

August 1, 2013

MEMORANDUM TO: Stephen D. Dingbaum
Assistant Inspector General for Audits

FROM: R. W. Borchardt */RA Michael R. Johnson for/*
Executive Director for Operations

SUBJECT: STATUS OF RECOMMENDATIONS AND STAFF RESPONSE TO
THE OFFICE OF THE INSPECTOR GENERAL'S AUDIT OF THE
U.S. NUCLEAR REGULATORY COMMISSION'S INSPECTIONS,
TESTS, ANALYSES, AND ACCEPTANCE CRITERIA PROCESS
(OIG-12-A-16)

This memorandum provides the U.S. Nuclear Regulatory Commission (NRC) staff's updates for remaining open recommendations from the Office of the Inspector General's (OIG) audit OIG-12-A-16, "Audit of the NRC's Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) Process," dated July 12, 2012. The staff continues to implement actions in response to the OIG's audit and believes that it remains responsive to the OIG's recommendations. The staff believes that the updated planned actions for resolved Recommendations 4, 7, and 8, and unresolved Recommendation 10, are responsive to OIG's analysis. Recommendations 1, 2, 3, 5, 6, and 9 are closed. Enclosure 1 to this memorandum presents history of correspondence for this audit.

Recommendation 1:

Develop formal guidelines governing the use of Strategy Documents in the context of construction inspection.

Status: Closed.

Recommendation 2:

Specify procedures for updating Strategy Documents and communicating changes in a systematic and coordinated fashion.

Status: Closed.

CONTACT: Mahmoud Jardaneh, NRO/DCIP
301-415-2753

Recommendation 3:

Provide specific guidance for inspection of non-targeted Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) and clarify the specific roles and responsibilities of various stakeholders during ITAAC closure notification review.

Status: Closed.

Recommendation 4:

Develop and deliver training for the ITAAC process based on the results of needs assessments.

OIG analysis dated May 06, 2013:

The proposed actions continue to partially meet the intent of OIG's recommendation. OIG acknowledges the change in the completion date to September 30, 2013, and also notes that the agency recently assigned the Office of the Chief Human Capital Officer (OCHCO) to serve as the NRC-wide lead for developing training needs assessments. OIG suggests NRO coordinate any actions directly with OCHCO. OIG will close this recommendation upon issuance and OIG review of training needs assessment guidance for a three-stage training needs evaluation process that includes organizational, occupational, and individual assessments as outlined in existing NRC and Office of Personnel Management (OPM) guidance, as well as development and delivery of training.

Status: Resolved.

Staff Update:

Based on input from the Office of New Reactors (NRO) subject matter experts, the Office of Chief Human Capital Officer (OCHCO) completed a needs analysis using Human Resources Training and Development (HRTD) Operating Procedure (OP)-0406a, "Technology-in-Training." This analysis focused on four areas related to ITAAC, including (1) the ITAAC Closure Verification Process, (2) ITAAC quality and inspectability, (3) the ITAAC inspection prioritization process, and (4) the applicable Verification of ITAAC Closure, Evaluation, and Status (VOICES) and Construction Inspection Program Information Management System (CIPIMS) tools. Results from the analysis were documented in accordance with HRTD-0406a. Based on these results, OCHCO determined that several self-paced and Web-based modules are the appropriate method to conduct ITAAC training. The training modules will include requirements and responsibilities in Title 10 of the *Code of Federal Regulations* (10 CFR) Part 52, "Licenses, Certifications, and Approvals for Nuclear Power Plants; the Construction Inspection Program, the Life-of-an-ITAAC, ITAAC Quality, and Inspectability, ITAAC prioritization, and the ITAAC Closure Verification Process. Additionally, the training modules will include practice activities and exercises on ITAAC inspectability, ITAAC prioritization, and using VOICES and CIPIMS to support ITAAC Closure Verification. The NRC held an initial design meeting with the subject matter experts to determine the most appropriate delivery method and identify the content of the training.

Because ITAAC training was not planned in OCHCO FY2013 budget, it is being completed in-house by OCHCO staff. Because of current OCHCO staffing, work load, and project prioritization, the NRC anticipates a delay of approximately 3 months.

Point of contact: James Gaslevic, NRO/DCIP
301-415-2776

Target completion date: December 31, 2013.

