September 28, 2007

MEMORANDUM TO: Richard Rasmussen, Chief

Construction Inspection & Allegation Branch

Division of Construction Inspection

& Operational Programs
Office of New Reactors

FROM: Thomas Herrity /RA/

Construction Inspection & Allegation Branch

Division of Construction Inspection

& Operational Programs
Office of New Reactors

SUBJECT: SUMMARY OF AUGUST 30, 2007 AND AUGUST 31, 2007,

CATEGORY 3 PUBLIC MEETING ON CONSTRUCTION ASSESSMENT, ENFORCEMENT AND ITAAC CLOSURE PROGRAMS FOR NEW REACTOR CONSTRUCTION.

The Nuclear Regulatory Commission (NRC) conducted public meetings on August 30, 2007 and August 31, 2007 with members of the Public and various nuclear industry stakeholders. The August 30 meeting was held at the Ramada Inn, 1775 Rockville Pike, Rockville, MD 20852; and the August 31 meeting was held at the NRC Headquarters, Two White Flint North, 11545 Rockville Pike, Rockville, MD 20852. These meetings provided an opportunity to discuss the NRC monitoring of licensee performance, assessment of the results of NRC inspection activities, the Inspection Test Analysis and Acceptance Criteria (ITAAC) prioritization process and the ITAAC closure documentation requirements. Lastly, the NRC discussed several Inspection Manual Chapters (IMC).

On August 30, 2007, the NRC began the meeting by providing a framework outline of assessment objectives, including current NRC thinking on construction oversight concepts, programmatic areas to be considered, characterization of inspection findings, and goals for complementary enforcement policies. Discussions of these assessment objectives were as provided in the current draft of IMC 2505, which is currently under development. The intent was to describe the process for using construction inspection results to arrive at an overall assessment of licensee performance.

CONTACT: Thomas Herrity, NRO/DCIP/CCIB

301-415-8496

After the introductory presentation, the NRC took questions and comments from attendees related to the assessment process. Following this, the NRC and attendees began a workshop portion of the meeting where several examples of inspection findings were processed through the proposed assessment and enforcement process. Listed below (Enclosure 1) are significant comments raised during the meeting with answers to the examples.

On August 31, 2007, the NRC presentated the ITAAC prioritization methodology used to select which ITAAC would be selected for direct inspection. Subsequentally, the NRC staff discussed two ITAAC examples of closure letters pursuant to 10 CFR 52.99 (Attachments 6 and 7). Lastly, the NRC provided a briefing of Inspection Manual Chapters 2502 & 2504. Listed below (Enclosure 1 and 2) are significant comments and questions that were asked during the meeting.

Enclosure 3 is a listing of the attendees for each day. Attachments 1-7 ADAMS Accession Numbers ML072270496, ML072610453, ML072280118, ML072610446, ML072610336, ML072700053 and ML072700062 are the slides and draft letters presented by NRC staff during the meeting.

Enclosure:

Comments from Meeting Attendees for August 30, 2007, Enclosure 1 Comments from Meeting Attendees for August 31, 2007, Enclosure 2 List of Attendees, Enclosure 3

cc w/encl: See next page

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ADAMS Package Accession Number: ML072610469 Meeting Notice Accession Number: ML072190694 Meeting Summary Accession Number: ML072610461

Role of the Assessment & Enforcement Program: ML072270496 (Attach. 1)

ITAAC Closure Verification Using Sample-Based Inspection Process: ML072610453 (Attach 2)

ITAAC Closure Letter Guidance Development Workshop: ML072280118 (Attach 5)

IMC 2501- Early Site Permit (ESP) & IMC 2502 - Pre- Combined License (Pre-COL) Phase:

ML072610446 (Attach 4)

IMC 2504 Construction Inspection Program Non-ITAAC Inspections: ML072610336 (Attach 3)

ML072700053 (Attach. 6) Draft ITAAC Acceptance Letter ML072700062 (Attach 7) Draft ITAAC Acceptance Letter

