March 28, 2008

MEMORANDUM TO: Richard Rasmussen, Chief
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Division of Construction Inspection
& Operational Programs
Office of New Reactors

FROM: Ian Spivack **/RA/**
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Office of New Reactors

PARTICIPANTS: Public, Industry, and NRC Staff

SUBJECT: SUMMARY OF PUBLIC MEETING HELD ON MARCH 6, 2008, TO DISCUSS ITAAC CLOSURE AND ASSESSMENT AND ENFORCEMENT FOR NEW REACTORS

The Construction Inspection and Allegations Branch of the Division of Construction Inspection and Operational Programs in the Office of New Reactors (NRO) conducted a Category 3 meeting on March 6, 2008, in Rockville, Maryland. The meeting discussed the Assessment and Enforcement Construction Response Table (CRT), Corrective Action Program (CAP) effectiveness, the Department of Energy (DOE) Standby Support, Design Acceptance Criteria (DAC), and Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) closure letters. The meeting is the sixth in a series of meetings discussing these topics, was attended by members of the NRC headquarters staff, NRC Region II, the Nuclear Energy Institute (NEI), industry, and the general public.

The NRC staff opened the meeting by presenting the Assessment and Enforcement CRT (ADAMS ML080810203). The CRT identifies the range of responses that NRC and licensee would be expected to take for varying levels of licensee performance. The CRT is similar to the Reactor Oversight Process (ROP) action matrix and the staff had initially considered calling it the Construction Action Matrix, but renamed it to the CRT based on stakeholder feedback. As currently proposed, there are two inputs for determining licensee and NRC response: Severity Level I, II, and III violations and substantive cross cutting issues.

Before the actual discussion of the CRT, the staff provided background on its decision to include substantive cross cutting issues in the CRT as they are not part of the ROP action matrix. This topic will be discussed in greater detail during the next public meeting. The industry expressed their concerns about the difficulty in implementing and addressing substantive cross-cutting issues due to the nature of construction activities. The industry also stated that substantive cross-cutting issues would be revealing through other construction activities. The NRC staff stated that the substantive cross-cutting issue is integral to the baseline inspection program and that the NRC is actively working on this topic. NRC staff stated that substantive cross-cutting issues are inputs into the NRC assessment program, and are used to identify the categories

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and types of NRC response to licensee performance. Inspection Manual Chapter (IMC) 2505, "Periodic Assessment of Construction Inspection Program Results," (ADAMS ML080870041) which the staff intends to issue by September 30, 2008, will contain more information on this issue.

The staff intends to issue periodic assessment letters, however the mid-cycle and end of cycle assessment letters from the ROP will be changed to semi-annual and annual periodicities for construction activities. The CRT will be linked to construction activities and will start with the beginning of construction. Licensee performance will be based on the various severity levels and substantive cross-cutting issues. There will be no performance indicators. The start of construction has not yet been defined, but may be the first safety related concrete pour, or the first significant module construction.

As noted earlier, The CRT is similar to the ROP action matrix and contains several columns that describe licensee performance and consequent licensee and NRC response. The nominal program review column pertains to licensees that do not have greater than SL IV violations and no substantive cross-cutting issues. This licensee will receive no additional regulatory actions. The limited program review column pertains to licensees that do not have greater than SL III violation or one substantive cross-cutting issue. The licensee will respond with a root cause evaluation and there will be a limited increase in NRC oversight in areas of concern. The expanded program review column pertains to licensees that do not have greater than three SL III violation or substantive cross-cutting issues or one SL II. The licensee will respond with cumulative root cause evaluation and there will be an expanded increase in NRC oversight in the areas of concern. The unacceptable performance review column pertains to licensees that have one SL I violation, multiple SLII violations, or a combination of the following: 1 SL II and a total of four SL III violations/ substantive cross-cutting issues; or a total of seven SL III violations and substantive cross-cutting issues. This will result in the Commission meetings with senior licensee management and there might be other increased NRC actions, such as issuing Orders. As the licensee moves towards the unacceptable performance column, the NRC will increase inspections and meetings. The CRT is similar to the ROP in that one white finding will cause a limited increase in NRC inspections and that the table contains a graded approach (ADAMS ML080870020). Multiple violations will most likely be packaged as a single problem, but is up to the discretion of the enforcement panel.

