

July 6, 2005

ORGANIZATION: Nuclear Energy Institute (NEI)

SUBJECT: SUMMARY OF MAY 5, 2005, MEETING WITH NEI TO DISCUSS NEI 04-01, REVISION D, "DRAFT INDUSTRY GUIDELINE FOR COMBINED LICENSE (COL) APPLICANTS UNDER 10 CFR PART 52," AND THE OPERATIONAL PROGRAM REVIEW PERFORMED DURING THE EVALUATION OF A COL APPLICATION

On May 5, 2005, the U.S. Nuclear Regulatory Commission (NRC) held a public meeting with NEI at the NRC headquarters in Rockville, MD. The purpose of the meeting was to let NEI provide followup information on NEI 04-01, Revision D, Section 4.3.9.7, "FSAR [final safety analysis report] Chapter 7 Instrumentation and Controls." NEI presented additional information on the implementation of operational programs included in a COL application. NRC presented information on permit conditions, combined license action items, and determining site characteristics. The meeting attendees are listed in Attachment 1 and the meeting agenda is given in Attachment 2.

Several handouts were distributed during this meeting. They are listed at the end of this memorandum with their accession numbers. All the handouts can be accessed through the Agencywide Documents Access and Management System (ADAMS) by accession number. This system provides text and image files of NRC's public documents. If you do not have access to ADAMS or if you have problems in accessing the handouts in ADAMS, call the NRC Public Document Room (PDR) reference staff at 1-800-397-4209 or 301-415-4737 or e-mail pdrc@nrc.gov.

NEI 04-01, SECTION 4.3.9.7: FSAR CHAPTER 7 INSTRUMENTATION AND CONTROLS

NEI provided a followup to the NRC's presentation in the April 7, 2005, NEI public meeting on instrumentation and control design acceptance criteria (I&C DAC). NEI said it appreciated receiving the NRC handout from that meeting (see ADAMS Accession # ML050960503) and that NRC's approach for I&C DAC was consistent with industry expectations. NEI provided NRC with the review plan for the AP1000 I&C system (see Attachments 5 and 6). Some of the discussions in the April meeting concerned when certain activities would occur. NEI said that some activities may occur before a COL was issued. NEI said it would like to revisit this issue.

The Westinghouse member of the NEI COL application task force led the remainder of this discussion for NEI. He said NEI wanted to discuss scheduling for the I&C DAC. He said planning was still in progress and that NEI agreed with NRC plans described in the NRC letter dated March 15, 2005 (see ADAMS Accession # ML050750083). He said Westinghouse would follow the inspections, tests, analyses, and acceptance criteria (ITAAC) for the AP1000 I&C DAC. NEI believes its comments apply to other designs at a high level.

Slide 3 of Attachment 5 describes the five phases of the AP1000 protection and safety monitoring system development: (1) design requirements, (2) system definition, (3) hardware

and software development, (4) system integration and testing, and (5) installation. Steps 1-3 are design activities. Step 4 activities are both design and construction related. The integration of software and hardware, including the factory acceptance tests, are design activities. The installation and site acceptance tests are construction activities. Step 5 is a construction activity. Westinghouse believes it will get a contract for the first three phases and a separate contract for the other two phases. Phases 1-3 will be completed during the COL process and phases 4-5 will be taken during the construction process.

NEI said the NUSTART industry consortium was currently doing detailed design work although no agreements have been signed with either General Electric or Westinghouse. NEI noted that NRC said during the April 2005 meeting that the NRC wanted to participate in the industry process. NRC said that it assumed these interactions would be with a COL applicant.

NEI said Westinghouse was close to signing contracts for performing work on the first three design phases, which will take 40 months. NEI 04-01 said that the review of a COL application referencing a certified design and an ESP should take 27 months (the NRC said this was a nominal schedule and assumed a high-quality application). Looking at the NRC handout from the April 2005 meeting, the design requirements phase matches well with the planning phase described by the NRC. This phase takes 12 months for the first design. NEI said that this would be the appropriate time for NRC to do the initial audits. For the second plant, this phase might take 1-2 months. NEI said most of the work could be completed short of the ITAAC. NRC asked if NEI had considered including an exemption for I&C DAC for subsequent COL applications using this I&C design. NEI said they had not considered this, but had considered using a topical report approach for I&C design.

NEI said that phase 2 of the design phase (see Slide 6 of Attachment 5) would take 14 months and also stop before the completion of the ITAAC. Design phase 3 (see Slide 8 of Attachment 5) would also take 14 months. This phase would include software implementation, which would be tested on representative hardware. Hardware will not be procured in phase 3. NEI said that Westinghouse would like hardware procurement to be done during the COL process.

