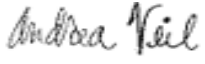




UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

February 8, 2023

MEMORANDUM TO: Chair Hanson
Commissioner Baran
Commissioner Wright
Commissioner Caputo
Commissioner Crowell

FROM: Andrea D. Veil, Director  Signed by Veil, Andrea
Office of Nuclear Reactor Regulation on 02/08/23

SUBJECT: STATUS OF INSPECTIONS, TESTS, ANALYSES, AND
ACCEPTANCE CRITERIA CLOSURE, AND INSPECTION AND
LICENSING ACTIVITIES FOR VOGTLE ELECTRIC GENERATING
PLANT, UNIT 4

The purpose of this memorandum is to inform the Commission of the status of the following activities related to Vogtle Electric Generating Plant (VEGP), Unit 4: closure of inspections, tests, analyses, and acceptance criteria (ITAAC); inspections related to ITAAC and operational programs; and current licensing activities and any possible impact these activities might have on the timing of the staff's finding under Title 10 of the *Code of Federal Regulations* (10 CFR) 52.103(g), "Operation under a combined license." This memorandum has been made publicly available in the Agencywide Documents Access and Management System (ADAMS Accession No. ML22214B488).

Background:

In SECY-13-0033, "Allowing Interim Operation under Title 10 of the *Code of Federal Regulations* Section 52.103," dated April 4, 2013 (ADAMS Accession No. ML12289A928), the U.S. Nuclear Regulatory Commission (NRC) staff proposed that the Commission delegate to the staff the 10 CFR 52.103(g) finding that all ITAAC acceptance criteria are met. Further, the staff stated that its 10 CFR 52.103(g) finding would be based on the ITAAC-related inspection activities performed during construction and the staff's independent ITAAC closure verification activities, which would be summarized in a Basis Document to be enclosed with a paper to the Commission. The Commission approved the staff's recommendation in the Staff Requirements Memorandum, dated July 19, 2013, for SECY-13-0033 (ML13200A115).

In SECY-06-0114, "Description of the Construction Inspection Program for Plants Licensed under 10 CFR Part 52," dated May 13, 2006 (ML060740479), the staff discussed inspecting the

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development and implementation of testing programs (i.e., the initial test program) and the other operational programs. The staff committed to inform the Commission of the status of those programs before the anticipated date for loading fuel.

To support the commitments described above, the staff issued Office Instruction LIC-114, Revision 1, "Title 10 of the *Code of Federal Regulations* (10 CFR) 52.103(g) Finding and Communication Process" (ML20055E096). This office instruction describes the steps for informing the Commission of the status of regulatory activities in the final year of construction under a combined license and the actions the staff must take in support of determining whether to make the 10 CFR 52.103(g) finding. Per LIC-114, this document serves as the initial memorandum to the Commission on the status of ITAAC closure, NRC inspection activities for construction and operational programs, and licensing activities for VEGP Unit 4.

In accordance with the above guidance, the staff issued the 10 CFR 52.103(g) finding for VEGP Unit 3 on August 3, 2022 (ML20290A280).

Status of ITAAC Completion:

Southern Nuclear Operating Company (the licensee) is required, in accordance with 10 CFR 52.99(c)(1), to notify the NRC that the prescribed inspections, tests, and analyses have been performed and the acceptance criteria are met. The staff reviews each of these ITAAC closure notifications (ICNs) to verify that the acceptance criteria are met. The results are then posted on the NRC public website at <https://www.nrc.gov/reactors/new-reactors/col-holder/vog4.html>. As of January 3, 2023, Appendix C to combined license NPF-92 for VEGP Unit 4 contains 364 ITAAC; the current status of the staff's ICN verification review is as follows:

- ICNs Verified 165
- ICNs Under Review 0
- ICNs Not Received 199

The staff has reviewed the Uncompleted ITAAC Notification for each ITAAC not yet completed. These Uncompleted ITAAC Notifications must provide sufficient information to demonstrate that the uncompleted ITAAC will be completed successfully. For each Uncompleted ITAAC Notification, the staff has determined that the licensee's methodologies are acceptable to close the associated ITAAC. If the licensee uses the planned methodologies, the ICNs should not differ significantly from the Uncompleted ITAAC Notifications, thereby streamlining the ICN review. In addition, the staff can leverage its experience reviewing the VEGP Unit 3 ICNs. Sufficient NRC staff are qualified and ready to process a significant number of ICN submittals if needed.

The requirements of 10 CFR 52.99(c)(2) specify that after an ICN is submitted, the licensee shall notify the NRC in a timely manner of new information that materially alters the basis for determining that either the inspections, tests, and analyses were performed as required or that the acceptance criteria are met. These are referred to as ITAAC post-closure notifications. As of January 3, 2023, the NRC had received three ITAAC post-closure notifications and verified them to be acceptable. The ITAAC post-closure notifications were associated with ITAAC index numbers 335, 336, and 344. The post-closure notifications for ITAAC 335 and 336 related to construction design changes (1) to increase the height of the turbine building elevations by 3 feet at each level, (2) the addition of platforms above the operating deck, and (3) the incorporation of the beyond-design-basis requirement to provide 800 gallons per minute of fire

protection system water to be supplied to the spent fuel pool for cooling, heat removal, and inventory makeup, resulting in changes to the pump flow requirement and fuel oil storage tank volume. The post closure notification for ITAAC 344 followed an auxiliary hoist holding brake adjustment; the licensee used an alternate post-work verification method to demonstrate the load holding capacity of the polar crane auxiliary hoist. The alternate post-work verification method involved verifying the holding brake torque setting per the vendor manual, which is standard industry practice after holding brake maintenance.

