

**Responses to Requests for Information  
Senators James M. Inhofe and Shelley Moore Capito  
Letter dated August 23, 2016**

**Question 1. Please describe how the Commission plans to process the "wave" of ITAAC closure notifications anticipated to occur as construction at the reactors in Georgia and South Carolina nears completion.**

Answer:

In anticipation of the expected surge of inspections, tests, analyses, and acceptance criteria (ITAAC) closure notifications as construction nears completion, the NRC is making a number of preparations. First, the NRC staff has developed comprehensive processes and an information technology (IT) infrastructure to efficiently track all submitted ITAAC notifications and the associated NRC verifications.

Second, the NRC is preparing to review uncompleted ITAAC notifications (UINs) well ahead of the surge if the licensee submits them earlier than required. Uncompleted ITAAC notifications describe the completion plans for ITAAC that have yet to be performed. These UIN reviews will allow earlier identification of issues related to ITAAC completion, and reduce staff review time during the expected surge since the subsequent ITAAC closure notifications should be nearly identical to the uncompleted ITAAC notifications previously reviewed.

Third, the NRC has developed internal ITAAC training programs to ensure that staff members are properly prepared to complete ITAAC closure work. The training will prepare additional staff to review ITAAC notifications in their areas of expertise, account for potential staff turnover, and assist in handling the ITAAC notification surge.

Finally, the NRC staff routinely assesses the expected increase in ITAAC closure work as construction continues and requests resources to appropriately account for the increased volume and complexity of work.

**Question 2. Please identify the methods and metrics used by the NRC to track ITAAC closure notification processing timeframes including the means of transparency for licensees to track their progress.**

Answer:

The agency has established a performance indicator to track the percentage of ITAAC closure notification reviews completed within 2 months of submission. The metric is evaluated quarterly, using data extracted from the IT platform established to track and process ITAAC notifications. This IT platform also produces an ITAAC status page that is available on the NRC's public website. All stakeholders, including licensees, can access this status page to track ITAAC notifications and the NRC's review progress.

Enclosure

**Question 3. Early in the development of the Construction Reactor Oversight Process, the time estimate for completing the entire program was that it would require approximately 17,000 hours of inspection oversight conducted by 6 to 12 resident construction inspectors.**

**a. Please indicate the current projection for the construction inspection hours required for the Vogtle and Summer sites, the number of construction inspectors resident at each site, and any efficiencies identified since the earlier estimate.**

Answer:

NRC Inspection Manual Chapter 2506, "Construction Reactor Oversight Process General Guidance and Basis Document," estimates 35,000 direct inspection hours per unit over the life of the construction project. Of that, 15,000 hours are allocated to direct ITAAC inspection. The remaining inspection hours are for operational programs, initial test programs, quality assurance programs, corrective action programs, and allegations follow-up.

Regarding the number of construction inspectors at each site, the NRC increased the number of resident inspectors from two to five over the last 5 years. Additional construction inspectors are assigned as necessary from the NRC Region II office in Atlanta, Georgia. If needed, plans are in place to supplement inspections with staff from NRC headquarters and other regional offices.

Additionally, in a continuing effort to improve the efficiency and effectiveness of inspection program implementation, several planning and scheduling process and organizational improvements were implemented based on inspection staff insights and lessons learned. For example, the resources assigned to monitor daily licensee construction schedules and plan NRC inspections have been enhanced. Application of the lessons learned from inspections of the lead unit has resulted in more efficient inspections on the second unit. Further, NRC has grouped similar inspection activities and performed them in a single inspection.

**b. Please indicate the percentage of inspection hours that have been completed and the projected date for completing the remaining inspection hours.**

Answer:

ITAAC inspection plans are approximately 20 percent completed, and inspections are scheduled to be conducted based on the licensees' progress in completing plant construction and testing. The ITAAC inspection completion rate parallels the licensees' construction rate, and the projected completion dates for ITAAC and other inspection activities are adjusted as the licensees' construction schedules are updated.

The date for completing the remaining ITAAC inspections depends primarily upon the progress of each licensee in completing the construction of the plants, and providing results from testing and analysis sufficient to demonstrate that the acceptance criteria in the combined license are met. The licensees are currently predicting they will complete construction, load fuel, and operate the Vogtle Unit 3 and VC Summer Unit 2 in 2019, and

the Vogtle Unit 4 and VC Summer Unit 3 in 2020. The NRC has established a robust inspection program and will allocate the necessary resources, keeping pace with the construction schedules to ensure timely completion of the required ITAAC inspections.

- c. Please provide a funding profile which indicates the amount of funding spent in the current fiscal year and for each following fiscal year until the construction inspection process is complete.**

Answer:

The fiscal year (FY) 2016 budget for construction inspection is \$11,858,340. We project spending approximately \$11.5 million (97%) of this amount by the end of the fiscal year. The resources budgeted for FY 2017 are currently lower than those budgeted for FY 2016 due to shifts in the construction schedules. Resources requested for FY 2018 are anticipated to be at the same level as FY 2017, based on the ITAAC inspection plans and operator licensing exam activities. Resources needed for FY 2019 and beyond will be requested to meet the anticipated construction and ITAAC inspection workload.

- d. Please describe the steps the NRC management is taking or plans to take to ensure the construction inspection process is provided adequate resources and will be completed in an effective and timely manner and without causing any unnecessary delays.**

Answer:

The NRC's inspection schedule is closely coordinated with licensees' construction schedules to ensure that resources to support inspection activities are available, and inspection activities address more than one unit when possible. Qualified inspectors and technical experts from other parts of the agency will supplement the inspection staff, as appropriate, to address any unanticipated inspection peaks that may occur.

The NRC developed resource models based on comprehensive inspection plans to ensure completion of ITAAC and operational program inspections. These resource models continue to be validated through the staff's planning, scheduling, and assessment process each quarter. In addition, similar to NRC's implementation of the Watts Bar 2 construction inspection program, NRC's inspection schedules for the four AP1000 units under construction, are adjusted, when necessary, to maintain a constant level of inspection activity. For example, portions of the ITAAC inspections are being performed as construction activities are completed and finished upon the licensees meeting the final acceptance criteria.

The majority of the ITAAC inspections will be completed prior to the ITAAC closure notifications being submitted. The NRC anticipates that a limited population of ITAAC inspections, primarily the as-built inspection or reviews, may be completed just before or just after the ITAAC closure notification is submitted. However, the licensees' and the NRC's inspection schedules indicate that this will be a small percentage of the ITAAC and that the NRC's inspection effort will be within planned resources. The progress of both the inspections and the ITAAC closure notifications are continuously monitored to ensure the current approach remains effective.

**e. Please describe any additional considerations that may be helpful in assessing any progress or shortcomings in this program.**

Answer:

Completing the AP1000 inspection program is a key priority for the NRC. The Commission has directed the agency staff to monitor construction inspection activities closely and we expect that they would alert the Commission promptly if any additional resources are needed. As a result, senior agency leadership routinely reviews the status of the program. NRC management and staff have consistently emphasized with licensees that early engagement on deviations from the licensing basis and construction schedules facilitates the effective implementation of the NRC's inspection programs.