

IMC 2503

“Construction Inspection Program: Inspections of Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC)”

Topics for Discussion NRC – Jan. 23, 2007

1. IMC 2503 merges the conclusions necessary to close each ITAAC with the larger construction inspection program without acknowledging the individuality and the binary acceptance characteristics that the certification applicants built into each ITAAC. For example:
 - a. Section 07.04 states, “The NRC’s determination of successful ITAAC completion will be based primarily on prior day-to-day onsite and offsite inspection activities which will have been documented in inspection reports...”
 - b. Appendix B, Background: “While the ITAAC may be viewed as a distinct set of verifiable inspection points, the need for a comprehensive assessment of facility construction dictated the development of an integrated NRC inspection strategy.”
 - c. Appendix B, Background: “The goal of inspections conducted under IMC-2503 is to verify licensee compliance with all QA and 10 CFR Part 52 ITAAC requirements.... The QA requirements delineated in 10 CFR Part 50, Appendix B, and the ITAAC associated with a specific design, provide criteria that are integral to the reasonable assurance that any facility licensed under Part 52 has been constructed and will be operated in conformance with the license and the NRC rules and regulations.”
 - d. Appendix B, Assessment of Inspection Results: “NRC process inspections provide a mechanism for checking the effectiveness of the licensee’s QA program, in addition to verifying the ITAAC completion and acceptance.”

The industry has viewed ITAAC close-out/verification as dependent upon a successful QA program but not redundant to the QA program. ITAAC verification documents the successful end-of-process determinations, not the day-to-day or overall evaluation of the construction process that the QA program provides. Some emphasis in IMC-2503 on the individual acceptance criteria and the NRC close-out process for individual ITAAC is appropriate and needed. Does the NRC envision another IMC or inspection procedure that will address the ITAAC verification process – as distinct from underlying inspections of construction process and QA program implementation – and provide a focus on specified acceptance criteria? The need to keep the ITAAC individualized becomes more important when considering the special role the ITAAC play in Part 52 licensing to define the scope of the post-construction hearing opportunity.

The underlined words in (c), above, are based on the language of Part 52 and describe the purpose of ITAAC. However, the purpose of QA is different. Appendix B states that “quality assurance” comprises all those planned and systematic actions necessary to provide adequate confidence that a structure,

system, or component will perform satisfactorily in service. The NRC CIP needs to reflect the difference between ITAAC and the QAP.

2. The ITAAC Matrix looks like as a smart way to group ITAAC so as to define the procedures that would be used to inspect ITAAC closure. How will the individual procedures distinguish between inspection to verify that specified acceptance criteria are met and inspections to “determine whether a process is being maintained with the proper quality controls”, as discussed in IMC-2503, Appendix B?
3. Will the inspection procedures indicated in row 17 on security ITAAC address the need for special planning and handling of safeguards information?
4. The IMC does not devote attention to implementation of the SAYGO process. In consideration of Comment 1, above, it is recommended that a distinction be made between SAYGO for construction processes and ITAAC determinations. These two important concepts are significantly different in scope, documentation, timing, and legal status. The construction inspection framework document (NUREG 1789) recognizes this difference and discusses them separately in sections 3.3.4.2, where it discusses SAYGO, and 3.3.4.3, wherein ITAAC determinations are discussed. This differentiation is also alluded to in Appendix B to IMC 2503.
5. The document uses the following similar terms: ITAAC inspections, ITAAC verifications, ITAAC determinations, ITAAC-related inspection activities, and non-ITAAC activities. Please contrast these terms.
6. Please provide an overview of IMC-0613, *Construction Inspection Reports*, including enforcement-related guidance.
7. Section 07.03.b is on Assessment of Inspection Results. How does this relate to IMC-2505, *Periodic Assessment of CIP Results?* How does this relate to SAYGO?
8. Appendix C uses the term “Inspection Group.” Is this the same as the term, “ITAAC family” used elsewhere?
9. It is important to be clear that sampling is to be applied, as appropriate, to the inspection of ITAAC SSCs, but that NRC will verify all ITAAC.
10. Suppose an inspector identifies a finding having to do with improper handling or storage of a component (e.g., valve) awaiting installation. Would this be an example of a “regulatory finding” – and not an “ITAAC finding” – because the finding concerns a QA issue that while potentially important, is not material to an ITAAC determination?