NEI summarized by saying it had given NRC details of NEI's schedule for completing the I&C DAC. NEI said that if it wanted to meet applicants' schedules, it needed to start work now. NEI also said that phase 1 may not involve a declared COL applicant. It may involve a "relationship" between Westinghouse and several applicants. NEI also said that this was not generic design work and the work might not be applicable to a plant 20 years from now.

NEI asked NRC what the inspection activity would be for the first 3 phases. NEI said that the applicable sections of the standard review plan of NUREG-0800 were in place but inspection procedures might not be. The NRC said that the NRC technical reviewers and NRC inspectors would have to work out their roles.

The NRC concluded by saying that the focus of the discussions at the current meeting should be on NEI 04-01. Westinghouse needs to discuss this issue separately with NRC and this meeting should not be considered such a discussion. NEI said that it understood that there would have to be separate discussions with the NRC on this issue.

IMPLEMENTATION OF OPERATIONAL PROGRAMS IDENTIFIED IN NEI LETTER DATED MAY 14, 2001

NEI provided a handout (Attachment 7 to this summary). NEI said that the NEI 04-01 meetings had provided good discussions on many of the operational programs identified in the NEI letter dated May 14, 2001. NEI said that information on these programs to support a reasonable assurance finding should be included in the safety analysis report. There has been a significant amount of discussion on the implementation of these programs because the NRC will approve the programs before the plant is built. NEI said that Appendices F and G of NEI 04-01 will provide information on how operational programs should be described in the safety analysis report for the Westinghouse AP1000 and the General Electric ABWR.

NEI said NRC needed to know when the operational programs would be phased in so that the NRC could inspect the programs. For a significant majority of the operational programs, these inspections will occur after a combined license has been issued. Some of these programs will be implemented in phases. NEI said that the question was when was this information going to be made available so NRC could inspect these operational programs.

NEI said that much of the operational program information should be provided to minimize NRC requests for additional information. The public meetings being held at the same time as the NEI 04-01 meetings on the information NRC needs to evaluate the radiation protection operational program are taking place with this goal in mind. NEI expects that the safety analysis report descriptions of operational programs such as fire protection will include the same information as was given in previous safety analysis reports and the SAR will have an additional section on implementation (e.g., the fire protection program is phased in when the fuel arrives on site and the licensee prepares to load fuel).

NEI said it did not object to the license conditions but wanted to know why the NRC believed that these conditions were necessary and what the conditions would look like. NRC said that it would make a presentation at the June NEI 04-01 meeting on implementation to address the issues raised at this meeting. NEI said that it would like to further discuss the fire protection implementation example provided in Attachment 7.

FOLLOWUP DISCUSSIONS ON NEI 04-01

Definition of a COL Action Item

NRC said that in the March 2005 public meeting that there were inconsistent definitions of COL action items in NEI 04-01. In addition, recent work for early site permits provided additional information on site characteristics and permit conditions. NRC said that this information should be included into NEI 04-01 for COL applicants referencing an early site permit. NRC has also given the staff guidance on determining site characteristics, permit conditions, and COL action items (see Attachment 3 to this meeting summary).

NRC said that site characteristics are specific physical attributes of the site, whether natural or man-made, and are the minimum design values for the design and construction of a new plant to be built at the site. Site characteristics fall into four categories: (1) severe natural phenomena, (2) physical features of the site, (3) boundaries or locations controlled by the applicant, and (4) characteristics relating to nearby human activities.

NRC said that 10 CFR 52.24 authorizes the inclusion of limitations and conditions in an early site permit. NRC may only recommend a permit condition in three circumstances: (1) the staff's evaluation in the safety evaluation report rests on an assumption that is not currently supported and that will be practicable to support only after ESP issuance, (2) a site physical attribute is not acceptable for the design of structures, systems, or components important to safety, and (3) the staff's evaluation depends on a future act.

NEI asked a number of questions about this information. NRC said that site characteristics and permit conditions carry issue preclusion. If the COL applicant deviates from the site characteristics and permit conditions, the issue may be reopened.

NEI asked the reasons for including COL action items in both the final safety evaluation report and the permit. NRC said that COL action items are specifically discussed in the regulations for design certifications but are not included for early site permits.

NEI asked why a permit condition is not needed for NRC regulations but is needed for a future act such as a State regulation. NRC said that the State approval affected the NRC approval and NRC might need to see what action the State took.

NEI asked why a site characteristic was needed for human activities when the applicant did not have control over these activities. NRC said that human activities were separated for exactly that reason.

FUTURE MEETINGS AND FOLLOWUP ITEMS

NEI said that it wanted to have discussions on NEI 04-01, Section 4.2, "General and Financial Requirements." NRC said that it was in the process of sending several comments to NEI on this section and would like NEI to review these comments.

NEI said that it might want to discuss the radiation protection operational program since their separate public meeting discussions might have ended. NEI also believes that a followup meeting will be necessary after the NRC responds to NEI's letter of February 10, 2005, concerning ESP finality.

