

April 21, 2008

MEMORANDUM TO: Richard Rasmussen, Chief
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Division of Construction Inspection
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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 APRIL 2 AND 3, 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 (DCIP) in the Office of New Reactors (NRO) and Region II Construction Inspection Programs conducted a Category 3 meeting on April 2nd and 3rd, 2008, in Rockville, Maryland. The meeting on April 2nd was lead by Region II and discussed Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) scheduling, and handling of proprietary information. The meeting on April 3rd was guided by DCIP and discussed safety culture considerations for new reactor construction, ITAAC closure letters, option C for resolving Design Acceptance Criteria (DAC), industry guidelines for the ITAAC closure process under 10 CFR Part 52, post fuel load timeline, and the public release of inspected ITAAC. The meeting was the seventh 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.

On April 2nd, 2008, the NRC staff provided opening remarks related to continuing good working relationships, promoting common understanding, and leveraging existing working group knowledge and resources for the benefit of ITAAC scheduling. The NEI staff provided opening comments on the industries roadmap to success and emphasized the importance of pre-planning and appreciated the exchange of ideas between the NRC and the industry.

At the completion of the opening remarks the NRC staff discussed the agencies roadmap to success and provided information on the responsibilities Region II and Headquarters will have with regards to ITAAC scheduling and closure. The discussion also noted that the current NRC plans are to have a scheduler on-site that may reduce unnecessary licensee burden and the need for electronic schedule information to flow freely. An overview of the ITAAC inspection framework was also presented (ADAMS ML081060154).

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The industry had concerns on closing ITAAC by family rather than individually closing ITAAC when the ITAACs were submitted for closure. Specifically, why should the industry complete and send ITAAC closure notifications to the NRC if the ITAAC would not be closed until the NRC completed the majority of targeted ITAAC inspections in that family? If an issue arose, how would that impact closed ITAACs related to the same open family? The discussion shifted and focused on reasons for making the targeted ITAAC publically available. The industry noted that if the targeted ITAAC was publically available and construction resources became available the schedulers could focus on scheduling targeted ITAAC earlier to preclude potential late issues related to ITAAC. The industry also discussed the release of ITAAC family completion percentages by the NRC, (i.e., periodic status update by the NRC).

The NRC staff continued with an overview of the current flowpath for processing construction schedule information. The industry highlighted concerns over release of construction schedules and noted the need to treat the schedules as proprietary information. Other suggested having daily/weekly meetings with the resident to ensure the residents were aware of all schedule changes. Discussion continued with respect to the pilot scheduling program Region II is conducting and when it will be completed. The NRC noted that the current target date for completing the pilot testing will be in the fall of 2008. Currently DOE has requirements on providing insurance to the industry if any delays are NRC related and expressed concern over the use of NRC developed software instead of using software readily available in the industry. The NRC explained it intends to use existing software platforms widely available. The discussion continued with a focus on modular construction, modular construction ITAAC inspections and schedules for qualification testing. The NRC emphasized the importance on providing a better understanding of modular construction and qualification test schedules.

The NRC staff also provided a presentation on the proof-of-concept (pilot testing) for acquiring and translating Primavera construction schedule information that will be used for inspection scheduling and ITAAC closure (ADAMS ML081060168). This would require some manipulation of the information from Primavera to incorporate it into the current IT resources used by the agency. The industry provided feedback on the use of Primavera filters while the NRC emphasized this required the use of activity codes that are specific to ITAAC such that all or selected ITAAC could be pulled and tabulated as an excel file if needed. Primavera does allow the creation of user-defined layout and filter views that require read only permission to the licensee database and would only be stored on the user's computer.

The NRC provided a presentation on the Construction Inspection Program Information Management System, (CIPIMS) and how CIPIMS will be used for ITAAC, non-ITAAC and vendor inspections (ADAMS ML081060186). The industry representatives asked if CIPIMS would be publically available. Currently the NRC's plans to make CIPIMS data publically available, but has not finalized the specific CIPIMS data or output format that will be publically available. The NRC also provided information on the ITAAC numbering, for the AP-1000 & ABWR, which was previously publically available (ADAMS ML0702500122).

NEI provided an open discussion with the Design Center Working Group (DCWG) on the software that they are using and their current status for developing the construction schedules.

NEI continued the discussion with a suggestion of using the 10 CFR 2.390 process for handling proprietary information. The NRC continued with a presentation on the control of proprietary information within the NRC. This highlighted current procedures with the presentation ending with an overview of the 10 CFR 2.390 process and how the agency handles requests for withholding proprietary information from public disclosure. The industry was informed of a

SECY paper that details this process and its application to electronic construction schedules (ADAMS ML060740479). One difference between the normal processes is that only one affidavit needs to be submitted for all construction schedules and their associated updates. This process is currently being used for other construction projects under NRC oversight. It was suggested that a draft affidavit be created which all licensees could use. NEI has taken the lead on this action.