Industry commented that a time frame is necessary to evaluate current licensee performance and to evaluate violations. Industry stated that one year seemed to be too long because the licensee will have had to resolve the issue in order to continue onto the next construction process. Industry commented that the previous construction workers that had violations will adversely penalize new construction workers that might have not been involved with the previous violation. Industry and staff further compared and contrasted the CRT to the ROP. No one disagreed in using the CRT concept.

The NRC staff presented the CAP Effectiveness Review (ADAMS ML080870017). NRC CAP inspections will be conducted when the licensee is ready and has had enough deficiencies entered in the CAP program. The CAP should include vendor and modular construction input. Self assessments and independent inspections are concepts that are being considered by the NRC, but are not listed in the presentation. The NRC is soliciting comments on this topic. Resident and other inspections will also be considered in formulating CAP effectiveness decision. The CAP effectiveness will be documented in an inspection report, which will be faster than a semi-annual assessment letter. A CAP effectiveness positive decision can be made when there is an adequate program in place, adequate implementation, and no significant

CAP issues. A significant issue is any Severity Level (SL) I, II, III, or a substantive cross-cutting issue. Sufficient CAP degradation may result in NRC reverting to Notice of Violations (NOVs) instead of Non-Cited Violations (NCV). These issues will be documented in the semi-annual report.

Industry commented that there will be significant activity in the vendor area prior to construction on the site. Industry claimed that reverting to NOVs is not done in operating space, and there is no precedence for doing so. The industry commented that there is no increase in safety if the NRC reverted to NOVs. The NRC stated that the benefit of reverting to NOVs (increasing formal responses to the licensee) increases the public awareness, and possibly increasing the attentiveness of the licensee management.

There are inspections currently in place for 10 CFR Part 52 construction activities. For these activities, the NRC still needs to make a determination that the licensee or vendor has an adequate CAP. The NRC staff solicited comments regarding self assessments and independent inspections of the CAP.

The Department of Energy (DOE) gave a presentation on the Standby Support Final Rule (ADAMS ML080850837 and ML080870208). The industry commented that the ITAAC schedule might change due to the licensee changing the schedule, which will affect the NRC ITAAC schedule. The NRC stated that it could provide a timeframe for completing each ITAAC, or the NRC could propose to complete the ITAAC review by a certain date. If the NRC stated that they could not meet a schedule given to the DOE by a licensee, the DOE would need to decide on what is a reasonable schedule. The DOE could get independent consultation to make this determination. Also, the licensee must provide evidence that they can meet the schedule provided to the DOE.

Industry commented that the licensee is the one who makes the schedule, and the NRC does not approve the schedule. The NRC would not likely request to modify the schedule and that the schedule is used to determine NRC resources. Industry commented that the NRC will be very familiar with the schedule provided to the DOE and that the NRC will know that it takes 4-5 years to complete the construction ITAACs. The NRC should be prepared to provide the resources to perform the inspections. The NRC would need updates about schedule changes in order to determine if any other licensees efforts stack up at the same time and will require concurrent NRC resources.

The list of exclusions for the DOE standby support is specific, and does not cover normal business risk within the licensee's control. The contract is terminated when the plant reaches full power operation. A covered event delay in schedule will have to be told to the DOE. It is recorded as an event if it results in a delay in fuel load. The claim could then be paid if the plant reaches full power.

The NRC's goal is to not interfere with the licensee's fuel load date, and NRC staff resources will be allocated to the extent possible to allow the licensee to hold its schedule.

Industry questioned if the cumulative effect of minor delays in schedule due to the NRC would be considered, and asked how it could be tracked. The NRC states that there are no hold points for construction in the NRC review process. The NRC stated that they will support the licensee's schedule, and that the NRC will review the subject ITAAC by other means if there is not an inspector physically present. A licensee should not submit a covered event to the DOE

due to the NRC inspector not being present to a construction event. The DOE stated that they expect to receive their first standby conditional agreement in 2008.

