

POLICY ISSUE (Information)

August 26, 2009

SECY-09-0119

FOR: The Commissioners

FROM: R. W. Borchardt
Executive Director for Operations

SUBJECT: STAFF PROGRESS IN RESOLVING ISSUES ASSOCIATED WITH
INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA

PURPOSE:

This paper informs the Commission on the progress by the staff toward resolving issues concerning inspections, tests, analyses, and acceptance criteria (ITAAC) maintenance and reporting, including the threshold for notification of events that may result in the acceptance criteria of successfully completed ITAAC no longer being satisfied. This paper also summarizes the staff's approach to making its recommendation to the Commission regarding the finding under title 10 of the *Code of Federal Regulations*, part 52, section 103(g) (10 CFR 52.103(g)) that all acceptance criteria in the combined license are met. This paper responds to actions from the staff requirements memorandum (SRM) dated January 14, 2009, entitled, "SECY-08-0117 Staff Approach to Verify Closure of Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) and to Implement Title 10 CFR 52.99, 'Inspection During Construction,' and Related Portion of 10 CFR 52.103(g) on the Commission Finding," dated August 7, 2008. This paper does not address any new commitments or resource implications.

SUMMARY:

This paper and its enclosures inform the Commission of progress and ongoing development of guidance for ITAAC completion and closure documentation, including the definition of ITAAC maintenance and the programs that maintain ITAAC conclusions. The paper describes three

CONTACT: Denise McGovern, NRO/DCIP
301-415-0681

new types of notifications that licensees may make to the U.S. Nuclear Regulatory Commission (NRC) after the initial ITAAC closure letter, as appropriate: a supplemental ITAAC closure letter, an ITAAC component replacement summary letter, and an ITAAC-all-complete letter.

The staff and industry expect that instances may occur where licensee activities affect previously completed ITAAC after the licensee submits an ITAAC closure letter to the NRC. Supplemental ITAAC closure letters will ensure that the staff and public have accurate and complete information on those situations. The discussion of supplemental ITAAC closure letters introduces the need for reporting thresholds, for the licensee to use in determining when supplemental notification is necessary. Those thresholds are under development, as discussed below. This paper also discusses component replacement letters and the ITAAC-all-complete letter as additional licensee notifications to the NRC. Finally, this paper presents key attributes the staff will consider in assessing ITAAC completion when making a recommendation to the Commission in support of the 10 CFR 52.103(g) determination on whether all ITAAC acceptance criteria are met.

BACKGROUND:

In SECY-08-0117 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML081220237), the staff provided an update on plans to inspect and perform closure verification of licensee-completed ITAAC. The staff also described how it intends to implement 10 CFR 52.99, "Inspection During Construction," and the related provision of 10 CFR 52.103(g) on the Commission finding that all ITAAC acceptance criteria are met. The SRM related to SECY-08-0117 (ADAMS Accession No. ML090140136), directed the staff to keep the Commission informed of progress in resolving issues associated with ITAAC, including instances where successfully completed ITAAC are no longer satisfied. The Commission also directed the staff to identify policy issues as they arise. The staff hosted nine public workshops in the last 12 months to solicit input and exchange views on issues related to ITAAC completion, closure documentation, and ITAAC maintenance. The Nuclear Energy Institute (NEI), industry representatives, and other external stakeholders participated in the public workshops.

DISCUSSION:

ITAAC Maintenance

Under both 10 CFR 52.97(b) and Section 185b. of the Atomic Energy Act of 1954, as amended (AEA), the combined license (COL) must contain those ITAAC that are "necessary and sufficient to provide reasonable assurance that the facility *has been constructed and will be operated* in conformity with" the license, the AEA, and NRC regulations (emphasis added). Operation cannot commence until the Commission finds that all ITAAC acceptance criteria in the COL "are met," as required by 10 CFR 52.103(g) and AEA Section 185b. This Commission finding will not occur until construction is complete, near the date for scheduled initial fuel load.

As required by 10 CFR 52.99(c)(1), the licensee must submit ITAAC closure letters containing "sufficient information to demonstrate that the prescribed inspections, tests, and analyses have been performed and that the associated acceptance criteria have been met." Following these notifications, the licensee needs to maintain the validity of the completed ITAAC so that the basis for the 10 CFR 52.103(g) "are met" finding is consistent in material respects with the as-constructed facility at the time the finding is made. ITAAC maintenance provides the

confidence that the ITAAC continue to be met and that no activity has invalidated the basis for determining that ITAAC are met. The time between the closure letter and the Commission finding is defined as the ITAAC maintenance period in NEI 08-01, "Industry Guideline for the ITAAC Closure Process Under 10 CFR Part 52," Revision 3, issued January 2009 (ADAMS Accession No. ML090270415). The staff plans to endorse NEI 08-01 in Regulatory Guide 1.215, "Guidance for ITAAC Closure Under 10 CFR Part 52."