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1. Consolidate focus areas and appropriate timing for inspections:
 - a. IMC 2514 addresses “Light Water Inspection Program Startup Testing Phase”. This document appears to be redundant to the guidelines provided in IMC 2504. We recommend that guidelines be consolidated in IMC 2504 and IMC 2514 be deleted.
 - b. IMC-2504 should stand alone as the process for inspection of non-ITAAC related activities. IMC-2503 should represent the NRC inspection of construction processes which result in data which satisfy ITAAC requirements. IMC 2504 seems to address items that are more appropriately addressed in IMC 2503. Examples include Section 8.01.a identification of QA program deficiencies that must be corrected before the NRC can find that an ITAAC work-related activity is acceptable. Section 8.01.g also addresses the Quality Program for developing ITAAC determinations. What is the relationship between Sections 8.04 and 8.05 on Construction and Pre-op Testing with IMC-2503?
 - c. FOAKE is the detailed engineering that translates the certified and approved design information into lower tier construction and design documentation that supports plant construction and equipment procurement. Completion of FOAKE is not required for the issuance of a combined license (COL). An applicant may decide to complete all or a portion of FOAKE for reasons of construction efficiency and business advantage prior to issue of a COL, but doing so is not a regulatory requirement. For these reasons, we recommend that the NRC inspection manual chapters be revised to address FOAKE requirements in IMC 2504 (post COL) rather than in IMC 2502 which is pre-COL. [Ref. NEI letters of 4/4/06 and 7/31/06.]

2. Resolution of corrective action program adverse quality conditions. Wording in Sections 6, 7 and 8 that addresses determining and resolving problems should be more specific in order to recognize the graded approach applied by licensees’ Problem Identification and Resolution (PI&R) programs and to focus attention on the resolution of significant conditions adverse to quality. For example:
 - a. The fourth and fifth paragraphs on page 8 section 2504-06 discuss completing or addressing all required or necessary corrective actions. It is recommended that this wording be replaced with, “all significant conditions adverse to quality (SCATQ) have been resolved and other open items have been placed in the licensee’s corrective action program with a date for resolution.”
 - b. Similarly, for the major steps in the plan for transition to the ROP identified in 07.03, it is recommended that Step b be revised to state, “verifying that all significant conditions adverse to quality have been resolved and other open items have been placed in the licensee’s corrective action program with a date for resolution.”
 - c. The second sentence in the second paragraph of 08.01.b should more specifically state which problems identified in the PI&R program require evaluation for the extent of condition. It is recommended that this sentence be revised, in part, to state, “...a licensee’s PI&R program should provide for evaluating problems that result in significant conditions adverse to quality (SCATQ), which are failures, malfunctions,

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deficiencies, deviations, defective material and equipment, or non-conformances that adversely affect the safety related function(s) of a SSC or part, for root and contributing causes of the problems, the extent of condition of the problems, and identification of the actions necessary to prevent recurrence.”

3. Incorporate a phased inspection approach where appropriate. Inspection manual guidance should consider the status of systems and programs relative to required inspections prior to fuel load and also recognize the phased approach that will be needed for inspections related to construction. For example:
 - a. IP 73753 “Inservice Inspection” and IP 73755 “Inservice Inspection Data Review and Evaluation” – Require a review and evaluation of records that may not be available on a new construction plant.
 - b. Similarly, In-service Testing is also identified as an inspection required prior to fuel load. The IP is listed as “TBD” and therefore not available for review. However, equipment required to be in-service tested prior to fuel load will probably be very limited.
 - c. Fire Protection Inspection requirements include a walkdown of fire protection systems to verify operability and that fire protection requirements are being met. This is certainly an appropriate action, however, the inspection should be limited to those areas/systems that are required to support initial fuel load.
4. Do not publicly release schedule information unless there is a demonstrated need. The industry considers that construction schedule information is business sensitive and proprietary.
 - a. Section 7.01.b states, “The construction inspection staff’s inspection plan, minus any licensee and NRC proprietary scheduling information, should be a public document to support any interface with external stakeholders and other agencies.” - Revise to require only that the inspection plan scope be made public. Schedule information should not be required to be made public unless there is a specific identified interface need, and then it should only be provided to the stakeholder with the identified need.
5. Evaluate the need for Operational Readiness Assessment Team (ORAT) Inspections
 - a. The Construction Inspection Program (CIP) will provide an on-going inspection and assessment process that assures the effectiveness of construction work practices, operational controls, problem identification and resolution and management oversight. The need for a Operational Readiness Assessment should be reevaluated after the CIP is fully developed.
6. A significant number of inspection procedures are not available for review. What are the NRC’s plans for updating/creating these procedures, assuring consistency with RG 1.206 and the SRP, making them publicly available, etc.?