OFFICE	NRO/DCIP/CCIB	NRO/DCIP/CCIB (BC)
NAME	THerrity:hpm1	RRasmussen (R.Pascarelli for)
DATE	09/27/07	09/28/07

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Comments from Meeting Attendees for August 30, 2007

The following topics were discussed by the meeting participants and represent areas for future public meetings:

- 1) The decision blocks on the flow chart represent an understanding of the NRC s thought process at the conceptual level. However, there needs to be a better explanation of the criteria at each decision point.
- Will there be a self-assessment process to evaluate the effectiveness of the construction oversight process? The staff stated that the reactor oversight process (ROP) conducts an annual assessment of the program and that it is expected that a similar self-assessment process would be prudent for oversight of new reactors.
- 3) What is the definition of NRC-identified, licensee-identified, and self-revealing as they relate to construction inspection and assessment activities? The staff stated that the plan was to start with the definitions described in IMC 0612 for operating reactors and make necessary adjustments.
- 4) According to the flow chart, a Notice of ITAAC Non-Conformance would be issued for an in-process deficiency identified prior to the licensee accepting the system/component. Would a more appropriate response be for an inspector to verify that the deficiency was in the licensee's CAP and documented in an inspection report? In this case, would a better characterization be to call this a potential ITAAC finding? Would a Notice of ITAAC Non-Conformance be better characterized as a Notice of ITAAC Finding?
- 5) The industry stated that a process should be established to allow licensees an opportunity to provide more information when the NRC has determined that a finding impacts ITAAC or codes/standards listed in the COL documents.
- The staff described a process of certifying that a licensee's CAP was mature enough to allow non-cited violations to be issued in lieu of cited violations. The participants recognized that further work is needed to develop the criteria for such a program. Additionally, what is the process for such a determination and how would the licensee be notified? Is this truly a program certification?
- The staff stated that the use of substantive cross-cutting issues would be utilized for new reactors to inform the staff of licensee performance across all performance areas and as an input to the assessment program. The staff also stated that the proposed cross-cutting areas would be quality, problem identification and resolution, and safety conscious work environment (SCWE). The participant s questioned how closely the ROP criteria for substantive cross-cutting issues would mirror that used for the ROP. Additionally, would cross-cutting aspects associated with licensee-identified items be used in this determination? How would the staff account for the lack of information in making these conclusions for new reactors?

- 8) The staff discussed the use of a construction action matrix that utilized a graded approach in allocating additional inspection resources, increased communications, and additional regulatory actions as licensee performance declined. The inputs to the construction action matrix would be escalated enforcement actions, ITAAC findings, and substantive cross-cutting issues. The participants stated that this topic needed further clarification and discussion.
- 9) Additional topics discussed were the role of licensee-identified findings and/or violations and how the NRC would evaluate these in the enforcement and assessment program, the application of the allegations program, and the impact of vendor compliance with NRC requirements.

Below are examples of inspection issues evaluated during the enforcement workshop. The specific details can viewed in the slides contained in Attachment 4 of this letter.

- 1) Example # 1: Seismic Support This deficiency would be considered as minor since the support was larger than the design requirement. This issue would not be documented in an NRC inspection report.
- Example # 2: Excessive Cable Installation Pull Force This deficiency would be considered a construction finding that is a hardware issue and would result in no violation. For the purpose of this exercise, this system was considered to be part of a non-safety related system and not subject to 10 CFR Appendix B quality assurance requirements. This finding would be documented in an NRC inspection report and would be subject to NRC sampling of licensee corrective actions.
- 3) Example # 3: Audit Findings Not Corrected This deficiency would be considered a construction finding that would result in a severity level IV violation. This finding would be documented in an NRC inspection report and would be subject to NRC sampling of licensee corrective actions.
- 4) Example # 4: Misidentified Duplicate Weld This deficiency would result in an ITAAC finding that is programmatic in nature and would result in consideration of escalated enforcement actions.
- 5) Example # 5: HVAC Supports This deficiency would be considered a construction finding that is a hardware issue and would result in no violation. For the purpose of this exercise, this system was considered to be part of a non-safety related system and not subject to 10 CFR Appendix B quality assurance requirements. This finding would be documented in an NRC inspection report and would be subject to NRC sampling of licensee corrective actions.
- 6) Example # 6: Welding Electrode There are two issues with this example: 1) the failure to pre-heat the electrodes sufficiently to remove moisture that could affect the porosity of the welds and 2) The potential lack of traceability for the welding rods. This would be considered a construction finding that would result in a severity level IV violation. This finding would be documented in an NRC inspection report and would be subject to NRC sampling of licensee corrective actions.