Licensee Programs That Maintain ITAAC Conclusions

One essential element in ensuring the maintenance of successfully completed ITAAC involves the use of established licensee programs such as the Quality Assurance Program, Problem Identification and Resolution Program, Maintenance/Construction Program, and Design and Configuration Management Program. Each program credited with supporting the maintenance of completed ITAAC should contain attributes that maintain the validity of the ITAAC determination basis. These program attributes include the following:

- licensee screening of activities for impact on ITAAC
- licensee determination of whether supplemental ITAAC notification is required
- licensee supplement to the ITAAC closure package as appropriate to demonstrate that the acceptance criteria continue to be met

The staff expects these programs to be fully implemented and effective before the licensee takes credit for them as an appropriate means of supporting ITAAC maintenance. These programs would be subject to NRC inspection.

Additional ITAAC Notifications

The staff's confidence in the licensee's ability to maintain the validity of completed ITAAC conclusions relies on timely communication. Currently, 10 CFR 52.99 specifies two ITAAC notification requirements for licensees. These notifications are the ITAAC closure letter required by 10 CFR 52.99(c)(1) and the notification required by 10 CFR 52.99(c)(2) no less than 225 days before the scheduled fuel load, which identifies the uncompleted ITAAC and describes the licensee's plan to complete those ITAAC.

The staff and industry have agreed on the importance and the need for three additional formal notifications to the NRC that are not currently required by regulation:

1. Supplemental ITAAC closure letters,
2. Component replacement letters, and
3. ITAAC-all-complete letter.

The staff plans to propose that the Commission supplement 10 CFR Part 52, "Licenses, Certifications, and Approvals for Nuclear Power Plants," to include these additional notification requirements in a future rule change. To facilitate NRC inspection planning, the staff expects that informal communications will give the onsite inspection staff advance notice of licensee activities associated with previously completed ITAAC.

Supplemental ITAAC Closure Letters

Events that affect completed ITAAC could involve activities that include, but are not limited to, maintenance and engineering or design changes. The staff expects that these activities will be conducted under established programs to maintain the ITAAC conclusion and that no supplemental notification will be necessary in most instances. The staff can have confidence that prior ITAAC conclusions are maintained so long as the ITAAC determination bases established by the original ITAAC closure letter are not materially altered. If the ITAAC determination bases are not materially altered, licensee activities will remain below the notification threshold. Conversely, if the ITAAC determination bases are materially altered, then the NRC expects the licensee to notify the NRC by submitting a supplemental ITAAC closure letter. In either event, records documenting the licensee's activities will be available at the plant site for NRC review.

Supplemental ITAAC closure letters would explain the need for the supplemental letter, outline the resolution of the issue, and confirm that the ITAAC acceptance criteria continue to be met. The staff expects that the supplemental notification letters will include sufficient information as described in NEI 08-01, similar to the level of information required in ITAAC closure letters under 10 CFR 52.99(c)(1). The NRC staff plans to review the supplemental ITAAC closure letters and publish its conclusions in *Federal Register* notices issued under 10 CFR 52.99(e).

Draft Supplemental ITAAC Closure Letter Thresholds

Through public workshops and stakeholder interaction, the staff is developing thresholds to identify when activities would materially alter the ITAAC determination bases. Three thresholds address the elements of an ITAAC, which are: the design commitment; the inspection, test, or analysis; and the acceptance criteria. Additionally, the staff is developing a threshold that focuses on the complete and valid representation of the completed ITAAC. Enclosure 1, "Draft Supplemental ITAAC Closure Letter Thresholds," provides the thresholds under development, as they currently exist, their intended focus, and an example of their application. The staff is developing these thresholds to clarify paragraph 3.b in "Proposed Supplemental Guidance on Maintaining ITAAC Closure for Section 8 of NEI 08-01 Revised 4/27/09," dated May 5, 2009 (ADAMS Accession No. ML091240094). NEI introduced this proposed supplemental guidance to expand upon the original guidance given in NEI 08-01, Section 8, "Maintaining the Validity of ITAAC Conclusions Post-ITAAC Completion." In addition to the reporting threshold in paragraph 3.b., NEI's proposed supplemental guidance recognized (1) that a supplemental notification would be needed to correct a material error or omission in the original closure letter and (2) that a license amendment is required if ITAAC acceptance criteria can no longer be met following licensee activities.

Component Replacement Letters

NEI also proposed to notify the NRC of the replacement of ITAAC-specified components using the component replacement letter. The guidance regarding component replacement letters is discussed in the "Proposed Supplemental Guidance on Maintaining ITAAC Closure for Section 8 of NEI 08-01 Revised 4/27/09." The proposed guidance instructs the licensee to submit an ITAAC component replacement summary letter 1 year before fuel load and every 30 days thereafter.

ITAAC-All-Complete Letter

Another notification proposed by NEI that will facilitate the staff recommendation regarding the 10 CFR 52.103(g) finding, is the ITAAC-all-complete letter. After or concurrent with the last ITAAC closure letter required by 10 CFR 52.99(c)(1), the licensee will provide a letter to the NRC stating that all ITAAC have been completed and that all ITAAC conclusions are being maintained. At the time the licensee submits the ITAAC-all-complete letter, the staff will expect that all activities requiring supplemental ITAAC closure letters will have been completed and that the associated ITAAC determination bases will have been updated.