Outside of this activity, HRTD has drafted an Office Procedure (OP) to address training needs analysis in response to a separate OIG audit, OIG 13-A-14. This OP, "Training Needs Analysis," is currently under review by HRTD management and should be issued before the new proposed deadline of December 31, 2013, for completion of this recommendation. This procedure will define how the training needs analysis will be conducted and reviewed at the NRC, and at what frequency. It is based on the Office of Personnel Management (OPM) guidance referenced in the original audit recommendation. Additionally, HRTD is in the process of obtaining contract support to conduct an occupational analysis to identify which positions within the NRC should be considered mission critical or have responsibility for oversight of safety activities. The training and development contractor will assist HRTD in conducting training needs analysis and gap analysis for these positions to establish a basis for the training and qualification programs administered within the agency. The NRO positions, which have responsibility for ITAAC, will be included in this analysis; however, the analysis of training gaps will likely not be addressed before the completion deadline for this recommendation. Any further gaps identified by this analysis in the training being developed under this recommendation will be addressed when the gaps are identified.

Recommendation 5:

Designate a specific project manager CIPIMS as required by the Project Management Methodology (PMM).

Status: Closed.

Recommendation 6:

Develop and maintain project artifacts for CIPIMS as required in the PMM.

Status: Closed.

Recommendation 7:

Determine what systems, structures, and components assembled or manufactured off-site need to be inspected prior to arrival at the construction site in support of the ITAAC closure process.

OIG analysis dated May 06, 2013:

The proposed actions continue to meet the intent of OIG's recommendation to determine what systems, structures, and components assembled or manufactured off-site, need to be inspected

prior to arrival at the construction site in support of the ITAAC closure process. OIG will close this recommendation upon issuance and OIG determination that the Vendor Inspection Plan and Inspection Manual Chapters (IMC) 2503, 2506, and 2507 describe what systems, structures, and components, assembled or manufactured off-site, need to be inspected prior to arrival at the construction site in support of the ITAAC closure process.

Status: Resolved.

Response:

The Region II Construction Inspection staff will establish a strategy for determining which systems, structures, and component assembled or manufactured offsite need to be inspected before their arrival at the construction site. Region II, in its response to the above Recommendation 7, stated that it would establish a list of recommended offsite inspections after a combined license is issued, and update the list as necessary. Region II would provide this recommended list of offsite inspections to NRO's vendor inspection staff for review. NRO staff revised Inspection Manual Chapter (IMC) 2506, "Construction Inspection Program: Inspections of Inspections, Tests, Analysis and Acceptance Criteria (ITAAC) Related Work," to reflect roles and responsibilities of Region II and NRO concerning inspections of ITAAC-related components.

Region II Construction Inspection staff established a recommended list of offsite inspections titled, "All-Offsite Tasks 2-13-13.xlsx," dated February 28, 2013, and the list of potential modular items produced at vendor sites titled, "Type Test Report Review List for ITAAC," dated March 1, 2013. These lists were developed as a result of the SmartPlan process created by the Region II Division of Construction Projects/Division of Construction Inspection technical subject matter experts. The process involved the review and evaluation of the AP1000 design certification document ITAACs and resulted in a list of inspection activities for each targeted ITAAC. These lists contain the inspections that are either (1) likely to occur at a vendor facility or (2) related to type test ITAAC and are a subset of the full list of targeted ITAAC inspections. The lists are discussed with NRO vendor inspection staff during weekly vendor inspection schedule status teleconferences. Inspections of items on the lists are coordinated between Region II and NRO.

Recent discussions concluded that two vendors are fabricating modular systems and structures for the AP1000: Chicago Bridge & Iron and Newport News Industries. Additional vendors are possible over time. Therefore, the list of vendors assembling or manufacturing modular systems, structures, and components for the AP1000 will be periodically evaluated based on information obtained during the construction inspection program.

The NRC staff has reviewed IMC 2503, "Construction Inspection Program: Inspections of Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) Related Work" and IMC 2506 in detail and determined that they are adequate and that no updates are necessary because the changes to the Vendor Inspection Program (VIP) Plan and IMC 2507, "Construction Inspection Program Vendor Inspection," as proposed actions in Recommendation 8, will adequately capture the guidance involving Recommendation 7.