The NRC revisited the discussion on the integration of the industry software and the NRC's software. The specific items discussed were the level of detail needed to implement the pilot project and a consistent ITAAC numbering scheme between DCD and construction schedules. NEI has taken the lead on identifying a DCWG that is willing to provide a construction schedule for pilot project.

At the conclusion of the meeting NEI noted that they would work with the industry to identify a DCWG that would interface with the NRC on pilot testing, module construction ITAAC inspection and ITAAC inspection schedule. The NRC would continue to develop the construction schedule pilot test and work with the industry to develop the needed framework that will allow electronic transfer of the appropriate data. The NRC and NEI will develop a consistent ITAAC numbering system for each DCWG. In addition, closing ITAAC by family verses individually and making targeted ITAAC publically available are program issues and will be discussed in the routine ITAAC closure, assessment and enforcement for new reactors public meetings. This scheduling working group will focus on detailed ITAAC inspection schedule information and issues surround the ITAAC and modular construction inspection schedules with DCWGs and periodically provide an overview and lesson learned to all the working groups through the ITAAC closure and assessment and enforcement for new reactors public meeting.

On April 3rd 2008, the NRC presented Safety Culture Considerations for New Reactor Construction (ADAMS ML080880454). NUREG 1055, "Improving Quality and the Assurance of Quality in the Design and Construction of Nuclear Power Plants" was written in order for the NRC to document lessons learned from previous construction activities. This NUREG documents lessons learned from a prevailing attitude that construction activities at nuclear power plants had no immediate threat to public health and safety. However, this belief did not consider potential future impacts due to low quality construction at nuclear power plants. The Commissioners strongly support and requested an expansion of agency policy regarding safety culture for new reactor construction.

The NRC established an internal working group to evaluate the use of safety culture component for new nuclear reactor construction. As one input to the working group, the NRC contracted a report to investigate the safety culture component of the ROP. This report agreed with the findings of NUREG 1055, which stated that previous safety culture issues were mostly related to organizational climate and construction quality issues. The NRC internal working group is currently evaluating the contract report, defining substantive cross cutting issues, and determining the appropriate level of follow up inspections. Future work includes an implementation plan, further development work, and a Commission paper.

The industry commented that there were lessons learned from nuclear reactor startup testing, and that there seemed to be a dichotomy between construction problems and no immediate impact. The NRC re-iterated the point from NUREG 1055 that this attitude was a major problem during previous construction of nuclear reactors, which caused major problems during nuclear reactor testing phase.

The industry requested a copy of the contractor report that looked at the feasibility of utilizing the ROP safety culture components. The NRC stated that they will evaluate this request.

The industry stated that safety culture cross cutting issues are already addressed in current activities, and they are not sure of the added value for an additional layer of regulatory oversight. The NRC stated that safety culture cross cutting issues are not an additional layer of oversight, but are used to see if there is a underlying performance theme within the various programs. Examples of safety culture cross cutting issues are safety conscious work environment.

The industry questioned the need of cross cutting issues and stated that they are already included in the ROP and addressed in enforcement activities. Industry stated that their current programs clearly cover safety culture components. The NRC stated that safety culture is the ability to connect the dots between various problems before a significant breakdown occurs. Cross cutting issues is a larger indication of an organization problem and looks at the organization horizontally instead of vertically. Safety culture will be assessed as part of the normal baseline inspection; it will not necessarily be a separate inspection. Enforcement decisions based on safety culture assessment are still under consideration. The appropriate response will be based on a stepped approach that has been presented at previous public meetings.

The industry commented that the ROP is based on years of data and operating experience and that there is no data right now for nuclear reactor construction that can be used as a basis for safety culture cross cutting issues. For example, the ROP just finished going through an 18 month trial period about additional changes to safety culture and will be finalized next December. Industry further stated that safety culture cross cutting issue development is premature and that there are not enough details provide. The NRC stated that they are currently developing these ideas internally. The NRC stated that there is no action matrix, but instead will be a Construction Response Table (CRT), which was presented at previous meetings.

The industry suggested that the NRC involve the industry in the NRO led safety culture and substantive cross cutting issue task group for new reactor construction. The industry is not part of the Office of Enforcement led safety culture working group for other issues, but the NRC has given the industry periodic meeting updates. The NRC will continue to have frequent public meetings where ideas can be shared and developed. The NRC stated that safety culture is important and will be involved in the construction program for new nuclear reactors. The NRC stated that these public meetings are open discussions where feedback on proposed ideas are actively solicited and reflected in the development of our programs and policies.