In accordance with the requirements of 10 CFR 52.99(c)(4), the licensee shall notify the NRC that all ITAAC are complete. Consistent with the timeline in LIC-114, Revision 1, the staff intends to make the 10 CFR 52.103(g) finding within 17 days of the “All ITAAC Complete” notification being submitted to the NRC if the staff determines that all acceptance criteria are met.

Status of Inspection Activities:

The staff continues to perform inspections of a sample of ITAAC to independently verify the licensee’s performance of the inspections, tests, and analyses and that the results meet the acceptance criteria. These inspections also verify that the licensee (1) has quality construction programs, processes, and procedures, (2) provides adequate quality assurance oversight of construction activities, and (3) identifies and corrects conditions adverse to quality. A sample of the ICNs was inspected against the associated closure packages to verify the accuracy of the information reported in the ICNs. A comprehensive ITAAC Status Report provides the public with a hyperlink to each NRC inspection report related to a corresponding ITAAC, as well as the corresponding ICN and staff actions responding to the ICN. This report can be found on the NRC public website at <https://www.nrc.gov/reactors/new-reactors/col-holder/vog4.html>.

Approximately 77 percent of the planned ITAAC inspection workload has been completed. The NRC has 252 planned ITAAC-related inspections remaining, representing approximately 2100 hours of direct inspection workload. The NRC staff continues to closely monitor inspection program implementation and adjustments to our estimates will be based upon licensee performance, lessons learned, and inspection results. Additionally, in anticipation of a significant inspection workload near the end of construction, Region II is continuing to conduct multiple planning/readiness meetings with the licensee for ICNs that are scheduled to be submitted within the last 60 days before the anticipated “All ITAAC Complete” notification. Region II’s efforts are positioning the NRC’s inspectors to be prepared to complete all inspections necessary to support a timely 10 CFR 52.103(g) finding.

In SECY-05-0197, “Review of Operational Programs in a Combined License Application and Generic Emergency Planning Inspections, Tests, Analyses, and Acceptance Criteria,” dated October 28, 2005, the staff identified operational programs that are required by regulation, reviewed in a combined license application, and inspected to verify program implementation as described in the final safety analysis report (ML052770257). VEGP Unit 4, Updated Final Safety Analysis Report, Chapter 13, Table 13.4-201, “Operational Programs Required by NRC Regulations,” includes a listing of all the operational programs and their implementation milestones.¹ Enclosure 1 of this paper includes a table listing the programs in Table 13.4-201, their implementation milestones, and NRC inspections associated with the implementation of these programs as of January 3, 2023. The 10 CFR 52.103(g) finding is based on verification

¹ Table 13-4.201 also includes operational programs implemented during the construction period.

that the ITAAC, including the emergency planning ITAAC, have been successfully completed; it is not dependent on the inspection of any operational program other than the emergency planning program.

Status of Licensing Activities:

As of January 3, 2023, the NRC has 5 licensing actions under review for VEGP Unit 4. Enclosure 2 identifies these licensing actions, the licensee's requested completion date, and whether the licensing action is necessary to support the 10 CFR 52.103(g) finding. None of the licensing actions identified in Enclosure 2 are needed to support the 10 CFR 52.103(g) finding. In addition, there remains the potential for the licensee to identify the need for additional licensing actions up until the 10 CFR 52.103(g) finding. The Office of Nuclear Reactor Regulation through the Vogtle Project Office is in routine communication with the licensee's licensing management to remain cognizant of changes that may necessitate additional licensing actions and is maintaining a dedicated team of staff ready to conduct the necessary safety reviews in a timely manner.

Future Staff Actions:

As stated above, the staff will determine whether it can make the 10 CFR 52.103(g) finding after the licensee submits the "All ITAAC Complete" notification. Provided that (1) no ICNs are deficient, (2) no additional inspections are required to address either deficient ICNs or other emergent issues, and (3) there are no other regulatory activities that may prevent the staff from determining that the acceptance criteria are met, the staff will inform the Commission via memorandum of the staff's plan to make the 10 CFR 52.103(g) finding. This memorandum will be sent to the Commission at least three calendar days before the staff plans to make the finding and will reference a publicly available document summarizing the staff's basis for the finding that all acceptance criteria are met. The staff will also include an updated table describing the current status of operational program inspections.

Once the staff makes the 10 CFR 52.103(g) finding, it will issue a *Federal Register* notice, as required by 10 CFR 2.106(a)(2), announcing the issuance of the finding and that the licensee is authorized to operate the facility in accordance with the terms and conditions of the license. The staff will also send a letter to the licensee informing it of the finding.

Enclosures:

1. Operational Program Inspection Status Table
2. Licensing Actions Status Table

cc: SECY
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CRITERIA CLOSURE, AND INSPECTION AND LICENSING ACTIVITIES FOR
VOGTLE ELECTRIC GENERATING PLANT, UNIT 4 Dated: February 8, 2023

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