- 7) Example # 7: Weld Repairs This deficiency would result in an ITAAC finding. For the purpose of this exercise, the extent of condition review revealed that the deficiencies were isolated and would result in a Notice of ITAAC Non-Conformance.
- 8) Example # 8: Associated Circuits This deficiency would result in an ITAAC finding that is isolated in nature and would result in a Notice of ITAAC Non-Conformance.
- 9) Example # 9: Circuit Isolation This deficiency would result in an ITAAC finding that is programmatic in nature and would result in consideration of escalated enforcement actions.

Comments from Meeting Attendees for August 31, 2007

NRC Class 3 Public Meeting for ITAAC Closure and Baseline Inspection Program

ITAAC Prioritization -

Questions/Answers

1) Question: What is the Agencywide Document Access and Management System (ADAMS) Accession Number for the ISL Technical Report that describes the formal decision making process used to decide which ITAAC will be independently inspected by the NRC?

Answer: ADAMS Accession Number ML060740006

2) Question: How were the risk rank & multipliers derived?

Answer: An expert panel of NRC members implemented the ISL methodology which uses the analytic hierarchy process (AHP). Key ITAAC attributes were identified including: propensity for making errors, construction and testing experience, opportunity to verify by other means, licensee oversight attention, and safety significance. The expert panel developed relative weights using AHP and then utility values for each attribute. Each ITAAC was then prioritized to identify its value for inspection.

3) Question: Are the targeted ITAAC sample for inspection and the prioritization numbers available for each ITAAC?

Answer: No, the list of targeted ITAAC for inspection and the prioritization numbers have not been made public. Release of that information is a policy issue which will be evaluated.

4) Question: The brief presents ITAAC numbers in every ITAAC field are they all inspections?

Answer: In the ITAAC matrix, the listing for each family has both targeted and non-targeted ITAAC for inspection. The list of rank results by family shows all ITAAC and its rank. The NRC selected a threshold value of .4 to identify which ITAAC was selected for direct inspection.

5) Question: How will ITAAC selection be converted to inspection procedures? How much inspection is required to make determination that selected ITAAC are satisfied

Answer: The NRC will prepare detailed inspection plans which will identify what constitutes an adequate inspection sample to close an ITAAC. IMC 2503, Construction Inspection Program – Inspections of ITAAC, provides guidance for sample selection and refers to the applicable inspection procedures for all matrix categories.

6) Question: The ITAAC selection threshold of 0.4, which correlates to a sample of 35% for AP1000 and 44% for ABWR, is too high and will result in too much NRC inspection

.

Answer: The 0.4 threshold was based on achieving adequate coverage of overall construction activities which represents part of the NRC baseline inspection program. The 0.4 threshold was not selected on resource limitations. The NRC is in the process of determining the resource necessary to perform the targeted ITAAC inspections.