Four ITAAC example closure letters and uncomplete notifications were reviewed, which were resubmittals from previous workshops. Although the quality is generally high with the examples, a few reoccurring problems were identified such as inspection requirements for as-built conditions and better delineation between completed and uncompleted work.

Closure letter ABWR ITAAC 2.3.3 Item 3 (ADAMS ML081060427) states that the system or component must be in its final arrangement to satisfy the acceptance criteria. There was a discussion regarding electrical isolation for this ITAAC and how it would be closed if non Class1E electrical equipment encroached on Class 1E equipment. The NRC also noticed that attention to detail was declining with these resubmittals, particularly in closure letter ABWR ITAAC 2.1.1d Item 3 (ADAMS ML081060449). The NRC stated that they are not sure if 25%

completion is accurate for the additional detail added to the closure letter, but that 75% completion would be more accurate. The NRC also stated that the items completed section and items to be completed section were disconnected. Also, it can not be determined from a 225 day letter that significant experience of personal already exists at the site, and that the examples would need to be corrected to remove that predetermination. Closure letter ABWR ITAAC 2.14.4a Item 4a (ADAMS ML081060472) has same comment from the previous example. Closure letter ABWR ITAAC 3.3 Item 1 (ADAMS ML081060431) also had very minimal edits. The NRC requested the industry to bring an ABWR basic configuration ITAAC closure letter to the next meeting. NEI is preparing to include in their guide on how to maintain ITAAC validation after it is closed.

A continuation of a previous discussion on Option C for Resolving DAC after the issuance of a combined license was presented (ADAMS ML081060444). Following the resolution of a DAC item,. NRC staff expects licensees to perform an inspection to verify DAC is met. The licensee would evaluate any resulting departures from the design control document or changes to the plant-specific final Safety Analysis Report (FSAR). The licensee would use the applicable change process to determine if a license amendment was needed. The licensee would update their FSAR to reflect the more detailed design information from DAC resolution, as required by 10 CFR 50.71 (e). Industry stated that there is a lot of detailed design information developed, and only a portion of this information would be appropriate to place in the FSAR. The NRC agreed with this statement.

NEI presented "Industry Guideline for the ITAAC Closure Process under 10 CFR Part 52" (ADAMS ML080950402). NEI 08-01 will provide guidance to applicants on ITAAC closure process and will ensure a standard industry approach. The next steps will be to receive formal comments from the NRC and to work with the NRC on resolving comments and issue the final document. NEI would like an endorsement of this document in the form of a Regulatory Guidance. NRC stated that they are open to a smaller Category 2 meeting so there could be a smaller dialog with questions.

A draft timeline of the post-fuel load period was presented (ADAMS ML080880467). The timeline starts with the fuel arriving onsite and goes to commercial operation. The power hold points are for a typical PWR, but are detailed and further described in Regulatory Guide 1.68. Regulatory Guide 1.68, revised in 2007, discusses details for the testing through this period.

NRC solicited comment if inspected ITAAC should be public or withheld. The industry stated that the ranking should not be too difficult to figure out, and which ITAAC are important. Industry commented that it is important for scheduling of targeted ITAACS that targeted ITAACS are public and the site teams can plan for the ITAAC inspection. Inspection Manual Chapter 2504 focuses on construction and operational programs and is more based on the traditional inspection. The NRC commented if the targeted ITAAC were to be made public, it would still not give the industry the specific items that the NRC planned to inspect. For families that do not have targeted ITAAC, the NRC will pick the most risk significant activities, or the NRC might choose a low risk activity if an uninspected subcontractor is performing that activity. These issues might not be known until the NRC reaches that time. The NRC may expand the scope of inspections if weaknesses are found. Industry commented that the NRC has the information on the most important processes that that there is nothing wrong with telling the public that certain ITAAC are more important than others. The industry commented that the targeted ITAAC should be disclosed in order to aid scheduling. The negative view is that the public might believe the licensee is not doing an adequate job on non-targeted ITAAC. Targeted ITAAC are chosen by the plant design. NEI stated the industry will be prepared every day for inspection and that

this discussion allows them to manage their process and coordinate activities and allow for efficient operations. NRC stated that releasing the list might increase the burden on staff in order to keep the information up to date on the public website. Industry stated that an opened list of targeted ITAAC might increase public confidence in having more information regarding inspections. In summary, the industry and NEI comments favored release.

The next meeting will be held Tuesday May 13th, 2008 in a location to be determine. The Instrumentation and Controls (I&C) group would like to participate in the next meeting to discuss I&C DAC. The next meeting will be July 10th, 2008 and August 28th, 2008 at a location to be determined.