Point of contact: David Ayres, RGN-II
404-997-4407

Target completion date: September 30, 2013.

Recommendation 8:

Develop a formal vendor inspection coordination strategy to ensure appropriate inspections of modular SSC assembled or manufactured off-site.

OIG analysis dated May 06, 2013:

The proposed actions meet the intent of OIG's recommendation to develop a formal vendor inspection coordination strategy to ensure appropriate inspections of modular systems, structures, and components assembled or manufactured off-site. OIG will close this recommendation upon issuance and OIG review of the revised Vendor Inspection Program (VIP) Plan and IMC that communicate the revised guidance addressing headquarters and Region II coordination pertaining to inspection of modular structures, systems, and components assembled or manufactured off-site.

Status: Resolved.

Staff Update:

The staff agrees with the essence of the recommendation, namely that NRO vendor inspection staff will establish a strategy for coordinating vendor inspections and communicating any findings identified at the vendor facility associated with ITAAC to Region II. The vendor inspection staff in its response to the above recommendation proposed that it would review Region II's established recommended list of offsite inspections in planning and coordinating resources from NRO's vendor inspection staff and Region II's construction inspection staff to support the ITAAC-related inspections of vendors manufacturing modular assemblies for the new reactor construction. It is important to note that each subsequent Reactor Design Center will require a similar evaluation process, if modular construction is used. The NRO vendor inspection staff reviewed Region II's recommended list of offsite inspections titled, "All-Offsite Tasks 2-13-13.xlsx," dated February 28, 2013, and the list of potential modular items produced at vendor sites titled, "Type Test Report Review List for ITAAC," dated March 1, 2013. Following discussions, the NRO vendor inspection staff and Region II construction inspection staff agreed that Chicago Bridge & Iron and Newport News Industries are the only two vendors that currently fabricate modular systems and structures for AP1000 modular construction. The list of vendors assembling or manufacturing modular systems, structures, and components for the AP1000 will be periodically evaluated based on information obtained during the construction inspection program.

As part of coordination with Region II construction inspection staff, the NRO vendor inspection staff will continue to conduct weekly meetings by teleconference to discuss vendor inspection schedules and status concerning Vogtle, Units 3 and 4, and V. C. Summer, Units 2 and 3, construction activities. The agenda of these meetings will be modified to include topics related to, but not limited to: (1) status update of vendor inspection schedule reflecting date changes, completions, and coordination of Region II inspection resources, (2) status update on confirmed Region II construction inspector resources, (3) discussion of any vendor issues identified on site by resident or construction inspectors or generic issues identified by NRO vendor inspection staff of which both Region II and headquarters should be aware, (4) identification of

ITAAC-related vendor inspection activities, as well as modular construction at a vendor site, and (5) review of actions items.

The documentation of meeting agenda, minutes of the meeting (if recorded), any action items, update to the NRO vendor inspection schedule, and revision of the Vendor Inspection Program (VIP) Plan and Region II Center for Construction Inspection/Quality and Vendor Branches Coordination SharePoint site will be documented by vendor inspection staff in coordination with Region II construction inspection staff. In addition, if either of the two current suppliers opens a new facility to manufacture modular assemblies for new reactor construction, then the NRO vendor inspection staff would evaluate and coordinate with Region II construction inspection staff for potential inspection.

The NRC staff has reviewed IMC 2503 and IMC 2506 in detail and determined that they are adequate and that no updates are necessary because the changes to the VIP Plan and IMC 2507 will adequately capture the guidance involving Recommendation 8.

Proposed Actions:

1) Update the VIP Plan by incorporating the strategy for coordinating vendor inspection with Region II construction inspection staff for inspection of vendors manufacturing modular assemblies that support new reactor construction. In addition, revise the agenda for the weekly NRO vendor inspection and Region II teleconference meeting to include topics for discussion related to evaluation and inspection of facilities for manufacturing modular assemblies for new reactor construction.

Point of contact: Edward H. Roach, NRO/DCIP
301-415-1973

Target completion date: September 30, 2013.

2) Update IMC 2507 to reflect the vendor inspection staff responsibility for coordination with Region II construction inspection staff for performing inspection of vendors manufacturing modular assemblies that support new reactor construction and communication of inspection findings and ITAAC findings identified at the vendor facility to Region II.