Comments

- 1) Industry requested a future meeting on how and what NRC will inspect as delineated in the inspection procedures.
- 2) Industry stated that the proposed program only allows for an increasing amount of inspections with no options of decreasing inspection for good performance. The NRC staff commented that the minimum construction baseline inspection concept is consistent with the reactor oversight process.
- The Union of Concerned Scientists (UCS) stated that NRC's efforts at keeping the results and the targeted ITAAC secret will work for the 1st plant, and after that, the industry will target those that are to be inspected and pay less attention to the remaining. The UCS further stated that this is the wrong approach and the ITAAC selection should be a truly random process that will force the licensee to properly complete all the ITAAC. The NRC staff replied that different approaches in selecting the ITAAC inspection sample were evaluated. A formal decision making process using AHP was used to determine the value of inspection of each ITAAC. Within one ITAAC, there may be numerous individual components, and the licensee would not know which ones would be selected for direct inspection. Also, NRC Region II has some limited flexibility to change which ITAAC will be inspected, thus adding an element of surprise. This approach was reviewed and accepted by the Commission and ACRS.
 - 3) Nuclear Energy Institute (NEI) believes that 44% inspection sample for the ABWR and 35% inspection sample for the AP1000 of ITAAC is too large. NEI suggested that a smaller sample be used to start and increase the sample if needed due to poor performance. The NRC staff stated that the level of resource required to inspect ITAAC is more directly related to the requirements of the inspection plan, rather than the ITAAC sample size. The size of the ITAAC sample was based on providing adequate coverage of overall construction activities to assure adequate confidence.

ITAAC Closure Letter - Workshop

Questions/Answers

1) Question: Calculations for ITAAC closure do not have to come from inspection. They can come from design but do licensees need to state source and report all the pertinent details?

Answer: (NRC) Details must be stated so that the public can validate them and conclude the ITAAC were met. In example #1, the fire hose test must state "at the highest fire plugs" or "the most remote" and provide the volume flow rate.

Question: (NEI) NEI is developing a document to dictate standard test methods that the licensees can use as reference to avoid needlessly voluminous ITAAC reports. Will NRC accept this approach?

Answer: (NRC) The letter must state that the ITAAC have been met, not only to referenced engineering standards, but so that a member of the public can read it and conclude that the ITAAC are met. The letter must have this level of detail. It must also address every element identified in the ITAAC.

3) Question: (NEI) The standard letter will utilize references while avoiding many pages of boilerplate in each ITAAC letter. Is this acceptable?

Answer: (NRC) ITAAC letters must address two sets of needs: 1) the NRC Staff's need for engineering detail and 2) the public's "need to know" that the ITAAC are met by correct and appropriate testing & inspection methods. The letter must clearly address any ITAAC findings or potential non-compliances. The letters should also use the active voice and not the passive voice.

4) Question: (NEI) Must the letter be "under Oath or Affirmation" such as the examples. Are these examples satisfactory?

Answer: (NRC) The rule only requires "Notification" not Oath and Affirmation. Be aware all submissions are subject to the "False Information" provisions of the rules. The NRC recognizes that "Oath" and "Affirmation" mean the same thing. Section 'i' (of example) is light, section 'ii' is ok.

5) Question: (NEI) Will the procedures and calculations supporting the closure letter of an ITAAC be available to public?

Answer: (NRC) No, it would flood the system with information. The basis of the procedures will be available through references to certain building codes, etc. The volume of information will make it unusable if put directly into the packages.

Comments

- 1) (D. Lockbaum) Stating "passed the 75 GPM flow test" is OK level of detail for a closure letter submittal.
- 2) (NEI) NEI is concerned about having to mine the corrective action program for all the related items. Does this example form meet the notification requirements? The NRC staff reserved judgment and indicated more discussion is needed on what constitutes "sufficient information."
- 3) (Builder) Contractor finds this very onerous; the requirements to associate each item to an ITAAC.
- 4) (D. Lockbaum) Regarding the examples, get rid of all extra details. Get rid of the Quality Assurance and CAP ties in the letter, or it'll be an ungainly process that won't serve the needs.

5) (Westinghouse) Westinghouse agrees that the NRC should have the records of the items. Everything MUST be done in quality manner. Quality is not a separate bin.

Action Items

- NEI intends to forward draft information to the NRC on anticipated reports letters etc.
- NEI has a better understanding of NRC expectations now.
- NEI is ready to expand on the work and progress going forward.
- All attendees agreed more workshops are needed.
- Ready to look at more complicated ITAAC in the next workshop.
- Westinghouse is looking for more design report integration into the process.