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Enclosure: Attendees List

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ADAMS ACCESSION: Package: ML081060483, Public Meeting Notification - April 2 and 3, 2008: ADAMS ML080780164, Summary of April 2 and 3 public meeting: ADAMS ML081060112, ITAAC Inspection_Closure Scheduling: ADAMS ML081060154, ITAAC Counting Methods: ADAMS ML081060168, CIPIMS for 4-2: ADAMS ML081060186, ABWR basic configuration defn: ADAMS ML081060220, NRO-Safety Culture 0403: ADAMS ML080880454, ITAAC Closure Letter 2.3.3 Item 3a & bFinal: ADAMS ML081060427, ABWR 2 1 1 3_225 day RPV System Hydro_3_14_08: ADAMS ML081060449, ABWR 2 14 4 4a_225 day SGTS Pressure Test_3_14_08: ADAMS ML081060472, ABWR ITAAC 3.3 Item 1_sample closure letter_final: ADAMS ML081060431, DAC Option C: ADAMS ML081060444, Industry Guideline for the ITAAC Closure Process Under 10 CFR Part 52: ADAMS ML ML080950402, Draft Post-Fuel Load Timeline Rev1: ADAMS ML080880467

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**Construction Inspection Program Assessment and Enforcement,
and ITTAC Closure Letter Workshop
April 2nd and April 3rd, 2008
Location: Hilton Hotel, Rockville, MD
Meeting Attendees**

Name	Organization
Larry Arnold	STP U3 and 4
Molly Keefe	NRC
John Mohr	MNES
Mark Giles	Entergy
Jonathan Ortega-Luciano	NRC
Larry Walsh	Shaw
Leslie Kass	NEI
Patrick Boyle	NRC
David Deslnrers	NRC
Alan Blamy	NRC
Bob Lukes	NRC
Stanley Day	UniStar
Ron Gardner	NRC
Tony Cerne	NRC
Jefferson Rhodes	MNES
Pat Sheppard	Exelon
Les Duncan	AREVA
Jerome Blake	NRC
Julie Kug	NEI
Jim Cassidy	Duke Energy
John Mammeran	Fluor
Jim Uchiyama	MNES
Takanori Murakami	MNES
Patricia Campbell	GE Hitachi
Caroline Schlaseman	MPR for Toshiba

ENCLOSURE

Russ Bell		NEI	
Jason Jennings		NRC	
Dave Trimble		NRO	
Barry Bryant		Dominion	
Mike Woods		Bechtel	
Lrunero Lorlin		EPRI	
Guy Davant		Entergy	
Wren Flower		NRC	
Tim Durkin		Energetics Inc	
Michael Webb		NRC	
Nian Agles		STP	
Dave Bogstma		Bechtel	
Julie Giles		SCE&G	
Dan Manarelli		AREVA	
Bob Taylor		Kievit	
Goerge Khouri		NRC	
Roger Lanksbury		NRC	
Isabelle Schonefield		NRC	
Alan Torres		SCEG	
John Oddo		Shaw	
Ian Spivack		NRC	
James Gaslevan		NRC	
Donald Lindgren		Westinghouse	
Jamie Malln		PSEG	
Matthew Williams		Dominion	
Robert Pascarelli		NRC	
Larry Arnold		STP U3 and 4	
Molly Keefe		NRC	
John Mohr		MNES	
Mark Giles		Entergy	

Jonathan Ortega-Luciano	NRC	
Larry Walsh	Shaw	
Leslie Kass	NEI	
Patrick Boyle	NRC	
David Deslnrers	NRC	
Alan Blamy	NRC	
Bob Lukes	NRC	
Stanley Day	UniStar	
Ron Gardner	NRC	
Tony Cerne	NRC	
Jefferson Rhodes	MNES	
Pat Sheppard	Exelon	
Les Duncan	AREVA	
Jerome Blake	NRC	
Julie Kug	NEI	
Jim Cassidy	Duke Energy	
John Mammeran	Fluor	
Jim Uchiyama	MNES	
Takanori Murakami	MNES	
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Wren Flower	NRC	
Tim Durkin	Energetics Inc	

Michael Webb		NRC	
Nian Agles		STP	
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Julie Giles		SCE&G	
Dan Manarelli		AREVA	
Bob Taylor		Kievit	
Goerge Khouri		NRC	
Roger Lanksbury		NRC	
Isabelle Schonefield		NRC	
Alan Torres		SCEG	
John Oddo		Shaw	
Ian Spivack		NRC	
James Gaslevan		NRC	
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