For the July meeting, which will be the last of the NEI 04-01 meetings until Fall 2005, NEI said it wanted to discuss a COL review schedule and costs. NEI said that the staff estimates were substantially higher than in the original future licensing paper and wanted the staff to discuss the matter further. NRC said it was currently working on the July status update paper and planned to have a COL workshop later this year to discuss the schedule and staff resources.

NEI said it was about to send the staff Appendices F and G of NEI 04-01, which are the COL application outlines for the Westinghouse AP1000 and the General Electric ABWR, respectively. NEI said this was for information only and not for NRC review. NEI said that these two appendices were 1300 pages long and would be sent electronically. NRC advised NEI to ensure that this electronic submission was in conformance with NRC's electronic document submission guidelines.

NRC ACTION ITEM

Present proposed approach for implementation of operational programs, including use of license conditions.

/RA/

Joseph Colaccino, Senior Project Manager
New Reactors Section
New, Research and Test Reactors Program
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

- Attachments:
1. List of attendees
 2. Agenda
 3. Staff Guidance for Determining Site Characteristics, Permit Conditions, and COL Action Items (ML051360008)
 4. Tentative Meeting Topics for June 8-9, 2005, Public Meeting on NEI 04-01 (ML051360011)
 5. NEI Handout: AP1000 Protection and Safety Monitoring System Review Plan (ML051360013)
 6. NEI Handout - AP100 Protection and Safety Monitoring System Review Plan, Revision C (ML051360016)
 7. NEI Handout - COL Application Guidance (ML051360020)

Project No. 689

cc: See next page

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- 6. NEI Handout - AP100 Protection and Safety Monitoring System Review Plan, Revision C (ML051360016)
- 7. NEI Handout - COL Application Guidance (ML051360020)

cc: See next page
ADAMS ACCESSION NO. ML051370086-Package

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DATE	06/20/2005	07/01/2005

Distribution for May 5, 2005, Meeting Summary dated July 6, 2005

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**NRC Meeting with Nuclear Energy Institute to Discuss NEI's Combined License
 Application Guidance Document (NEI 04-01) and the Operational Program
 Review Performed During the Evaluation of a Combined License Application**
Thursday, May 5, 2005
9:00 a.m. to 1:00 p.m.
NRC Headquarters Conference Room O-7B4

Name	Organization
Joseph Colaccino	NRR/DRIP/RNRP
Patricia Campbell	Morgan, Lewis & Bockius, LLP
Hiroyuki Yoshida	Toshiba
Hiroshi Yamazaki	Toshiba
Dale Smith	Duke Power
Christian Araguas	NRR/DRIP/RNRP
Michael Bourgeois	Entergy
Bruce Musico	NRR
Ken Heck	NRR
Laura Dudes	NRR
Sandra Sloan	AREVA Framatome ANP
Tolani Owusu	NRR
Ron Gardner	NRC
Narin Trehan	NRC
Deann Raleigh	US, Scientech
Robert Crandall	Black & Veatch Corp.
Guy Cesare	Enercon Services
Mark Stoflu	Westinghouse
Steve Routh	Bechtel
Al Passwater	EPRI
Ben George	Southern Nuclear/NuStart
Joe Hegner	Dominion
Russ Bell	NEI
Eddie R. Grant	Exelon

Tom Hayes	Westinghouse
Dan Williamson	Exelon
Belkys Sosa	NRC/NRR/RNRP
Jerry Wilson	NRR/RNRP
Bob Weisman	OGC
Matt Chiramal	EEIB/DE/NRR/NRC
Hulbert Li	EEIB/DE/NRC
Mary Ann Ashley	IIPB/DIPM/NRC
John Segala	NRR
Alex Klein	NRR
Naeem Iqbal	NRR
Nanette Gilles	NRR

Agenda*

May 5, 2005, Meeting with the Nuclear Energy Institute (NEI) to Discuss NEI's Combined License (COL) Application Guidance and the Operational Program Review Performed During the Evaluation of a Combined License Application

9:00 a.m.	Introductions/Opening Remarks	NRC/NEI
9:10 a.m.	Followup Discussion of NEI 04-01, Section 4.3.9.7, "FSAR Chapter 7, Instrumentation and Controls"	NEI
10:00 a.m.	Followup Discussion on Implementation of Operational Programs Identified in May 14, 2001, NEI Letter to NRC	NEI
11:00 a.m.	Break	
11:15 a.m.	Followup Discussions on Operational Program Reviews and NEI 04-01	NRC/NEI
12:15 p.m.	Future NEI 04-01 and Operational Program Review Public Meeting Topics	NRC/NEI
1:00 p.m.	Adjourn	

***NOTE: Specific topics and associated discussion times may change without notice.
Public comments will be solicited after each agenda item is completed.**

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