The next presentation discussed DAC (ADAMS ML080870060). DAC is a set of prescribed limits, parameters, procedures, and attributes upon which the NRC relies in making a final safety determination to support a design certification. DAC must be verified as part of the ITAAC performed to demonstrate that the as-built facility conforms to the certified design. Radiation shielding, piping, instrumentation and control, and human factors are included in current reactor design certifications as DAC. There are three ways to resolve DAC issues: (1) amendment process; (2) resolved before licensee is issued; or (3) met after license is issued. Generic changes to the license will have to be made under 10 CFR 52.59. The industry commented that flowcharts should be made detailing these three options.

For DAC to be met after the license is issued, the DAC must be met by each licensee referencing a design certificate. The NRC does not make a safety finding, but instead verifies that design ITAAC has been met. This will be reviewed and documented per IMC 2504. The level of detail needed to resolve design ITAAC will be identical for all three options.

The licensee should submit to the NRC that the ITAAC has been met, and then the NRC verifies that the acceptance criterion has been met. The NRC will document inspection findings in associated inspection reports. The industry commented that design information will be completed during construction, and was not sure how that information would be carried into the safety evaluation report. The NRC commented that the purpose of DAC was to let NRC staff reach a safety decision within a prescribed amount of detail and confidence.

The industry commented that there should not be an amendment needed to include DAC during construction, but the change process could require an amendment. There was a discussion on the design of the ITAAC and the implementation schedule. NEI will bring a sample ITAAC closure letter related to DAC and proposes to continue discussing this issue.

Following a lunch break, NRC staff discussed 10 CFR 52.99 closure letters (ADAMS ML080870057). The re-submittal for ABWR Hydrostatic testing was acceptable (ADAMS ML080850589). Calling out specific references to codes and referencing inspections to the time of manufacturing and when it was installed is very important. The second example was Containment Atmospheric Monitoring System Power Station (ADAMS ML080870051). This example letter does not references codes and inspection reports and did not employ the lessons learned from the previous high-quality example. These closure letters need to be standardized and the industry guide should reflect the type of information that should be contained in each submittal to provide consistency. The industry questioned if codes and standards were to be used in the reference letters. The NRC commented that codes might require that a field evaluation be made to ensure that the installation was done properly.

The third example was a Standby Gas Treatment System closure letter, (ADAMS ML080850747). The ITAAC design commitment stated that the piping followed the American Society of Mechanical Engineers (ASME) codes. The code data report establishes that the plant is built per ASME, and the data reports need to be referenced and are suggested to be included in the ITAAC closure letters.

The fourth example is a main control area envelope closure letter (ADAMS ML080870046). The fifth example is the ASME piping design criteria letter (ADAMS ML080850810). The NRC questioned if this was a realistic example to show as a 225 day notification letter. The industry

responded that they planned on multiple hydrostatic tests. The format and information was adequate, but the example chosen for the 225 day notification was questioned.

The sixth example was the emergency facilities and equipment (ADAMS ML080850849). The Staff found this to be an example for future submittals. The test and inspections were directly related to each acceptance criteria as they were written. The seventh example was the onsite power (ADAMS ML080870071). This was also an acceptable example. The inspection, tests, analysis sections will be performed using real or simulated signals. It would be preferable, though, if the licensee declares which option is used in their closure letter submittal.

The industry would like to place these letters into the guide that they are currently developing. The industry commented that these meetings have been helpful in formulating the guide, and the letters will likely be an appendix to the guide.

The 10 CFR Part 50.103(g) flow chart was presented. Changes to this chart were made to the descriptive text for the Federal Register Notices posted for closed ITAAC, and a step box was deleted as well as other minor clarifications.

Industry commented that the top time line does not indicate the location in the flow boxes, and that these two items could be depicted independently. Industry commented that the large decision block diamond in the middle concerning information received and substantiated allegations is not typically the phrase used. The industry questioned to need of this block. The NRC responded that this is applicable to any and all ITAAC reviewed by the NRC.