Staff Recommendation for 10 CFR 52.103(g) Commission Finding

To support the Commission's 10 CFR 52.103(g) finding, if and when appropriate, the staff will send a recommendation to the Commission.

The staff will consider that all ITAAC "are met" if both of the following conditions hold:

- All ITAAC were verified to be met at one time.
- Licensee provides confidence that the ITAAC determination bases have been maintained and that the ITAAC continue to be met.

The staff approach would allow licensees to have ITAAC-related structures, systems, and components (SSCs) or security/emergency preparedness (EP) related hardware undergoing certain activities at the time of the 10 CFR 52.103(g) finding if the programs credited with maintaining the validity of completed ITAAC guide those activities and the activities are not so significant as to exceed a threshold for reporting. If a reporting threshold has been exceeded, the staff would need to evaluate the licensee's supplemental notification to determine whether the ITAAC continue to be met.

Stakeholder Interaction

To date, the staff interaction with NEI and other stakeholders regarding ITAAC maintenance strategies has resulted in substantive agreement on the majority of issues presented in this paper. The staff and NEI agree on the licensee programs credited with maintaining the validity of completed ITAAC, the attributes of these programs, and the need for additional notifications.

At this juncture, the staff and NEI have differing views on two issues. The first difference concerns draft threshold 1, which addresses post-work verification (PWV) different from the performance of the inspection, test, or analysis (ITA) as described in the ITAAC closure letter. The second difference concerns the supplemental notification thresholds affecting the staff recommendation for the 10 CFR 52.103(g) finding. NEI presents its views in a letter from Russell J. Bell, NEI, to Glenn Tracy, Office of New Reactors dated July 8, 2009 (ADAMS Accession No. ML091950256) (Enclosure 2). NEI does not believe that ongoing work related to an activity requiring supplemental notification should prevent the staff from recommending to the Commission that all ITAAC are met. In creating the reporting thresholds, however, the staff sought to obtain information needed to support the Commission's ITAAC finding. Therefore, the staff believes that the supplemental ITAAC closure letter thresholds and the 10 CFR 52.103(g) finding are linked.

Planned ITAAC Work

The staff plans continued interaction with industry and the public to further develop the draft supplemental ITAAC closure letter thresholds. In addition, the staff will work with stakeholders to address specialized areas such as security and EP to determine if any additional ITAAC maintenance strategies are needed. The staff plans to incorporate these principles in a future revision of Regulatory Guide 1.215. The staff also plans to recommend that the Commission include the notifications discussed in this paper in a future rule change. An additional challenge related to ITAAC completion and closure, for which the staff will continue its interactions with industry and the public, is planning and scheduling of NRC inspection activities for the high percentage of ITAAC expected to be closed during the later phases of plant construction.

COORDINATION:

This paper has been coordinated with the Office of General Counsel (OGC). OGC has no legal objection to this paper.

/RA/ Martin J. Virgilio for

R. W. Borchardt
Executive Director
for Operations

Enclosures:

1. Draft Supplemental ITAAC Closure Letter Thresholds
2. NEI Letter w/enclosures dated July 8, 2009

Planned ITAAC Work

The staff plans continued interaction with industry and the public to further develop the draft supplemental ITAAC closure letter thresholds. In addition, the staff will work with stakeholders to address specialized areas such as security and EP to determine if any additional ITAAC maintenance strategies are needed. The staff plans to incorporate these principles in a future revision of Regulatory Guide 1.215. The staff also plans to recommend that the Commission include the notifications discussed in this paper in a future rule change. An additional challenge related to ITAAC completion and closure, for which the staff will continue its interactions with industry and the public, is planning and scheduling of NRC inspection activities for the high percentage of ITAAC expected to be closed during the later phases of plant construction.

COORDINATION:

This paper has been coordinated with the Office of General Counsel (OGC). OGC has no legal objection to this paper.

/RA/ Martin J. Virgilio for

R. W. Borchardt
Executive Director
for Operations

Enclosures:

1. Draft Supplemental ITAAC Closure Letter Thresholds
2. NEI Letter w/enclosures dated July 8, 2009

WITS 200900019/EDATS: SECY-2009-0038

ADAMS Accession #: ML091980372

*via e-mail

SECY-012

OFFICE	NRO/DCIP/CTSB	TECH ED*	NRO/DCIP/CTSB	NRO/DCIP/CTSB	NRO/DCIP
NAME	DMcGovern	KAzariah-Kribbs	RLaura	MKowal	GTracy
DATE	7/15/09	7/16/09	7/17/09	7/15/09	7/15/09
OFFICE	NRO/DNRL	NRC/REG II *	NRC/NSIR *	NRC/OGC *	NRC/NRO
NAME	D Matthews	LPlisco	RZimmerman	MZobler	MJohnson(GHolahan for)
DATE	7/31/09	7/30/09	8/07/09	8/12/09	8/21/09
OFFICE	EDO				
NAME	RBorchardt (MVirgilio for)				
DATE	8/26/09				

OFFICIAL RECORD COPY