NRC meeting with NEI on Assessment and Enforcement August 30, 2007 Location: Ramada Inn, Rockville, MD Meeting Attendees

	Attendees	
Name	Organization	
Thomas Herrity	NRC	
Leonard Loflin	EPRI	
Richard Rivera-Lugo	NRC	
June Cai	NRC	
Dough Starkey	NRC	
Maria Schwartz	NRC	
Caudle Julian	NRC	
Terry Scott	Kiewit	
John Cohoon	Kiewit	
Stephen Burdick	Morgan Lewis	
Guy Davant	Entergy	
Jacob Kulangara	Bechtel Power	
Lance Rakovan	NRC	
Jim Fisicano	NEI	
Richard Rasmussen	NRC	
Jeff Gordon	Kiewit	
Bob Taylor	Kiewit	
Glenn Tracy	NRC	
Mike Baron	Exelon	
Steve Blossom	STPNOC	
John Ward	Kiewit	
Loren Plisco	NRC	
Richard Laura	NRC	
Mark Giles	Entergy	
Gordon Arent	TVA	
Russ Bell	NEI	
Leslie Kass	NEI	
Barry Westreich	NRC	
Jason Jennings	NRC	
Paul Harris	NRC	
John Thompson	NRC	
Julie Keys	NEI	
Roger Lanksbury	NRC	
Ronald Gardner	NRC	
David Lochbaum	UCS	
Ryuji Iwasaki	Toshiba	
Don Lindgren	Westinghouse	
Don Hutchings	Westinghouse	
Dave Waters	Process Energy	
Dennis Buschbaum	Luminant	
Mark Lesser	NRC	
Alan Blamey	NRC	
Jim Gaslevic	NRC	
Patricia Campbell GE Hitachi		

NRC meeting with NEI on Assessment and Enforcement		
August 30, 2007		
Location: Ramada Inn, Rockville, MD		
Meeting Attendees		
Daniel Livermore	NRC	
Stanley Day	UNI Star	
John Oddo	Shaw Stone & Webster	
David Hastie	Shaw Stone & Webster	
Jim Davis	Southern Nuclear	
Dan Magnabelli	AREVA NP	
D. Mike Woods	Bechtel	

NRC meeting with NEI on Assessment and Enforcement August 31, 2007 Location: U.S. NRC, Rockville, MD Meeting Attendees

Name	Organization
David Lochbaum	UCS
Loren Plisco	NRC
Justin Fuller	NRC
Jim Davis	SNC
Dan Magnarelli	AREVA
Jim Fisicano	NEI
Donald Lindgren	Westinghouse
Roger Lanksbury	NRC
Alan Blamey	NRC
Mark Giles	Entergy
Don Hutchings	Westinghouse
Dave Waters	Process Energy
Leslie Kass	NEI
Stephen Burdick	Morgan Lewis
Rich Laura	NRC
Robert Pascarelli	NRC
John Nakoski	NRC
Jeff Gordon	Kiewit
Cindy Montgomery	NRC
Robert Taylor	Kiewit
Guy Davant	Entergy
Russ Bell	NEI
John Cohoon	Kiewit
Terry Scott	Kiewit
Richard Rivera-Lugo	NRC
Patricia Campbell	GEH
Michael Baron	Exelon
Glenn Tracy	NRC
Ron Gardner	NRC
John Oddo	Shaw Stone & Webster
David Hastie	Shaw Stone & Webster
Dennis Buschbaum	Luminant
Mike Woods	Bechtel
Leonard Loflin	EPRI
Caudle Julian	NRC
Jacob Kulangara	Bechtel
Michael Webb	NRC
John Nguyen	NRC
Anne Cottingham	NEI
John Ward	Kiewit
Tyson Smith	Winston & Strawn
Aida Rivera	NRC

NRC meeting with NEI on Assessment and Enforcement August 31, 2007 Location: U.S. NRC, Rockville, MD Meeting Attendees Joseph Colaccino NRC Nan Giles NRC Richard Rasmussen NRC Jason Jennings NRC

CC:

Mr. Terry Scott Kiewit 1800 South Bell Street, Suite 300 Arlington, VA 22202 terry.scott@kiewit