Industry raised a question about how allegations will be handled for new reactor construction. The NRC stated that they have an in-house allegation review process which is based on each case. The review might include investigations or result in the NRC referring the issue back to the licensee. The process for new reactors will not be substantially different than the current process for existing reactors. Filing a contention is a separate process than filing an allegation.

It was agreed that the next meetings would be held on Thursday April 3rd, 2008 and Thursday May 22nd, 2008. The CAP document and NEI ITAAC closure guide document will be available for the next meeting. IMC 2505 is being planned for issuance during September 2008. NEI will consider a meeting at their office at the end of April/May for CAP effectiveness review and ITAAC closure letters in addition to these periodic workshops

Wednesday April 2nd, 2008 will be the kickoff meeting for a new working group with the industry regarding scheduling of ITAAC inspections. The meeting will be from 1pm to 5pm. This working group will develop a charter and will work on integrating schedules between the NRC and the industry.

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Enclosure: Attendees List

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ADAMS ACCESSION: Package: ML080870182, Meeting Notice and Agenda: ML080450044, Meeting Summary: ML080810150, ESBWR RINSS ITAAC Closure Letter Final: ML080870071, 0306 Public Meeting CRT latest: ML080810203, ABWR 2113 _225 day RPV System Hydro_2_19_08: ML080850589, ABWR 2 14 4 4a_225 day SGTS Pressure Test_2_19_08: ML080850747, ABWR ITAAC 3.3 Item 1_sample closure letter_revD: ML080850810, CAP Validation Rev 1: ML080870017, Construction Inspection Program: ML080870020, DOE: ML080850837, ESBWR EP ITAAC Closure Letter Final: ML080850849, IMC 2505 CRT rev1: ML080870041, ITAAC Closure Letter 2 15 12 Item 5 final: ML080870046, ITAAC Closure Letter 2.3.3 Item 3a and bFinal: ML080870051, ITAAC Workshop 6: ML080870057, Meeting Design ITAAC Option C: ML080870060, Standby Support final Rule Aug 11_2006: ML080870208

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Construction Inspection Program Assessment and Enforcement, and ITTAC Closure Letter Workshop
March 6, 2008
Location: Hilton Hotel, Rockville, MD
Meeting Attendees

Name	Organization
James Cassidy	Duke Energy
Eric Hernander	GE-H
Cal Reid	Bechtel
Tom Martin	Talisman
Leslie Kass	NEI
Thom Herrity	NRC
Terry Beltz	NRC
Hamer Carter	Progress Energy
Stephen Burdick	Morgan Lewis
Laura Dudes	NRC
Mark Giles	Entergy
Antonio Fernandes	Rizzo Associates
Steve Blossom	STPNOC
C. Keith Paulson	MNES
Thomas Matula	NRC
David Lewis	PSEG
John THompson	NRC
Caroline Schlaseman	MPR for Toshiba
John J Murphy	Excelon
Dong Sinpkins	NRC
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Mark Beaumont	URS
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David Shum	NRC

ENCLOSURE

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Patricia Campbell		GE Hitachi	
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Jim Davis		SNC	
Joh Hammeran		Fluor	
Lanny Dusek		Fluor	
John Oddo		Shaw	
Larry Walsh		Shaw	
Ron Gardner		NRC	
Alan Blamey		NRC	
Robert Pascarelli		NRC	
Demetrius Murray		NRC	
Roger Lanksbury		NRC	
Tony Cerne		NRC	
Don Lindgren		Westinghouse	
Omid Tabatabai		NRC	
Rich Laura		NRC	
Don Ralgama		MNES	
Richard Rasmussen		NRC	
Ed Kleeh		NRC	
Carl Weber		NRC	
Jim Andersen		NRC	
Nathan Sanfilippo		NRC	
George Khoni		NRC	
Carl Weber		NRC	
AH Hsia		NRC	
J Dixon Herrity		NRC	
Terry Jackson		NRC	
Kerry Kavanagh		NRC	

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Chris Wiegand		Exelon		
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