has reviewed LAR-16-018 and determined that additional information is necessary to continue the review.

10 CFR 50.34(f)(iii) states:

(iii) Provide, for Commission review, a control room design that reflects state-of-the-art human factor principles prior to committing to fabrication or revision of fabricated control room panels and layouts.

In accordance with NUREG-0800 Chapter 18 "Human Factors," HOIB staff uses NUREG-0711 "Human Factors Engineering Program Review Model" to assess licensee human factors programs to ensure that the control room design reflects state-of-the-art human factors principles as required by 10 CFR 50.34.

Enclosure 1 describes updates to various licensing documents associated with LAR-16-018. However, there are ambiguities in the enclosure about how these changes will translate into the AP1000 design and how these design changes may ultimately influence operator ability to safely operate the plant. Please provide additional information describing how the human factors program will address the issues below.

Question 1.

Based on Table 2 in Enclosure 1 of LAR-16-018, it is presumed that new controls will be added to the AP1000 design. However the physical design of these controls is not discussed in the amendment.

- Describe any physical changes to the HSI design (refer to NUREG-0711 chapter 8 & NUREG-0700) that will be added or modified in the plant (alternatively, you may submit clearly labeled photographs that illustrate new controls/displays/alarm panels etc.). If no new HSI are necessary, please clarify how the manual functions described in the LAR are possible using existing HSI.
- Briefly describe any changes to the task analyses that were conducted as a result of changing the minimum inventory. Please confirm that the training program and associated procedures have been updated accordingly.

Question 2.

The HFE integrated system validation recently tested the performance of the current control room design (prior to submittal of this amendment). This process identified and documented potential issues related to operator performance of important human actions. These issues

are documented in APP-OCS-GER-320 "AP1000 Human Factors Engineering Integrated System Validation Report." It is unclear what affect, if any, this amendment will have on operators during certain scenarios associated with the manual operation of the ADS and IRWST. Presumably, the amendment will add steps to these scenarios, which may negatively affect operators, especially for time-critical operator actions.

- The influence of new HSIs (addressed in question 1) on important operator actions (as defined in NUREG-0711 chapter 7) is unclear. Identify and describe all important human actions that will be affected by the proposed modifications. Provide estimations of the amount of time that may be added to each important human action as a result of modifying these actions.

Question 3.

NUREG-0711 chapter 11 describes an acceptable human factors validation process that can be used to ensure that modifications to HSIs and operator manual actions are possible given available time constraints and relevant operating conditions.

- Explain the validation activities that will be conducted to ensure that operators can safely and reliably conduct operator actions (identified in question 2), using new or modified HSIs within the time available. Please indicate if this will be conducted during the planned ISV retesting process or during other validation activities. If other validation processes are to be used, please clearly indicate the appropriate process.
- Clearly define the criteria for determining success during testing of relevant scenarios (or provide references to specific licensing basis documents). Be sure to indicate how you plan to address potential failures to meet time-critical operator actions.