Point of contact: Edward H. Roach, NRO/DCIP
301-415-1973

Target completion date: September 30, 2013.

Recommendation 9:

Develop a plan to correct the existing communication and coordination problems between headquarters and Region II that resulted from lack of a change management process for ITAAC-related issues.

Status: Closed.

Recommendation 10:

Develop and implement a change management process to address future change in the ITAAC process that can create barriers to effective communication and coordination.

OIG analysis dated May 06, 2013:

While the agency states agreement with the recommendation, the described agency actions do not meet the intent of OIG's recommendation. The activities described in the agency's January 31, 2013, response do not constitute development and implementation, of a formal change management process for the overall ITAAC process as envisioned by the recommendation. Rather, what is described is a collection of actions NRO has taken to apparently address changes to specific ITAAC, not the overall process of overseeing ITAAC-related activities.

OIG will resolve this recommendation when the agency describes a change management program that demonstrates that it addresses future change in the overall ITAAC process. Examples of potential future changes that would benefit from a change management process could include re-organization within NRO or NRC or significant staffing, technology, and/or budget changes similar to sequestration under the 2011 Budget Control Act. Such events would potentially cause change in the ITAAC program that would need to be effectively managed.

OIG will resolve this recommendation when the agency describes to OIG its intent to develop and issue a formal guidance document that describes in detail a formal change management process, as envisaged by the audit report and recommendation.

Staff Update:

As previously articulated in the staff's responses to this recommendation, NRO has several tools and processes in place to facilitate and control ITAAC changes. This is being accomplished through the use of procedures (e.g., IMC 2506, Construction Reactor Oversight Process General Guidance and Basis; NRO-COM-108, NRO Construction Inspection Interfaces with Region II, and Impacts of License Amendment Requests on ITAAC (under development). In so doing, NRO has incorporated the principles of change management discussed in John Kotter's book "Leading Change."

In addition, agency senior management is evaluating implementation of an agency-level management system, which is expected to include a change management process to address future changes in NRC processes. NRO would modify its guidance regarding change management for the ITAAC process to align with any agency-level change management framework that is developed. Definitive plans concerning this potential agency initiative will be included in a future status update.

Point of contact: Mahmoud Jardaneh, NRO/DCIP
301-415-2753

S. Dingbaum

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Target completion date: Within 6 months after implementation of the agency-level management system.

Enclosure:

As stated

cc: Chairman Macfarlane
Commissioner Svinicki
Commissioner Apostolakis
Commissioner Magwood
Commissioner Ostendorff
SECY
EDO

S. Dingbaum

- 8 -

Target completion date: Within 6 months after implementation of the agency-level management system.

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Correspondence History
OIG-12-A-16, "Audit of NRC's ITAAC Process"

- July 12, 2012. *Audit Report: AUDIT OF NRC'S INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (ITAAC) PROCESS (OIG-12-A-16)*.
 - Agencywide Documents Access and Management System (ADAMS) Accession No. ML12194A434.
- August 16, 2012. *Memorandum to Assistant Inspector General for Audits: STAFF RESPONSE TO THE OFFICE OF THE INSPECTOR GENERAL'S AUDIT OF THE NUCLEAR REGULATORY COMMISSION'S INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (ITAAC) PROCESS (OIG-12-A-16)*.
 - ADAMS Accession No. ML12212A177.
- October 4, 2012. *Memorandum to the Executive Director for Operations: STATUS OF RECOMMENDATIONS: AUDIT OF NRC'S INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (ITAAC) PROCESS (OIG-12-A-16)*.
 - ADAMS Accession No. ML12279A263.
- January 31, 2013. *Memorandum to Assistant Inspector General for Audits: STATUS OF RECOMMENDATIONS AND STAFF RESPONSE TO THE OFFICE OF THE INSPECTOR GENERAL'S AUDIT OF THE U.S. NUCLEAR REGULATORY COMMISSION'S INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA PROCESS (OIG-12-A-16)*.
 - ADAMS Accession No. ML13002A423.
- May 6, 2013. *Memorandum to the Executive Director for Operations: STATUS OF RECOMMENDATIONS: AUDIT OF NRC'S INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (ITAAC) PROCESS (OIG-12-A-16)*.
 - ADAMS Accession No. ML13126A287.