Mr. John Cohoon Kiewit 1800 South Bell Street, Suite 300 Arlington, VA 22202 john.cohoon@kiewit.com

Mr. Stephen Burdick Morgan Lewis 1111 Pennsylvania Avenue, NW Washington, DC 20004 sburdick@morganlewis.com

Mr. Guy Davant Entergy 1340 Echelon Parkway Jackson, MS 39213 gdavant@entergy.com

Mr. Jacob Kulangara Bechtel Power 5725 Westview Drive Frederick, MD 21703 jmkulang@bechtel.com

Mr. Jim Fisicano Nuclear Energy Institute 1776 I Street, NW, Suite 400 Washington, DC 20006-3708 ijf@nei.org

Mr. Jeff Gordon Kiewit 2440 Kiewit Road Ingleside, TX 78362 jeff.gordon@kos.kiewitt.com

Mr. Robert Taylor Kiewit Kiewit Plaza, Suite E-200 Omaha, NE 68131-3374 bob.taylor@kiewit.com Mr. Michael Baron Exelon 4300 Winfield Road Warrenville, IL 60555-4012 michael.baron@exelon.com

Mr. Steve Blossom STPNOC 4000 Avenue F Bay City, TX 77414 sdblossom@stpegs.com

Mr. John Ward Kiewit 8455 Lenexa Drive Lenexa, KS 66214 jgward@bibb.com

Mr. Mark Giles Entergy 101 Constitution Avenue, NW Ste 200 E Washington, DC 20001-2161

Mr. Gordon Arent TVA garent@tva.gov

Mr. Russell Bell Nuclear Energy Institute 1776 I Street, NW, Suite 400 Washington, DC 20006-3708 rjb@nei.org

Ms. Leslie Kass Nuclear Energy Institute 1776 I Street, NW, Suite 400 Washington, DC 20006-3708 Ick@nei.org

Ms. Julie Keys Nuclear Energy Institute 1776 I Street, NW, Suite 400 Washington, DC 20006-3708 jyk@nei.org Mr. David Lochbaum Union of Concerned Scientists 1707 H Street, NW, Suite 600 Washington, DC 20006 dlochbaum@ucsusa.org

Ryuji Iwasaki Toshiba ryuji.inasaki@toshiba.co.dp

Mr. Donald Lindgren Westinghouse Electric Company PO Box 355 Pittsburgh, PA 15230-0355 lindg1da@westinghouse.com

Mr. Don Hutchings
P. O. Box 355
Pittsburgh, PA 15230-0355
hutchidf@westinghouse.com

Mr. David Waters
Progress Energy
PO Box 1551
Raleigh, NC 27602
david.waters@pgnmail.com

Mr. Dennis Buschbaum Luminant PO Box 1002 EC15 Glen Rose, TX 76063 dennis.buschbaum@luminant.com

Ms. Patricia Cambell GE Hitachi patricial.campbell@ge.com

Mr. Stanely Day UniStar stanley.day@constellation.com

Mr. John Oddo Shaw Stone & Webster john.oddo@shawgrp.com

Mr. David Hastie Southern Nuclear 40 Inverness Center Parkway Birmingham, AL 35242 jtdavid@southernco.com Mr. Daniel Magnarelli AREVA NP daniel.magnarelli@areva.com

Mr. D. Mike Woods Bechtel Power 5725 Westview Drive Frederick, MD 21703 dmwoods@bechtel.com

Mr. Jim Davis Southern Nuclear 40 Inverness Center Parkway Birmingham, AL 35242 jtdavis@southernco.com

Mr. Leonard Loflin EPRI 1300 Harris Blvd Charlotte, NC 28262-8550 leloflin@epri.com

Ms. Anne Cottingham Nuclear Energy Institute 1776 I Street, NW, Suite 400 Washington, DC 20006-3708 anc@nei.org

Ms. Deann Raleigh Scientech draleigh@scientech.com

Mr. Cal Reid Bechtel Power 5725 Westview Drive Frederick, MD 21703 creid@bechtel.com